



*Study No. 147*

**Impact Study on Agricultural Extension Services to Farmers  
by Agri-Clinic & Agri Business Centres (ACABC Scheme)  
–A Study in Assam**



**Study Sponsored by the Ministry of Agriculture and Farmers'  
Welfare, Government of India,  
New Delhi**

**Mrs. Runjun Savapandit  
Dr. Moromi Gogoi**

**Agro-Economic Research Centre for North-East India  
Assam Agricultural University, Jorhat  
Assam, 2017**



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## PREFACE

The present study entitled, “Impact study on Agricultural Extension Services to Farmers by Agri-clinic and Agri-business Centres (ACABCs Scheme)- A study in Assam “ was undertaken at the instance of the Ministry of Agriculture and Farmers’ Welfare, Government of India and AERC Allahabad was designated as coordinating centre for the study.

The Agri–Clinics and Agri-Business Centres (ACABC) Scheme was launched in 2002 by the Ministry of Agriculture, Government of India, in order to strengthen the agricultural extension services as well as to tap the potential of huge unemployed agriculture graduates and to provide them employment opportunities by making them entrepreneurs, with the support of National Bank for Agriculture and Rural Development (NABARD).

The study comprised of 100 beneficiaries and 50 non-beneficiary respondents of Kamrup and Nagaon districts in Assam. The findings of the study show that ACABC Scheme had a positive impact on different activities under different services like proper agriculture, allied agriculture and other services.

I am grateful to AERC Allahabad, for guiding our research team throughout the study and giving valuable comments on the draft report which have duly been incorporated. I am also grateful to the officials of the Indian Society of Agri-business professionals, Guwahati , Directorate of Economics and Statistics, Govt. of Assam for their help and cooperation during the study. I also thank all the sample respondents for their spontaneous help and cooperation during field surveys.

Like all the studies, this is also a joint output of the centre. The names of the research staff associated with the study have been mentioned elsewhere in the report.

I hope that the results of the study will be useful for the planners, policy makers and researchers.

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## **Chapter-1**

### **Introduction**

The contribution of the agriculture sector to national economy is reflected by its share in total Gross Domestic Product, its foreign exchange earnings, and its role in supplying inputs to other sectors. It provides the underpinning for our food, livelihood security and support for the economic growth and social transformation of the country. About 75 per cent of the country's population is dependent directly or indirectly on agricultural and allied sector, contributing 13.70 per cent of the Gross Domestic Product (GDP) during 2013-14. India possesses only 11 per cent of world's arable land but it has to feed about 18 per cent of world population. To provide food and livelihood security, the Government has been making all out efforts through various Schemes and programmes to improve the productivity of land and enhance farm incomes.

There has been a structural transformation in the Indian economy during the past few decades. The composition of Gross Domestic Product reveals that the share of agriculture including forestry and fishing has declined over time, while growth in industrial and service sectors far outpaced agricultural sector. Despite a steady decline of its share in the GDP, agriculture continues to play a significant role in the overall socio-economic development of the country. Therefore, fostering rapid, sustained and broad-based growth in agriculture remains key priority for the government.

As per estimates made by the Central Statistics Organisation (CSO), the share of agriculture and allied sectors (including agriculture, livestock, forestry and fishery) was 15.35 per cent of the Gross Value Added (GVA) during 2015-16 at 2011-12 prices.

### **I.1.Statement of the Problem under study**

Development of agriculture continues to remain critical for India's economic growth and poverty reduction. The 12th Five Year Plan Approach Paper recognizes the centrality of agriculture in achieving its basic objective of faster, sustainable and more inclusive growth. Agricultural growth is also crucial for generation of jobs, checking of inflation, securing nutritional security and providing raw materials for industrial growth besides, easing pressures on urban areas. Twelfth five year plan envisions for 9 per cent

economic growth with 4 per cent growth in agriculture. The nature of agriculture has been changing rapidly during the last two decades and farmers currently need a range of support including organizational, marketing, technological, financial and entrepreneurial front. Agricultural extension services can and should play an important role in addressing many of these challenges. Perhaps, there cannot be a better agency at the ground level, other than agricultural extension services that can provide knowledge support to farming community. In order to provide this support efficiently, extension should expand its mandate beyond dissemination of technologies, which may include, linking farmers to markets, engaging in research planning and technology selection, educating them on new policy issues and linking producers to a range of other support and service networks. However, the Indian extension system has considerably weakened over last two decades in terms of human resources and capacity. Huge vacancy levels in public extension system particularly in remote and disadvantaged regions have further constrained the extension support services to farming community. Though the participation of private sector and civil society in extension has increased time, their presence is mostly restricted to few commodities, sectors and regions only. A strong, vibrant and responsive extension system with an expanded mandate is a pre-requisite for achieving a faster, sustainable and more inclusive growth through agriculture. Agricultural extension services need to assume new challenges and reform itself in terms of content, approach, structure and processes and their delivery and implementation.

With the transformation of Indian agriculture from subsistence level to commercial level, agricultural extension system has started facing several new challenges. The relative proportion of Agri graduates finding employment in public sector in India is also shrinking gradually. Therefore, it becomes essential to create more job opportunities in private sector. The Government of India envisages for achieving 4% annual growth rate in agriculture and allied sector during the 12<sup>th</sup> five year plan (2012-17) and strongly recommends to evolve suitable strategies to meet the needs of the farmers.

In a developing country like India, adequate infrastructural facilities and efficient extension services are indispensable for boosting the agriculture sector which constitutes the largest private sector in the country. Despite planned industrialization over the years, agriculture still provides employment to about 65 per cent of population. It is very difficult

to serve all the farmers all the time for all the problems with adverse farmer-extension worker ratio (1000:1). With the advent of WTO regime, new farmers need to work hard to produce quality goods in order to compete with the international standards. There is a need for specialized advice training to the farmers. The Government machinery needs to be more proactive and responsive in rendering the services to the farmers. Therefore, in order to strengthen the agricultural extension services as well as to tap the potential of huge unemployed agriculture graduates and to provide them employment opportunities by making them entrepreneurs, the Union Finance Minister had announced a scheme for setting-up “Agri-Clinics and Agri-Business Centres” (ACABC) by agriculture graduates with the support of National Bank for Agriculture and Rural Development (NABARD) in the Budget speech on February 28, 2001. Accordingly, the scheme was launched on 9<sup>th</sup> April, 2002 to strengthen the transfer of technology and agricultural extension services and also to provide self employment opportunities to the technically trained persons. The main objectives of the ACABC scheme were (1) To provide extension and other services to the farmers on payment basis, (2) To support agricultural development and entrepreneurship and (3) To promote self-employment. The Agri-Clinics are envisaged to provide expert advice and services to the farmers on technology, cropping practices, protection from pests and diseases, market trends, prices of various crops in the markets and also clinical services for animal health *etc.* which would enhance the productivity of crops and animals and ultimately, the farmers’ income.

The Ministry of Agriculture and Farmers’ Welfare, Government of India in association with NABARD has launched this unique programme to innovate better methods of farming to encourage each and every farmers across the country. Under this programme, the Government is providing start-up training to graduates in agriculture and allied activities like horticulture, sericulture, veterinary science, forestry, dairy, poultry farming and fisheries *etc.* After completing the training programme, the trainees can apply for special start-up loans for venture. It was hoped that the scheme if materialized in right perspectives, will be able to bring in significant changes in the agricultural extension services.

Considering the importance of agri- clinic and agri-business centres in the country, the present study entitled “Impact Study on Agricultural Extension Services to

Farmers By Agri-Clinics & Agri-Business Centres (ACABCs Scheme)’ has been undertaken at the instance of the Ministry of Agriculture and Farmers’ Welfare, Government of India with AERC, Allahabad as the co-ordinating Centre. It has been tried ,through this study, to focus on the impact of agri clinic and agri business centres scheme in terms of production, productivity and farmer’s income.

### **I.2. Concepts of Agri-Clinics and Agri. Business Centres**

Government of India constituted a steering committee on agriculture and allied sectors under the chairmanship of Prof M.S. Swaminathan, the noted agricultural scientist for the growth of agriculture sector during 2002. The committee suggested for creation of agriclincs and agribusiness centres managed by agriculture graduates so as to provide consultancy services to the farming community in rural areas (Karjagi, *et.al* 2006). The committee felt that, there is need for revitalizing the extension system in the country for providing value added extension services to the farmers through additional qualified manpower and adequate infrastructure. The present agricultural extension services suffer from inherent difficulties both in the terms of quality and quantity of skilled manpower. Quantitatively speaking, the current farmers to extension worker ratio has been worked-out as 1000 : 1 which means that for every 1000 farmers ,there is only 1 extension worker in the country (Global Agrisystem, 2010). Under such circumstances it becomes really difficult for an extension worker to provide quality services to a large number of farmers and as a result, the quality time of an agricultural extension worker available to each farmer becomes indeed minimum and inadequate. The National Institute of Agricultural Extension Management (MANAGE) also observed that around 15,000 agri graduates pass out every year from Agricultural Universities of the country and only around 2,500 agri graduates are able to find jobs in public and private sectors. Thus, every year around 11,500 agri graduates remain unemployed and are available for supporting agriculture and allied sectors. Apart from this, only about 20 per cent of the agricultural extension workers under the changed scenario, find it very difficult to address the complex issues of agriculture. In this background, the ACABC was pressed in to service for the benefits of the farmers *w.e.f.* April, 09/2002. The programme was designed to help develop opportunities for private extension, to lower the burden on public funding, to offer a wider range of advice in specialized areas and

Table -1.1

**Information Regarding Agriclincs and Agribusiness Centres (ACABCs) in India**

Sl.No	Particulars	Explanation
1.	Recommendation of Agriclincs and Agribusiness Centres Scheme by the Committee	M.S. Swaminathan Committee
2.	Date of announcement of scheme by the Union Finance Minister	28 <sup>th</sup> February, 2001
3.	Date of launching of the Scheme	9 <sup>th</sup> April, 2002
4.	Eligibility Criteria	Graduate in agriculture and allied subjects
5.	Implementing Agencies	MANAGE, NABARD, Department of Agriculture, Nodal Training Institutes (NTIs) and Commercial Banks
6.	Subsidy and margin money under the scheme	Subsidy- 33% for general candidates and 44% for SC/ST/Women candidates. Margin- Accordance to RBI guideline

*Source: Bairwa Lal, S, et.al (2014): Present Status of Agriclincs and Agribusiness Centres Scheme in India : An Analysis*

to develop challenging job opportunities for agricultural graduates. Table-1.1 summarized the general information on Agriclincs and Agribusiness Centres (ACABCs) in India.

**ACABC Scheme Structure**

The scheme is operated by a number of entities that perform their individual task for successful implementation. Below is the diagrammatic explanation of the roles and responsibilities of each of the entities:

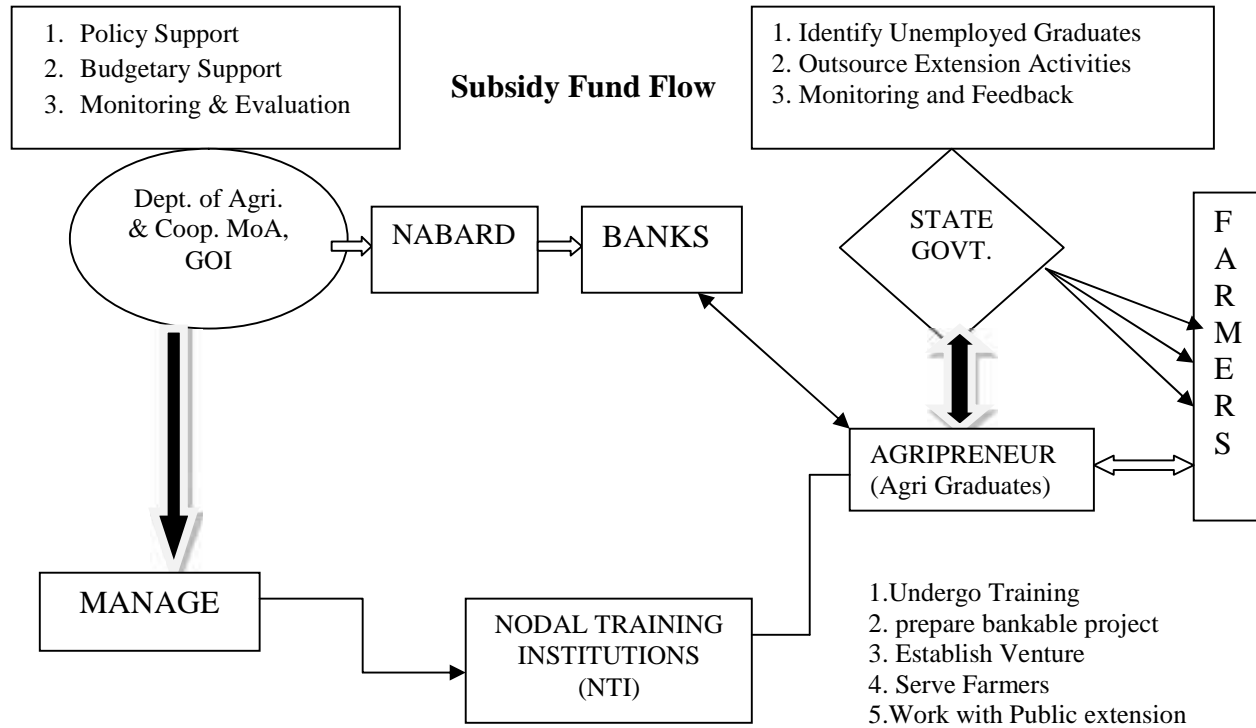
The Department of Agriculture and Cooperation, MOAFW, Govt. of India provides the fund for this scheme through its extension division.

The MANAGE is the monitoring and overall implementing agency of this scheme. It is responsible for reviewing the performance of the nodal institutes; decide upon the training content, methodology and duration. It also constitutes the selection committee for choosing the eligible candidates and set the criteria for selection of nodal institutes.

Nodal Institutes are selected by the MANAGE for conducting training programmes for selected agricultural graduates and assist them in preparing bankable project.

The Banks (nationalized/ commercial/ cooperative and regional rural banks) who would be the financing institution in the scheme are responsible for processing of loan

**Agri- Clinic and Agri- Business Centres (ACABC) Model**



1. Develop Training Modules
2. Identification of Training Institutes
3. Selection of Candidates
4. Assess and Certification
4. Monitoring and Evaluation
5. Linkages with NABARD & Agri. Business Firms

1. Selection of candidates
2. Training & handholding
3. Monitoring & feedback
4. Liaise with Banks & Industries

proposals and finally finance the approved ones against the trained agricultural graduates under the scheme.

The NABARD acts as the nodal institute, and is responsible for monitoring credit support to Agri clinics through the above mentioned banks.

Agripreneurs are the ultimate beneficiary of the scheme. They are the agricultural graduates and post graduates and after undergoing a rigorous training under this scheme provide specialized extension and other services on fee-for-service basis and supplement the

efforts of the public extension system by raising economically viable enterprise (s) in self employment mode.

The State Government's participation comes in the form of giving priority to the trained graduates in obtaining license for agri-inputs and facilitating involvement of ACABCs in state extension services.

### **I.3.Growth in ACABC Scheme (2002-2016)**

Agriclinics and Agribusiness Centres provide agricultural advisory services to the farmers through trained agricultural graduates at the village level, known as“ agripreneurs”. The Central Government provides 33 per cent of the total cost of the project as subsidy. The ACABC programme is evolved from the perceived need of farmers on the basis of locally available, reliable, effective and knowledgeable third- party advice. The objectives of the programme are to supplement the public extension system, increase the availability of inputs and services for farmers and provide employment to agriculture graduates. This programme aims at to fill up the gaps in the public sector extension system where in input dealer plays a major role in providing advice to the farmers about input use. The ACABC centres provides a package of inputs consultancy and other services in order to strengthen the transfer of technology process through on efficient extension service network .

Agriclinics and Agribusiness Centres scheme is steadily gaining popularity among the agri graduates and has started serving meaningfully in some part of the country, by supplementing the public extension system. Till date, the number of trained people under ACABC scheme stands at 48,557. The ACABC Scheme has been implemented successfully in 32 states in the country and agriventures have been established in 31 states under 32 different categories related to agriculture and allied sectors. The number of agriventures established during the period is estimated at 20,999 depicting a success rate of 43.67 per cent. It was noted that 1,540 number of training programme were successfully conducted under the scheme since its inception . It may be mentioned here that there are 74 Nodal Training Institutes (NTIs) identified by the MANAGE all over the country for training purpose. Table-1.2 shows the status of Agriclinics and Agribusiness Centre scheme in India up to September, 2016.

The district wise number of agri-ventures established in Assam during the period of 2003-04 to 2016-17 is worked out and presented in Table-1.3. Although ACABC scheme



**Table-1.2****Overview of Agriclincs and Agribusiness Centre Scheme as on September, 2016**

Name of the State	No. of Training Programme Completed	No. of Agri-venture established	No. of Trained Graduates	No. of Nodal Training Centres
Maharashtra	336	5,310	11,205	15
Uttar Pradesh	310	5,214	10,053	8
Tamil Nadu	164	2,966	5,665	6
Bihar	102	1,246	3,422	2
Karnataka	98	1,302	3,102	7
Rajasthan	89	1,024	2,764	3
Gujarat	53	557	1,486	2
Telangana	51	363	1,034	3
Jammu and Kashmir	45	176	1,333	2
Madhya Pradesh	44	576	1,486	5
West Bengal	28	256	855	3
Jharkand	24	163	632	2
Assam	22	209	666	1
Haryana	21	205	614	1
Punjab	20	203	566	1
Pondicherry	19	77	126	1
Orissa	18	106	521	1
Chattisgarh	18	253	543	3
Andhra Pradesh	17	321	846	2
Manipur	16	128	437	1
Uttaranchal	15	140	417	1
Himachal Pradesh	13	108	418	0
Kerala	7	51	184	1
Nagaland	6	21	174	1
Meghalaya	1	3	11	0
Sikkim	1	1	9	1
Mizoram	1	0	34	0
Arunachal Pradesh	1	3	32	1
Goa	0	4	9	0
Delhi	0	3	26	0
Tripura	0	1	2	0
Chandigarh	0	1	3	0
Total	1540	20,999	48,557	74

Source: ACABC Cell, MANAGE

was started in Assam during 2002-03, no agri-venture was established in the same year. During 2003-04, 4 numbers of agri ventures were established. After that, the number of agri-ventures gradually increased and highest number of agri-ventures established in 2009- 10 (42 nos.) followed by 2012-13 (32 nos.). Table shows that till the year 2016-17, total 209

**Table-1.3**  
**District-wise number of Agri-Ventures Established during 2003-04 to**  
**2016-17 in Assam**

Sl. No.	Districts	No. of Ventures Established during 2003-2016														Total
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
1	Baksa								1							1
2	Barpeta					1	1	1	1	1	1			2	1	9
3	Bongaigaon							1	1					1	1	4
4	Cachar															
5	Chirang															
6	Darrang					1	2	1			4	2	1	1		12
7	Dhemaji					1		2	2	2	1			1		9
8	Dhubri	1				1						2	1	1		6
9	Dibrugarh							1	1		1					3
10	Goalpara						1	1	1							3
11	Golaghat		1	1				2				1		1		6
12	Hailakandi															
13	Jorhat	1	2		2			1	1				1		1	9
14	Karbi-Anglong															
15	Kamrup	1		1	1	8	6	15	12	3	6	6	3	4	2	68
16	Karimganj															
17	Kokrajhar						1									1
18	Lakhimpur			1				1	1	1	5	1	1	1	3	15
19	Marigaon							2	1		4					7
20	Dima Hahao															
21	Nagaon					1	3	8	1	2	3	1	1			20
22	Nalbari					2	1	4	3	1	2	2	1		1	17
23	Sibsagar							1				1	1			3
24	Sonitpur	1	1	1		1	2	1	1		4			2		14
25	Tinsukia											1				1
26	Udalguri										1					1
All Districts		4	4	4	3	16	17	42	27	10	32	17	10	14	9	209

*Source: ACABC Database*

agri ventures established across the state.

District wise distribution of agri-ventures established successfully during the period of 2003-04 to 2016-17 is also presented in the Table. Out of the total 209 agri-ventures established so far in Assam, highest number is found in Kamrup district (68) followed by

Nagaon (20), Nalbari(17) and Lakhimpur (15) district. Not a single agri -venture established so far in the districts of Cachar, Chirang, Karimganj, Hailakandi, Karbi- Anglong and Dima Hasao although, few number of agri graduates took training under the ACABC scheme.

From the above analysis, it may be concluded that, the ACABC scheme has become popular in many parts of the country, it is yet to make any significant headway in the state of Assam. As compared to the agri-graduate trainees, the number of ventures established is not satisfactory and Government should give more attention on the north eastern states, where the overall performance of agriclinics and agribusiness centres scheme was reported very poor. Suitable policies should be form especially for these states for the proper implementation and improvement in the performance of ACABCs scheme, so that the objectives of scheme can be achieved effectively and efficiently.

#### **I.4. Contribution of ACABC Scheme in Agricultural Extension Services**

It is important to disseminate information about new technologies so that the farmers can make use of the latest agricultural techniques. There also exists a gap between research findings and the actual needs of the farmers. For technology to be successful, it must serve the purpose of the end users. The institution that bridges the gap between the farmers and agricultural research scientists is the Agricultural Extension Service.

The main objective of the Agricultural Extension Services (AES) is to transmit latest technical know-how to the farmers. Monitoring the farmers towards modern agro-techniques with enhanced productivity is yet another goal of the AAES. This is done through training, farm visits, on farm trials, kisan melas, kisan clubs, advisory bulletins and the like.

It is seen that ACABC Scheme contributes a lot in providing agricultural extension services to the farmers of the country. As per the mid - term evaluation conducted by Global Agrisystem Private Limited in respect of Agriclinics and Agribusiness Centres Scheme, “ ACABC has generated 4,152 established agripreneurs, in turn these employed agriculture graduates have created further 25,000 jobs across segments and benefitting more than 1 lakh farmers in more than 7,000 villages across the country.” (Global Agrisystem, 2010).

Table- 1.4 depicts the state - wise and activity- wise number of agri ventures established in the country. It was observed that Maharastra, Uttar Pradesh, Bihar, Karnataka

**Table -1.4**  
**Activity Wise Number of Agri Ventures Established Across the Country**

Name of the Agri-Venture	AP	ARN	ASS	BHR	CHA	CHD	DEL	GOA	GUJ	HP	HRN	JAM	JHA	KAR	KER	MAN	MEG
01. Agri-Clinics	127		23	155	20	1			39	12	20	11	72	191	16	6	
02. Agri-Clinics and Agribusiness Centres	67	2	30	494	63		1	1	253	25	97	49	26	426	7	25	2
03. Agro-Eco Tourism								1	1					1			
04. Animal Feed Unit	1		2	1					1			2		6			
05. Bio-fertilizer production and Marketing	3		1	3					4		1			15	1		
06. Contract Farming	5				2				1	1	2			13			
07. Cultivation of Medicinal Plants	1		1	16	3					4			2	14			
08. Direct Mkt.	1		1	6	2				6	3		3		16			
09. Farm Machinery Unit	8		3	11	8				32	16	9	8	1	28	1	2	
10. Fisheries Development	4		4	104	34				1	1	3	2	7	12	14	10	
11. Floriculture					1				3	5		7		21			
12. Horticulture Clinic	3			6	3					7	2	3	2	23		2	
13. Landscaping + Nursery	2		1	1				2	1	1	1	4		15	3		
14. Nursery	11		5	21	3				13	8	7	11	2	45	3	8	
15. Organic Production/ Food Chain				3	3				4					20		2	
16. Pesticides Production and Marketing				1					4				1	10			
17. Value Addition	4		2	38	6				5			11	1	10		2	
18. Fishery clinic	1			4									1				
19. Seed Processing and Marketing	13		1	28	10		1		19	3	12		1	56	1	1	
20. Soil Testing Laboratory	2		1	23	1		1		6		1		1	12			
21. Tissue Culture Unit	2													11			
22. Vegetable Production and Marketing	1		1	1	21				3	9	7	2	8	7		2	
23. Vermicomposting / Organic manure	7		5	125	3				6	1	3	2	6	39	2	2	
24. Veterinary Clinics	2		92	66					17	2	6	23	16	11		28	1
25. Crop Production	3		1	3	11				3		1	5		27		1	
26. Dairy/Poultry/Piggery / Goatary	50	1	35	107	56				130	8	18	24	13	253	3	18	
27. Rural Godown				5										2			
28. Production & Marketing of Bio-Control Agents									1					4			
29. Agriculture Journalism	1				1				2					3			
30. Sericulture	1												1	7		19	
31. Mushroom Cultivation				16	2				1	2	3	6	2	2			
32. Apiary	1			8					1		14	3		2			
<b>Total</b>	<b>321</b>	<b>3</b>	<b>209</b>	<b>1,246</b>	<b>253</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>557</b>	<b>108</b>	<b>207</b>	<b>176</b>	<b>163</b>	<b>1,302</b>	<b>51</b>	<b>128</b>	<b>3</b>

*Contd.....*

Name of the Agri-Venture	MP	MS	NAG	ORS	PON	PUN	RAJ	SKM	TG	TN	TRI	UP	UTC	WB
01. Agri-Clinics	61	898	1	27	16	29	146		86	595		636	18	25
02. Agri-Clinics and Agribusiness Centres	169	1,422	3	20	17	32	163	1	87	605		2,611	26	47
03. Agro-Eco Tourism		7								1				
04. Animal Feed Unit	1	16	1						1	5		9	1	
05. Bio-fertilizer production and Marketing		30		2	1		9		9	9		12	2	
06. Contract Farming	1	1				1			6	21		11	1	
07. Cultivation of Medicinal Plants	3	6		2	1	1	31		5	10		12		
08. Direct Mkt.	4	66		4			5		2	8		38	2	1
09. Farm Machinery Unit	46	207		3	2	3	14		8	89		196	7	11
10. Fisheries Development	3	40		5	7		2		4	43	1	30	1	18
11. Floriculture		33				4	3		2	14		8	4	3
12. Horticulture Clinic	5	62			2	1	1		11	26		11		
13. Landscaping + Nursery	1	46		1	4		1		3	24		1	1	
14. Nursery	8	164		6	1	11	15		10	91		53	2	8
15. Organic Production/ Food Chain	1	15		1	2	6	8			13		10	1	
16. Pesticides Production and Marketing	2	14					3		2	1		2		
17. Value Addition	8	121	3			4	10		1	22		27	3	2
18. Fishery clinic		3								6				
19. Seed Processing and Marketing	13	24		3	2	27	14		31	31		39		7
20. Soil Testing Laboratory	2	16		1		1			1	25		5		3
21. Tissue Culture Unit	1	8		4						2				
22. Vegetable Production and Marketing	7	33		2		17	6		7	21		57	3	35
23. Vermicomposting / Organic manure	6	82		1	2	17	71		12	43		53	6	1
24. Veterinary Clinics	1	323	7	2	3		83		6	152		22	3	10
25. Crop Production	11	41		11			49		2	13		11	2	2
26. Dairy/Poultry/Piggery/Goatary	219	1,601	6	4	12	57	385		65	1,044		1,251	54	77
27. Rural Godown	2	8					1			3		28		
28. Production & Marketing of Bio-Control Agents		4								1		9		
29. Agriculture Journalism	1	3					1		2			2		
30. Sericulture		13								7				1
31. Mushroom Cultivation		3		6	5		1			39		5	2	5
32. Apiary				1		1	2			2		65	1	
<b>Total</b>	<b>576</b>	<b>5,310</b>	<b>21</b>	<b>106</b>	<b>77</b>	<b>212</b>	<b>1,024</b>	<b>1</b>	<b>363</b>	<b>2,966</b>	<b>1</b>	<b>5,214</b>	<b>140</b>	<b>256</b>

Source: ACABCDatabase

and Tamilnadu are the leading states in overall performance of Agriclincs and Agribusiness Centres scheme. These states have maximum number of trained candidates, agriventure established, nodal training institutes and number of training completed under the scheme. Maharastra was found to top the list in terms of candidates trained (11,205 Numbers) followed by Uttar Pradesh (10,053 numbers), Tamilnadu (5,665 numbers) and Bihar (3,422 numbers). Of the total agriventures established under ACABCs, Maharastra again led the country with 5,310 numbers followed by Uttar Pradesh (5,214 nos.), Tamilnadu (2,966 nos.) and Karnataka (1,302 nos.). On the other hand, the performance of the north eastern states and union territories of the country was found far from satisfactory level may be due to various reasons such as lack of periodical inspection of training programme, lack of finance, lack of positive attitudes towards agri-clincs and agribusiness ventures *etc.*

The MANAGE has identified as many as 32 agricultural projects for Agrigraduates as businesses opportunities under Agriclincs and Agribusiness Centres scheme. Among all agri ventures, Agriclincs and Agribusiness Centres tops the list (6771) as opted the trained Agrigraduate, followed by Dairy/poultry/piggery Unit (5439), Agri Clinics (3185), Veterinary Clinics (875), Farm Machinery Units (713), Nursery (506) and Vermicomposting & Organic Manure (495). The other ventures under this scheme are not generally preferred by the agri graduates largely due to lack of product demand, lack of conducive environment and viability.

From the above discussion, it may be concluded that ACABC scheme is contributing a lot in terms of providing extension services to the farmers across the country. Agricultural extension programmes under ACABC scheme are conducted to make the farmers aware of the activities of the chosen ventures, to motivate the farmers to go for modern agro-techniques and to strengthen the linkages amongst farmers, extension officers and researchers by providing need- based consultancy services to the farmers *etc.* Most of the agriventures under ACABC scheme are established with the objectives of increased productivity, employment and income level which in turn help in economic upliftman of the farming community. Thus, the Agriclincs and Agribusiness Centre (ACABC) is an innovative scheme which gives an opportunity to the agricultural graduates to become agripreneurs through entrepreneurship development training with matching financial support in order to supplement agricultural growth & extend broad-based extension services to the peasant community.

## **I.5. About the MANAGE**

National Institute of Agricultural Extension Management (MANAGE) is an autonomous body under the Ministry of Agriculture (MOA), Government of India and it has been appointed as the implementing agency of ACABC scheme. The aim of the institute is to instill managerial and technical skills to Extension Officers, Scientists and Administrators in the agricultural economy, to enable them to provide support and services to farmers for practicing sustainable agriculture. The implementing agency MANAGE broadly performs four different activities, i.e. 1. Selection of Nodal Institutes 2. Preparation of Training modules 3. Monitoring the performance of the Nodal Training Institutes and 4. Managing and releasing of funds. The parameters on which the performance of MANAGE has been assessed is based on its roles and responsibilities.

The MANAGE was established in 1987, as the National Centre for Management of Agricultural Extension at Hyderabad, by the Ministry of Agriculture & Farmers Welfare, Government of India as an autonomous institute, from which its acronym 'MANAGE' is derived. In recognition of its importance and expansion of activities all over the country, its status was elevated to that of a National Institute in 1992 and re-christened to its present name i.e., National Institute of Agricultural Extension Management. The MANAGE is India's response to challenges of agricultural extension in a rapidly growing and diverse agriculture sector. The policies of liberalization and globalization of the economy and the level of agricultural technology becoming more sophisticated and complex, call for major initiatives towards reorientation and modernization of the agricultural extension system. Effective ways of managing the extension system needed to be evolved and extension organizations enabled to transform the existing set up through professional guidance and training of critical manpower and MANAGE is the response to this imperative need.

### **Mandate of MANAGE**

The mandate of MANAGE vests the institute with the responsibility to work in the following directions:

- J Developing linkages between prominent state, regional, national and international institutions concerned with agricultural extension management
- J Gaining insight into agricultural extension management systems and policies
- J Forging collaborative linkages with national and international institutions for sharing faculty resource

- J Developing and promoting application of modern management tools for improving the effectiveness of agricultural extension organizations
- J Organizing need based training for senior and middle level agricultural extension functionaries
- J Conducting problem oriented studies on agricultural extension management
- J Serving as an international documentation center for collecting, storing, processing and disseminating information on subjects related to agricultural management.

### **I.6. Need and Scope of the Study**

With different agro-climatic zones, India offers congenial ambience for growing a wide range of agri-horticultural, marine livestock and dairy produce. It has also provided trend in non-conventional farming practices like organic farming, hybrid seed production, exotic vegetables, medicinal and herbal plants, spices, floriculture etc. In modern time, more emphasis has been given in commercial cultivation of crops for better profit rather than conventional crops cultivation with lesser profit. In a nutshell, farmers are shifting from food crops to non-food crops for which they need high investment and technical information which is not readily available in the existing extension service networks. So, they look for other alternative agencies and have ready to pay for such service, which is vital to make profit. Farmers need advice to solve specific problems in the field and the ACABC can makes substantial contribution to resolve those issues.

In India, there are many national and state level R & D organisations in agriculture and allied fields. India has agricultural universities which are continuously engaged in development of technologies for the farming community. The proven technologies can be advantageously used through ACABCs for further development of this sector.

### **I.7. Objectives of the Study**

Keeping in view the importance of the subject, the objectives of the present study has been framed as under-

1. To identify the benefits accrued to farmers through extension services by ACABCs.
2. To analyse comparative effectiveness of extension services to beneficiary farmers by ACABCs and non-beneficiary farmers of the same area.
3. To assess the extent of effects on income of beneficiary farmers through extension services by ACABCs and the income of non-beneficiary farmers.
4. To examine the problems / factors hampering the effects of extension services on farmers by ACABCs.



5. To explore measures and suggestions for strengthening extension services by ACABCs more effective to farmers.
6. To suggest changes in imparting extension services to farmers under the ACABCs Scheme.

### **I.8. Organization of the report**

The Report comprises of six chapters. The first chapter is the introductory chapter covering the concept of Agri-Clinics and Agri. Business Centres (ACABC) in the country, growth of the ACABC scheme and contribution of ACABC Scheme in agricultural growth of the country. It also includes the objectives and scope of the study. The second chapter contains the review of literature on different aspects of ACABC scheme. This chapter is based on secondary level information collected from various research journals and magazines. The third chapter is mainly confined with the various aspects of ACABC scheme in Assam such as status of ACABC scheme in the State, trend of growth of ACABC Scheme since inception, contribution of ACABC Scheme in agricultural development of the State along with a brief profile of the State covering agriculture and allied sector.

In the fourth chapter, an attempt has been made to analyse the method and procedures of the present study i.e. sampling design, method of investigation and survey of the area under study, method of analysis of data along with the reference period. Results of the data analysis and discussion are presented in the fifth chapter.

The sixth chapter deals with the major findings of the impact study on agricultural extension services to farmers by Agri-Clinics & Agri-Business Centres with some policy implications and conclusions. Following is the chapter wise and point wise details of chapter plan.

#### **Chapter-1:- Introduction**

- I.1. Statements of the Problem under study
- I.2. Concepts of Agri-Clinics and Agri. Business Centres.
- I.3. Growth in ACABC Scheme (2002-2016)
- I.4. Contribution of ACABC Scheme in Agricultural Extension Services to the farmers of the country.
- I.5. About the MANAGE Nodal Training Institutes (NTIs), Agri. Ventures and Agri. Entrepreneurs
- I.6. Need and Scope of the study.

- I.7. Objectives of the Study
- I.8. Organization of the Report

**Chapter-II:- Review of Literature in Chronological Order**

**Chapter-III:- General Description of the Area under study and Status of ACABC Scheme therein.**

- III.1 Profile of the State
- III.2 Status of ACABC Scheme in the State
- III.3. Agricultural Extension Services provided to Farmers by Agri-clinics and Agri-Business Centres
- III.4 Contribution of ACABC Scheme in Agricultural Development of the State.
- III.5 ACABC Scheme at a glance in the State.
- III.6 Trend of Growth in ACABC Scheme since inception in the State (2002-2016)
- III.7 All other relevant latest information relating to ACABC Scheme in the State.

**Chapter-IV:- Method and Procedures of the Study**

- IV.1 Method of study
- IV.2. Sampling Design
  - IV.2 (a) Selection of States/Districts
  - IV.2 (b) Selection of Agri-Ventures
  - IV-2 (C ) Selection of Ultimate Sample Beneficiary and non-beneficiary farmers
- IV.3. Method of Investigation and Survey of the Area under study
- IV.4. Method of Analysis of Data
- IV.5. Reference Period of the Study
- IV.6 Table of Sampling Design

**Chapter-V:- Result and Discussion**

**Chapter-VI:- Summary of Main Finding, Conclusion and Policy Implication**

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## Chapter-II

### Review of Literature in chronological order

Some selected work undertaken in the part in the line is reviewed in following paragraphs:

Chandrashekhara, P(2003) in his study discussed the success stories of Agripreneuers and change in the attitudes of agricultural graduates due to the operation of Agriclincs and Agribusiness Centres in India. He identified 338 success stories in different projects throughout India and Karnataka on this count, contributed highest percentage followed by Andhra Pradesh and Tamil Nadu. He suggested a larger policy support from both Central and State Government, networking with private firms and NGOs, for greater success of ACABC in the country.

Rao and Rupkumar (2005) in their report on “Concurrent Evaluation of Agriclincs and Agribusiness (AACs) in Maharashtra” mentioned that the number of success stories by the end of October 2002 was 17 and the number had increased to 158 and 252 at the end of October 2003 and October 2004, respectively. They concluded that Maharashtra was the state which reported highest number of success stories of ACABCs in India by the end of October 2004.

Parimaladevi S.*et. al* (2006): tried to identify the socio-psychological characteristics of graduate trainees in agriculture contributing to the effectiveness of 'Agriclincs and Agribusiness Scheme'. A survey of 60 trainees from the agriclincs and agribusiness training programme of Kerala Agricultural University was conducted. Results revealed that the most important factors influencing establishment of agribusiness units were attitude towards self-employment, entrepreneurial ability, and self-confidence. Gender-related variations were also significant with regard to attitude towards self-employment, decision-making ability and information seeking behavior. The authors viewed that agribusiness training programmes should focus on changes in attitude towards self-employment, entrepreneurial ability and enhance self-confidence of the trainees, which in turn, would promote successful agribusiness ventures.

Chandra Shekara *et.al* (2007) conducted a study on “Impact of Agriclincs and Agribusiness Centers on the Economic Status of the Farmers in Uttar Pradesh and Maharashtra” based on the primary data collected from a sample of 107 farmers from Maharashtra and Uttar Pradesh. The results of the study indicated that majority of the

sample farmers received free advisory and quality input supply on time from the Agripreneurs. Cropping pattern shifts occurred in both the states due to the intervention of Agripreneurs, and this shift was more in Maharashtra. Around 90% of the farmers adopted improved technologies after obtaining services from Agripreneurs. These results pointed out that the yield of the sample farmers has gone up due to adoption of better package of practices based on the advice of the Agripreneurs. The income of the sample farmers accordingly was increased due to intensification, diversification, value addition, adoption of allied enterprises and better market linkage. Professionalism in agriculture extension brought by Agripreneurs contributed to the overall development of agriculture in both the sample states under study.

Rajashekhar *et al.* (2007) analysed the factors motivating the respondents to take up training under the ACABC scheme and it was revealed that self motivation for own business was the main factor in all the selected states except in Kerala and in South India as a whole. This was mainly due to the interest of the graduates to take up their own business. The second important factor in most of the selected states and in South India was found to be the efficient utilization of resources. This might be due to the technical knowledge of agripreneurs. Better institutional linkage was the third important factor identified by the authors as this training programme provided the linkage to financial institutions, agriculture department, NABARD, MANAGE, agricultural universities, successful agripreneurs, corporate companies and other institutions. Though the problem of unemployment was equally important, it was in fourth rank in most of the selected states and also in South India as a whole.

Ahire *et al.* (2008) in their study, "Perception of Agripreneurs on Centrally Sponsored Schemes of Agri-Clinics and Agri-Business Centres" wanted to know the personal profile of the trained agripreneurs, their opinion on training components and to study the problems encountered by the agripreneurs under ACABC scheme. They found that majority of the agripreneurs were of the view that the training programme was practical oriented to a great extent. It was also rated by 94 per cent of the agripreneurs as good to excellent on qualitative aspect. Regarding change in attitude of the agriculture graduates, majority (90.00%) of the agripreneurs perceived that the training programme helped them towards the establishment of different agri-based enterprise. Majority (60.00%) of the agripreneurs were satisfied with the existing duration of 60 days of training programme under the ACBCA. More than 50 per cent of the agripreneurs expressed their

opinion that the training enhanced their skills and knowledge on management of agribusiness.

Rajashekhar, K. *et.al* (2009) examined the problems faced by trained agribusiness entrepreneurs in establishing and running their agribusiness ventures. Data were collected in south India from 99 trained agribusiness entrepreneurs who had not started their venture and 46 who had already established theirs. High rate of interest, lack of subsidy component and lack of hand holding support from the training institutes were the major problems faced by the agribusiness entrepreneurs in establishing their agribusiness ventures. On the other hand, heavy competition from the well-established dealers, non-cooperation of the farmers in repaying credit and insufficient cash on hand while starting the business were the major problems in running the start-up ventures.

Global Agrisystem (2010) team conducted an “Evaluation study on Agriclincs and Agribusiness Centers (ACABC) in Himachal Pradesh”. They found that apart from providing employment to agriculture graduates, the ventures set up by them had helped in providing gainful employment, both direct and indirect, to several people, depending on the nature of enterprise. On an average about 3 persons were employed under each enterprise with 80 per cent receiving direct employment. This created employment opportunities of about 32,890 man days per annum from all the enterprises set up with assistance under the scheme.

NABARD (2010) conducted an evaluation study on Agri Clinics and Agri - business Centres in Mandi district of Himachal Pradesh. They found that the agribusiness centers (input suppliers) have been successful in imparting knowledge to the farmers on the new and scientific methods of farming, thus leading to an increase in the production per hectare and the farm income. In case of other type of agripreneurs also, timely advice on production technology, income enhancement, reduction in production cost and increase in productivity are reported to be the major benefits of the scheme. They viewed that though, the objective of technology transfer has been met to some extent, yet there is a need to involve private extension staff in the entire production, processing, transporting and marketing chain. They suggested that to ensure long-term viability and sustainability of the agripreneurs, the banks may engage them as Business Facilitators and use their technical/advisory services for identification of prospective borrowers and appraisal of loan applications.

Ahmed, T. *et.al* (2011) studied on “Entrepreneurial Characteristics of the Agripreneurs under the Scheme of Agri-Clinic and Agri-Business Centres” and

concluded that entrepreneurial characteristics like achievement motivation, leadership ability, management orientation and information seeking behavior were the important areas of training for the agripreneurs. Majority of the respondents (70%) had medium level of achievement, motivation, 60% had medium level of risk taking ability, 70 % respondents had medium level of innovativeness towards the developmental activities and new technologies in the agri- enterprises. Majority of the agricultural graduates were found to have moderate level of entrepreneurial characteristics like achievement motivation, leadership ability, self confidence, decision making ability *etc.*, They were of the view that necessary steps should be adopted to strengthen the entrepreneurial ability . It was suggested that for competing in national and international markets, agriculture needs to function with entrepreneurial approach.

Chargotra, Meenakshi and K.L. Dangi (2011) conducted a study on “Aspiration Level of the Agriculture Graduates regarding Agri- Clinics and Agri Business Centres” in the state of Rajasthan. They collected data from 110 number of respondents classified them in to three categories, *viz.* successful entrepreneurs who contributed to their enterprises (EC), defaulter entrepreneurs (ED) and the trained graduates who did not start the enterprises (EN). The results of the study indicated that altogether 75 (68.20 per cent) agriculture graduates possessed medium level of aspiration towards agri-clinics and agri-business centres (ACABCs). Another 19 (17.30 per cent) respondents expressed high aspiration and the remaining 16 (14.50 per cent) indicated low aspiration towards ACABCs. EC comparatively visualized encouraging aspiration compared with ED. No respondents (EN) expressed high aspiration. The authors felt that the scheme of ACABCs must be continued as majority of sample beneficiaries expressed high level of aspiration about the scheme and the young graduates are needed to persuaded and motivated for ACABCs during their training period.

Manish, K *et.al* (2011) conducted a study on attitude of the agricultural graduate towards Agri-clinic and Agri-business Centers in Arunachal Pradesh. The study was conducted in purposively selected five running centres of agri-clinic and agri-business namely, West Siang, Upper Subansiri, Lower Subansiri, West Kemeng and Tawang. Data were collected from three categories of respondents *i.e.* successful entrepreneurs, unsuccessful entrepreneurs and agricultural graduates who not started enterprise. Results of the study revealed that majority of the respondents (75.50%) had most favourable attitude towards ACABCs in three selected categories of respondents. Nearly 14.50 per cent of the total respondents remained undecided and the remaining 10

per cent of the respondents displayed highly unfavourable attitude towards ACABC. The study revealed that there was a significant difference in attitude of three above - mentioned categories of respondents. The moderately favourable attitude of the agriculture graduates led to the recommendation that there was a need to put more efforts to bring the youth under most favourable attitude toward the skill development.

Shekhara *et al.* (2011) viewed that the manpower available in the form of unemployed agriculture graduates could be channelized for strengthening the extension services to the farmers and at the same time spout their potential and expertise on paid service basis by making them as entrepreneurs through economically viable agriventures. In order to address these issues, Agriclincs and Agribusiness Centres Scheme (ACABC) was launched on 9th April, 2002 to create profitable self-employment opportunities to unemployed agricultural graduates, support agriculture development and supplement the efforts of public extension services.

Planning Commission, Government of India (2012) conducted a study on “Agricultural Extension for Agriculture and Allied Sectors for the Twelfth Five Year Plan (2012-17)”. They found that, in most states, the ACABCs had been able to support & strengthen the State Governments extension efforts. The farmers under ACABC programme viewed that the Agripreneurs could play important role in increasing the productivity and in turn increasing their income. Agri-clinics equipped with new /advanced knowledge had better problem solving abilities, and ventures involved with input supplies had improved the access of farmers to better inputs. The working group estimated that besides generating self-employment to 4,152 graduates (number of ventures set up at the time of study), each agri-clinic had provided employment to 6 persons.

Kumari, Vinaya (2013) conducted an evaluation study of Agriclincs and Agribusiness Centres Scheme in Andhra Pradesh. The results of the study indicated that, despite facing stiff competition from other similar units (with owners having non-agriculture education background), the agripreneurs were able to attract the farmers due to expert advice regarding proper use of inputs and free consultancy services along with good quality inputs. The agripreneurs were of the view that the agribusiness centers (input suppliers) had been successful in imparting knowledge to the farmers on the new and scientific methods of farming, thus led to an increase in production and farm income. In case of other type of agripreneurs also, timely advice on production technology, income enhancement, reduction in production cost and increase in productivity were

reported to be the major benefits. Apart from providing employment to agriculture graduates, the ventures set up by them had helped in providing gainful employment, both direct and indirect, to several people, depending on the nature of enterprise. Income of the sample farmers has gone up due to intensification, diversification, value addition and better market linkage.

Bairwa S.L *et.al* (2014) analysed the “Status of Agriclincs and Agribusiness Centers Scheme in India” based on the secondary data collected from various journals, research articles and websites. The study revealed that although, Agriclincs and Agribusiness Centres Scheme became popular among the agrigraduates due to specialized training, credit facility, subsidy and handholding support for the establishment of agribusiness/agriventure, the success rate of total agriventure establishment was low against the total number of trained candidates in the country. The success rate was only 37 percent against 30,977 trained candidates including male and female candidates. The authors felt that agri graduates engaged in the agribusiness should receive regular support and guidance from the agricultural department, MANAGE and NABARD for improvement in the performance of ACABCs scheme. It was also opined that there should be a state level coordination committee between MANAGE and Nodal Training Institutes in order to ensure smooth implementation, monitoring and evaluation of the training programme under the Agriclincs and Agribusiness Centres Scheme in India so that the objectives of scheme can be achieved effectively and efficiently.

Chandra Shekara *et.al* (2014) conducted a study on “Effectiveness of Agri Clinics and Promoting Paid Extension Services among Farmers” in 12 districts of Uttar Pradesh where Agri Clinics were found to be running with a considerable amount of success. According to the authors, Agri Clinic’s influence on farmers’ extent of adoption of recommended practices was reflected in increased yield of the crops and enhanced profit. The increase in yield rate was recorded for about 29 crops being cultivated in varying proportions by the beneficiary farmers. The increase in yield was highest in papaya (100 %) cultivation and lowest in Marigold (11.11%) cultivation. They found that profit increase was quite impressive almost for all the crops. It was found highest in Bajra (86.37%) and lowest in Coccinia vegetables (21.25%) before and after the availability of agri clinic services. The authors also found that 85-100 per cent farmers were very highly satisfied with 6 out of seven items considered for assessing farmers’ satisfaction. All the farmers were very highly satisfied with the fairness and competence of the Agri clinic entrepreneurs and their effective capacity in solving field problems.



About 91-93 per cent farmers were also highly satisfied with the provision of appropriate technology and timely supply of proper inputs. 89 per cent of the farmers were highly satisfied with training programmes and demonstrations, 85 Per cent were highly satisfied with proper advice and more than 74 per cent were highly satisfied with timeliness of other extension services. The authors concluded that since the ACABC was a new set of approach, it was expected that it would strengthen the Indian extension system and enhance the productivity, income and satisfaction in years to come.

Bairwal. S, *et.al* (2015) studied on “Problems faced by Agripreneurs in starting and operating Agriventures under ACABCs in Rajasthan State” and found that lack of own money to start enterprises, lack of proper handholding support from NTIs, lack of family support, lack of business and field experience, high rate of interest on loan and a lot of formalities in getting bank loans were the major problems in establishing agriventure, while heavy competition from existing market players, marketing and infrastructural problems, perishability and seasonability of products, fluctuation in demand and prices of products, illiteracy and lack of knowledge of the farmers and insufficient cash in hand to run the business were the major problems faced by agripreneurs in operating agriventure.

T. Ravindra, and Agarwal, Sweta (2015) opined that a farmer to become a successful agripreneur needs to be active, curious, determined, persistent, visionary, hard working, come up with ideas, communicative with strong management and organizational skills, recognize suitable marketing opportunities, manage the optimum resources or bearing the risk. Agripreneurship is greatly influenced by three factors namely, the economic situation, education and culture. The socio-economic analysis of agripreneurs and traditional farmers in selected districts of Uttar Pradesh clearly indicates that if the right environment is created and farmers are provided with good infrastructure, technology and timely availability of credit through financial institutions it can enhance food production and can ensure food security, income and quality of life for the farmers. Contrary to common beliefs, the skills associated with agri-business are not necessarily innate but the farmer can develop it through education and training. They need to put in continuous effort to update their skills and competencies which basically includes self initiative, good decision making, problem solving, opportunity seeking, ability to focus on customer demands, self confidence *etc.* Farmers need to acquire knowledge in each of the key areas of farm management which include planning, implementing and controlling. They also need information about primary agricultural techniques and methods like

production, harvesting, processing, wholesaling and retailing, financial services, transport, packaging, promotion and advisory services.

From the above analysis, it becomes clear that almost all the researchers and scholars found the ACABC scheme to be very effective and beneficial for the farmers. It provides value added extension services at the doorstep of the farmers through the unemployed agricultural graduates. Direct impact has been created by the scheme by providing self employment to the agriculture graduates through setting up of different ventures. The agripreneurs trained under ACABC scheme are actively involved in providing advisory and extension services to the farmers on improved technologies relating to soil health, cropping practices, plant protection, post harvest technology *etc.* However, it was felt that agri graduates engaged in the agribusiness should receive regular support and guidance from the State Agricultural Department, MANAGE and NABARD for improvement in terms of performance. There is also a need for establishment of a state level coordination committee comprising the MANAGE and the Nodal Training Institutes in order to ensure smooth implementation, monitoring and evaluation of the training programme under the ACABC Scheme.

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### Chapter-III

#### **General Description of the Area under study and Status of ACABC Scheme therein**

In this chapter, an attempt has been made to provide some basic information of the area under study and the status of ACABC Scheme in the state.

#### **III.1 Profile of the State: Assam**

Assam is one of the eight states of North-East India. It is situated in the sub-tropical zone lying in between 24<sup>0</sup> 08' N and 27<sup>0</sup>09'N latitude and 89<sup>0</sup>42'E and 96<sup>0</sup>10'E longitude. The state is bounded on the north by Bhutan and Arunachal Pradesh; on the east by Arunachal Pradesh; on the south by Nagaland, Mizoram and Meghalaya; on the west by West Bengal and on the southwest by Bangladesh. Broadly, Assam consists of three physiographic divisions – the Brahmaputra Valley, Barak Valley and Hills region. The Brahmaputra valley covers an area of 56,339 sq.km. which is 72.0 per cent of the total geographical area. Barak valley has an area of 6,962 sq.km. accounting for 9.0 per cent and hill region covers an area of 15,222 sq.km. constituting 19.0 per cent of the total geographical area of the State.

Agriculture is considered as the mainstay of the economy of Assam. Agriculture and allied activities in Assam have overriding importance as source of livelihood to its people. It still contributes more than one fourth (26.19 %) to the State's Net Domestic Product (NSDP) and supports about 70 Per cent of its population. The net cropped area of the state is 28.09 lakh hectares with a gross cropped area of 40.76 lakh hectares. But the average operational holding is very small i.e.1.14 hectares only. The state of Assam experiences plenty of rainfall and possesses fertile land which is extremely advantageous for cropping. The soil, topography, rainfall and climate of the state are quite congenial for producing a variety of crops in different crop seasons. However, agriculture in the state is characterized by low level of productivity due to recurring natural calamities, low level of mechanization, inadequate availability of quality inputs, poor soil health, low level of assured irrigation and inadequate marketing infrastructure. About 83 per cent of the total land holdings are small and marginal and is a major concern for formulation of any agricultural development strategy.

Rice is the main food crop in Assam providing food to more than 25 million people, in addition to generating income and employment directly and indirectly. Some of the basic information of Assam agriculture are presented in Table-3.1

**Table-3.1**  
**Basic Indicators of Assam Economy (2012-13)**

<b>Agricultural Profile:</b>	
Geographical Area	78.50 lakh hectare
Net Cropped Area	28.09 lakh hectare
Gross Cropped Area	40.76 lakh hectare
Area Sown more than Once	12.67 lakh hectare
Cropping Intensity	145.11%
Area Covered by Horticultural Crops	6.30 lakh hectare (15 % of GCA)
Area Under Total Food grains	27.14 lakh hectare
Area Under Total Pulses	1.50 lakh hectare
Area Under Total Oilseeds	3.25 lakh hectare
Rice Area Covered by HYV	15.89 (63.50 % of GCA)
Area Under Hybrid Rice	2.34 lakh hectare
Per Capita Land Holding	1.10 hectare
Per Capita NSDP at current price	Rs.44,263
Per Capita GSDP at current price	Rs.56,919
<b>Demographic Profile:</b>	
Total Population as per 2011 census	312.06 lakh
Literacy Rate	72.09%
Sex Ratio	962
% of rural population	86 %
Decadal growth rate	17.07%

*Source: Directorate of Economics & Statistics, Govt. of Assam*

### Land use pattern

Table-3.2 gives the trend of land use pattern and cropping intensity for the period from 2000-01 to 2014-15. The geographical area of the state was recorded at 7843

**Table-3.2**  
**Trend of Land use pattern and Cropping Intensity in Assam**

Area in 000' hectare

Year	Geographical area	Net area sown	Area sown more than once	Total cropped area	Cropping intensity
2000-01	7843	27.93	12.99	40.92	146.51
2001-02	7843	27.74	12.09	39.83	143.58
2002-03	7843	27.53	12.05	39.58	143.77
2003-04	7843	27.53	12.04	39.57	143.73
2004-05	7843	27.53	11.43	38.96	141.52
2005-06	7843	27.53	11.96	39.49	143.44
2006-07	7843	27.53	10.10	37.63	136.69
2007-08	7843	27.53	10.86	38.39	139.45
2008-09	7850	28.10	11.89	39.99	142.31
2009-10	7850	28.11	12.88	40.99	145.82
2010-11	7850	28.10	13.49	41.60	148.04
2011-12	7850	28.11	13.63	41.74	148.49
2012-13	7850	28.09	12.67	40.76	145.11
2013-14(E)	7850	28.13	12.75	40.88	145.33
2014-15(E)	7850	28.17	12.83	41.00	145.54
CGR (%)	0.009	0.16	- 0.64	0.31	0.15

*Source: Directorate of Economics & Statistics, Govt. of Assam*

thousand hectares in 2000-01 which was then recorded at 7850 thousand hectares in 2014-15 with an increase of 7 thousand hectares as per report of the geographical survey of the state. There are a nominal increase in net sown area and total cropped area, but the area sown more than once was found to decrease during the period of 2000-01 and 2014-15. The CGR grew at the rate of 0.16 per cent against the net area sown, - 0.64 per cent against the area sown more than once and 0.31 per cent against the total cropped area. The cropping intensity had decreased insignificantly from 146.51 in 2000-01 to 145.11 per cent 2014-15. The CGR of cropping intensity was recorded at 0.15 per cent per annum during the reference period.

### **Cropping Pattern**

The type of soil, type of agro-climatic condition, the extent of rainfall, the irrigation status, the social back ground, the economic factors of the farmers and the economic return or monetary gain per unit of area basically determine the cropping pattern of a region or a state. Also, agricultural economic policies under each of the Five Year Plans do have significant bearing on changing cropping pattern of a state. As Assam is situated in heavy rainfall zone, it follows a rice-based cropping system which is adopted in the entire eastern part of India. To ensure good yield, it needs supplemented irrigation when there is any shortfall of rain in the growing season of the crops. Most of the research studies found that, if crop has to depend solely on rainfall, it requires not less than 30 cm per month of rains over the entire growing period.

The crop season of the state is basically divided into two main seasons- *kharif* from April to September and *rabi* from October to March. Some of the crops are grown in particular season while some others are grown in both the seasons, depending upon the seed varieties and its suitability depending on climatic conditions. The main cereal crops of *kharif* season of Assam include *Ahu* rice (direct seeded), *Ahu* rice (transplanted), *Sali* rice, *Bao* rice and maize. *kharif* pulses include black gram, green gram and *Arhar*. Sesamum, groundnut, *etc.* are the oil seed crops of *kharif* seasons. The fiber crops include jute, mesta, cotton and ramie. Both cotton and ramie cover a significant area. *Boro* rice (summer paddy), early *Ahu* (direct seeded/transplanted), wheat, *rabi* maize, *etc.*, are the cereals grown in the state during *rabi* season. Summer black gram/green gram, lentil, pea, grass pea (*khesari*) *etc.*, are the pulses; rapeseed-mustard, linseed, nizer, *rabi* ground nut *etc.*, are the oilseeds and potato is grown as tuber crops. In addition, different types of vegetables and spice crops (ginger and turmeric) are grown in both the

*kharif* and *rabi* seasons as well. The area under *kharif* and *rabi* vegetables are also on the rise as reflected in the statistics available with the published data of Assam Government.

Among the cereal crops, rice dominates the cropping pattern scenario of Assam. It is the principal crop and staple food for the people of Assam. Rice is cultivated in the State in three broad seasons- autumn, winter and summer. Autumn rice is commonly known as *Ahu*, winter rice as *Sali* and summer rice as *Boro*. Winter rice occupies the highest proportion of area followed by summer and autumn rice. Table-3.3 reveals the changes in cropping pattern in terms of percentage of cropped area to gross cropped area of the state. The area under autumn rice has declined from 13.20 per cent in 2000-01 to 4.78 per cent in 2014-15. Farmers are usually reluctant to go for this crop as pre-harvest loss is more as first shower of monsoon comes at the time of harvesting and immediately after harvesting they are to go for winter rice (*Sali* paddy). Moreover, yield rate of autumn rice is lower than that of the summer paddy. Therefore, the farmers have a tendency to switch over to summer paddy. Summer rice has shown a sizeable increase in the area from 8.04 per cent to 10.15 per cent during the same period. It is basically due to creation of minor irrigation facility through STW and LLP. Farmers are also benefited for its higher yield rate by applying modern package of practices.

The total rice area during the period under reference found to decline by 3.81 per cent. It varied in between 64.66 per cent and 60.85 per cent during the period under observation. The area under wheat showed a decreasing trend from 1.71 per cent in 2000-01 to 0.59 per cent in 2014-15 while the area under maize increased during the period and so was observed in case of pulses area. In case of total oilseeds also, the area decreased marginally from 8.21 per cent in 2000-01 to 8.00 per cent in 2014-15. The area under fibre crops varied in between 1.83 per cent and 1.85 per cent. Sugarcane is also an important *Kharif* crop (cash crop) of the State and its area is increasing over the year during the reference period.

From the analysis of cropping pattern, it may be concluded that there were no significant changes in cropping pattern in the state during the period of study. Most of the time, seed was considered to be a major constraint. Existing irrigation facilities have not been utilized fully by the farmers due to some technical loopholes in the irrigation system. Rising input cost in one hand and lower productivity on the other, have resulted in continuous decline in profit per unit. Poor mechanization of agricultural activities &

Table - 3.3

## Cropping Pattern of Major Crops in Assam During 2000-01 to 2013-14

(Area in lakh ha.)

Year	Autumn Rice	Winter Rice	Summer Rice	Total Rice	Wheat	Maize	Pulses	food - grains	Oil seeds	fibre	Sugar cane	Gross cropped Area
2000-01	5.40 (13.20)	17.77 (43.43)	3.29 (8.04)	26.46 (64.66)	0.70 (1.71)	0.20 (0.49)	1.23 (3.01)	28.35 (69.28)	3.36 (8.21)	0.75 (1.83)	0.27 (0.66)	40.92
2001-02	4.96 (12.45)	17.14 (43.03)	3.26 (8.18)	25.36 (63.67)	0.72 (1.81)	0.2 (0.50)	1.3 (3.26)	27.32 (68.59)	3.39 (8.51)	0.73 (1.83)	0.27 (0.68)	39.83
2002-03	4.64 (11.72)	17.49 (44.19)	3.27 (8.26)	25.41 (64.20)	0.69 (1.74)	0.2 (0.51)	1.23 (3.11)	27.26 (68.87)	3.39 (8.56)	0.73 (1.84)	0.25 (0.63)	39.58
2003-04	4.41 (11.14)	17.69 (44.71)	3.19 (8.06)	25.30 (63.94)	0.70 (1.77)	0.20 (0.51)	1.26 (3.18)	27.19 (68.71)	3.03 (7.66)	0.69 (1.74)	0.25 (0.63)	39.57
2004-05	4.36 (11.19)	16.36 (41.99)	3.11 (7.98)	23.83 (61.17)	0.64 (1.64)	0.19 (0.49)	1.15 (2.95)	25.89 (66.45)	2.84 (7.29)	0.63 (1.62)	0.24 (0.62)	38.96
2005-06	3.98 (10.08)	17.07 (43.23)	3.15 (7.98)	24.2 (61.28)	0.50 (1.27)	0.19 (0.48)	1.07 (2.71)	26.04 (65.94)	2.48 (6.28)	0.62 (1.57)	0.23 (0.58)	39.49
2006-07	3.79 (10.07)	14.98 (39.81)	3.12 (8.29)	21.90 (58.20)	0.60 (1.59)	0.19 (0.50)	1.14 (3.03)	23.9 (63.51)	2.76 (7.33)	0.63 (1.67)	0.27 (0.72)	37.63
2007-08	3.54 (9.22)	16.47 (42.90)	3.23 (8.41)	23.24 (60.54)	0.56 (1.46)	0.18 (0.47)	1.17 (3.05)	25.22 (65.69)	2.77 (7.22)	0.65 (1.69)	0.26 (0.68)	38.39
2008-09	3.51 (8.78)	17.73 (44.34)	3.60 (9.00)	24.84 (62.12)	0.50 (1.25)	0.17 (0.43)	1.18 (2.95)	26.42 (66.07)	2.67 (6.68)	0.65 (1.63)	0.29 (0.73)	39.99
2009-10	3.46 (8.44)	17.89 (43.64)	3.94 (9.61)	25.30 (61.72)	0.60 (1.46)	0.19 (0.46)	1.19 (2.90)	26.99 (65.85)	2.76 (6.73)	0.70 (1.71)	0.27 (0.66)	40.99
2010-11	3.13 (7.96)	18.59 (47.30)	3.99 (10.15)	25.71 (65.42)	0.45 (1.15)	0.20 (0.51)	1.26 (3.21)	27.66 (70.38)	2.72 (6.92)	0.67 (1.70)	0.30 (0.76)	39.30
2011-12	2.76 (6.61)	18.76 (44.94)	3.94 (9.44)	25.46 (61.00)	0.40 (0.96)	0.21 (0.50)	1.32 (3.61)	27.43 (65.72)	2.76 (6.61)	0.72 (1.72)	0.28 (0.67)	41.74
2012-13	2.38 (5.67)	18.57 (44.25)	3.93 (9.36)	24.88 (59.28)	0.34 (0.81)	0.25 (0.60)	1.42 (3.38)	26.92 (64.14)	3.05 (7.27)	0.71 (1.69)	0.16 (0.38)	40.76
2013-14(E)	2.23 (5.45)	18.81 (46.01)	3.99 (9.76)	25.03 (61.23)	0.31 (0.76)	0.24 (0.59)	1.50 (3.67)	27.14 (66.39)	3.25 (7.95)	0.71 (1.74)	0.29 (0.71)	40.88

*Source: Statistical Handbook of Assam, Relevant Year*

*Note: Figures in parentheses indicate percentage to Gross Cropped Area*

inefficient market net work also dampened the spirit of the farmers in accepting/ trying new crops. Higher production at a low cost is the solution of the problem by increasing the productivity per unit of land in consideration of the limitation of arable land in the state. Together with this, gross cropped area can be increased by double or multiple cropping practices.

### Area, Production and Productivity of Crops

The State Agriculture Department has given more thrust to increase area, production

**Table - 3.4**  
**Area, Production and productivity of Major Crops in Assam**

Crops		2009-10	2010-11	2011-12	2012-13	2013-14	2014-15(P)
Autumn Rice	A	346	313	276	238	223	196
	P	335	356	338	309	294	281
	Y	968	1,137	1,225	1,298	1,318	1454
Winter Rice	A	1,789	1,859	1,876	1,857	1,881	1883
	P	3,214	3,649	3,298	3,655	3,709	3718
	Y	1,797	1,963	1,758	1,968	1,972	2005
Summer Rice	A	394	399	394	393	399	416
	P	860	1,028	1,080	1,164	1,190	1224
	Y	2,183	2,576	2,741	2,962	2,982	2940
Total Foodgrains	A	2,733	2,767	2,743	2,692	2,714	2700
	P	4,557	5,178	4,857	5,279	5,402	5459
	Y	1,667	1,871	1,771	1,961	1,990	2013
Rape & Mustard	A	249	244	248	279	279	281
	P	131	143	139	170	169	188
	Y	526	586	560	609	606	667
Total Cereals	A	2,614	2,641	2,611	2,550	2,564	2552
	P	4,491	5,106	4,784	5,195	5,314	5348
	Y	1,718	1,933	1,832	2,037	2,073	2095
Total Pulses	A	119	126	132	114	150	148
	P	66	72	73	84	88	111
	Y	555	571	553	737	587	749
Total Oilseeds	A	296	292	295	326	325	328
	P	147	159	156	187	186	209
	Y	497	545	529	574	572	670
Jute (bales of 180kg)	A	65	62	66	65	70	70
	P	713	626	608	558	717	768
	Y	10,969	10,097	9,212	8,585	10,243	10971
Potato	A	83	85	98	95	98	105
	P	600	658	683	709	700	784
	Y	7,229	7,741	6,969	7,463	7,143	7499
Total Fruits and Vegetables	A	180	186	200	197	205	213
	P	1,745	1,877	2,031	2,126	2,271	2377
	Y	9,694	10,091	10,155	10,792	11,078	11160

*Source: Directorate of Economics & Statistics, Govt. of Assam*



and productivity of various crops by implementing double cropping schemes to provide food security and nutrition to growing population and also to increase the income of the farming community by harnessing the best technologies. As a result, area, production and productivity of most of the crops have shown a positive trend during the last few years.

The trend of growth of area, production and productivity of major crops during 2009-10 to 2014-15 in the state is given in Table -3.4. In the study, 11 major crops were taken under observation. The positive trend of area was found against eight crops *viz* , winter rice, summer rice, rape & mustard, total pulses, total oilseeds, jute, potato and fruits and vegetables while the negative trend was found against three crops *viz.*, autumn rice, total foodgrains and total cereals. In case of production, the positive growth was found against all the selected crops except marginal decline against autumn rice. In case of yield rate per hectare, the positive growth trend was found against all the crops under study.

### **Horticulture Scenario in Assam**

Assam is endowed with diverse agro-climatic conditions, which permit growing of wide range of horticultural crops. It accommodates various fruits, vegetables, flowers, spices, medicinal and aromatic plants, nut crops, tuber crops and also plantation crops. Horticulture crops occupy about 15 per cent of the gross cultivable area of the state, with an annual production of more than 76 lakh MT of various horticultural produces. The important fruit crops in the State are banana, pineapple, citrus, jackfruit, guava and litchi. Coconut, arecanut and betel vine are predominant plantation crops. Potato, sweet potato, tapioca, colocasia and yams cucurbits, peas, beans and okra are cultivated in commercial scale. Ginger and turmeric occupy prime position among the spices.

There has been a significant increase in area and production of horticultural crops in Assam during the last two decades and Table-3.5 presents the status of area, production and productivity of horticultural crops for the last five years. It is observed that the area, production and productivity of fruit crops increased by 5.11 per cent, 21.50 per cent, and 11.78 per cent, respectively during the period from 2010-11 to 2014-15. In case of vegetables, the area increased by 6.93 per cent and production by 29.13 per cent; but productivity declined by -0.97 per cent during the corresponding period. This might be attributed to use of traditional low yielding varieties and lack of adoption of improved technology and lack of irrigation facilities etc.

**Table: 3.5**  
**Trend of Area, Production & Productivity of Horticultural Crops in Assam from 2010-11 to 2014-15**

(Area in lakh hectare, Production in lakh MT & Productivity in Kg. per hectare)

Crop		2010-11	2011-12	2012-13	2013-14	2014-15	% change during the period
Fruits	Area	1.37	1.38	1.51	1.42	1.44	5.11
	Production	16.56	17.75	20.74	20.25	20.12	21.50
	Productivity	12485	12885	13760	14219	13956	11.78
Vegetables	Area	1.01	1.04	1.10	1.04	1.08	6.93
	Production	2.30	2.56	3.28	2.67	2.97	29.13
	Productivity	2777	2464	2970	2578	2750	-0.97
Spices	Area	2.57	3.66	3.86	3.65	3.91	52.14
	Production	44.33	52.51	60.34	53.30	58.58	32.15
	Productivity	17231	24325	27536	24797	25455	47.73

*Source: Directorate of Economics & Statistics, Govt. of Assam*

During the 11<sup>th</sup> five year plan period, maximum focus was laid on raising the productivity of various commercially important horticultural crops through extensive use of improved technology, management inputs and planting materials. Together with the post harvest handling, setting up of collection centres with grading and transport facilities, marketing and processing, involvement of private sectors more particularly for contractual farming and buy back arrangement are also being considered as prime area of intervention. The Government of Assam has targeted to increase the area, production and productivity of different horticultural crops during the 12<sup>th</sup> plan period.

Assam agriculture is now focusing on horticulture segment of the state. Horticultural crops such as coconut, citrus, banana, black pepper, and papaya have been placed on the priority list and a range of plantation materials have been ordered for these crops to increase its productivity. Various plant protection measures are being taken up by the Agricultural Department of Assam for safety of the crops raised in the state. All these have contributed to marked increase in productivity of agricultural crops and with the advent to newer schemes and new technologies, the agriculture in Assam is expected to march ahead to a greater height.

### **Fishery Sector in Assam**

Assam is endowed with vast fishery resources in the form of rivers, ponds, derelict water bodies, *beels* covering about 2.85 lakh ha. in addition to the two major river system *viz.* the Brahmaputra and the Barak with their tributaries. Fish occupies an important place in the lives of the people of the State and fish farming has been one of the common activities in the rural areas. Thus, the Fishery Sector is considered to be an

important economic activity in the State of Assam. The sector has registered an annual average growth of 7.36% during the last three years of 12th five year plan.

Fishery sector has a higher growth rate as compared to other agriculture and allied sectors and could play a pivotal role in the socio-economic development of the State including employment generation. The contribution of fishery sector to State Domestic Product (at constant 2011-12 prices) was Rs. 4,99,623.00 lakh (with a growth rate of 6.7 per cent as per provisional estimates 2013-14 (P) and Rs. 5,23,675 lakh (with a growth rate of 10.26 percent) as per quick estimates 2014-15(Q). The Department of Fishery has been implementing a number of schemes in the State with a view to achieve self-sufficiency in fish production and for bringing socio-economic development of the poorer section of the society. Fish farming is gradually gaining popularity in the State, as the farmers have started taking up fish seed farming and fish farming on commercial scales as a result of extensive awareness campaign by the Department.

Table - 3.6 depicts the status of fish production in the State of Assam from the period of 2004-05 to 2014-15.

Over the period, from 11<sup>th</sup> Five Year Plan to the current year of the 12<sup>th</sup> Five Year Plan, significant changes have been brought about in the fishery sector, in terms of

**Table- 3.6**  
**Status of Fish Production in Assam**

Year	Fish production ('000 tons)	Growth rate (%)	No of fish seeds produced (million)
2004-05	186.31	2.90	2471
2005-06	188.01	0.90	3208
2006-07	181.48	-3.47	3062
2007-08	190.32	4.80	3206
2008-09	206.15	8.30	3429
2009-10	218.82	6.15	3326
2010-11	227.24	3.85	4263
2011-12	228.62	0.61	3624
2012-13	254.27	11.22	4364
2013-14	266.70	4.88	4546
2014-15	282.70	5.99	4586

*Source: Statistical Handbook of Assam (Relevant Years)*

growth and production. During this period, the sector has been growing at an average annual growth rate of 5% in terms of fish production (from 1.90 lakh tonnes during 2007-08 to 2.83 lakh tonnes during 2014-15).

Considering the potential and prospect of the fishery sector and with a view to increase the per capita availability of fish, both the Central and State Government have come up with a number of positive interventions/ schemes to help the fish farmers. Horizontal expansion is being accomplished through creation of new ponds and reclamation and renovation of existing wet land areas followed by scientific fish farming through community/ Self Help Groups and subsequent bank linkage.

### **Livestock, Animal Husbandry and Dairy Sector in Assam**

Animal husbandry plays a significant role in the rural economy of Assam by providing gainful employment, particularly to the small and marginal farmers, women and agricultural labourers. This sector contributed 5.38 per cent to the agriculture and allied sector in the year 2014-15 and its share to total GSDP was estimated at 1.09 per cent during the year. The importance of livestock sector, as a component of whole production system can not be under-estimated for sustainable agricultural development. Rapid growth of this sector is essential not only to achieve higher productivity levels in livestock products but also for income generation of rural households of the State.

**Table-3.7**

#### **Status of Livestock Products in Assam**

Item --->	Milk (Million Tonnes)	Egg (Million nos.)	Meat (Thousand Tonnes)
Year :			
2010-11	832 (36.10)	470(8.50)	34.00(10.20)
2011-12	838(37.10)	471(8.60)	34.19(10.40)
2012-13	845(35.30)	471(8.30)	36.63(10.70)
2013-14	857(35.40)	472(8.20)	38.34(10.90)
2014-15	873(35.60)	473(9.88)	42.00(11.80)

*Note: Figures in Parentheses indicate Percentage of Total Requirement.*

*Source: Economic Survey, Assam 2015-16*

The Animal Husbandry and Veterinary Department of the State has been implementing various developmental programmes to create gainful employment/income opportunities in the rural & semi urban areas in order to boost up the socio-economic condition of the rural economy and to enhance the volume of livestock and poultry products in the State so as to reduce the gap between the demand for and supply of these products. The status of livestock products during the last five years is presented in Table-3.7.

According to the Sample Survey results for the year 2014-15 published by the Directorate of Animal Husbandry & Veterinary, Assam, there exists large gaps between

the requirement and availability of livestock products in the State over the years. It is seen from the Table that quantity of milk, egg and meat availability in the State during the year 2014-15 were 35.60 per cent, 9.88 per cent and 11.80 per cent of the total requirements of milk, egg and meat, respectively. As such, there must be a concerted effort to raise the availability of these livestock products backed by necessary policy support.

The key to better livestock production is the availability of quality breeds animals, quality feed and fodder and effective disease control measures. There should be a comprehensive approach to deal with the above key factors. All the stakeholders including the Assam Agricultural University, State Animal Husbandry and Veterinary Department and State Agricultural Department & the farmers must work hand in hand to bring in perceptible changes in the current situation.

Assam is an agrarian state and continues to contribute to the State's economy since today. However, the percentage contribution of this sector towards the state economy has been declining steadily and now reaches the level of 19.21 per cent in 2014-15 from 21.70 per cent in 2004-05. In recent times, Government of Assam has undertaken a large number of flagship programmes and schemes for development of this sector to the desired level and has allocated more funds under different programmes. But for increasing production and productivity of various crops and for the upliftment of animal husbandry and fishery sector, it is important to disseminate information about new technologies so that the farmer is able to make use of the latest agricultural development practices. Further, it has been reported that, there exists a large gap between the research findings and the needs of the farmers. For any technology to be successful, it is important that it should serve a useful purpose to the end user. A well-conceived & well-coordinated Agricultural Extension Service can bridge the gap between the farmers and agricultural research scientists. The main objective of Agriculture Extension Services (AES) is to transmit the latest technical know-how to the farmers. Besides this, the AESs also focuses on enhancing farmers' knowledge about crop techniques and helping them to increase productivity. It is desired that Agricultural Extension Services provided through Agri - Clinic and Agri Business Centres Scheme can go a long way to change the agriculture scenario of the state.

### III.2 Status of ACABC Scheme in the State

Following the Central Government's initiatives, the Central Sector Scheme, Agri-Clinics and Agri-Business Centres (AC&ABC) was initiated in 2002 with the prime objective to supplement the efforts of public extension by facilitating qualified agricultural professionals to setup Agri-ventures that can deliver value-added extension advisory services to the farmers at their door step, besides providing self-employment opportunities to Agripreneurs. Although, it was envisaged that the scheme would be able to establish successful agri ventures with trained graduates, it was observed that Assam could not perform well and the number of trained candidates and number of venture established are much lower in comparison to other states of India like Maharashtra, Uttar Pradesh, Tamilnadu, Bihar *etc.* According to MANAGE, till October, 2016 only 632 number of agriculture graduates took training and 206 number of agriventures have been established under the ACABC Scheme in Assam. The achievement rate is 32.59 per cent in case of Assam while it was 62.10 per cent in Pondicherry, 53.28 per cent in Tamilnadu, 52.09 per cent in Uttar Pradesh, and 48.05 per cent in Maharashtra.

### III.3. Agricultural Extension Services provided to farmers by Agri-clinics and Agri Business Centres

In Assam, the ACABC scheme provided support to the agri graduates in establishing gainful agri enterprises. The scheme provides self employment opportunities to technically trained persons and supplement extension services. Agri-clinics and Agri-business are envisaged to provide expert services and advice to farmers on cropping practices, technology dissemination, crop protection from pests and diseases, market trends and prices of various crops in the market and also clinical services for plant and animal health *etc.* which can enhance productivity of crops/animals.

The unit/project wise distribution of agri- ventures established in Assam during the period from 2002-03 and 2016-17 is presented in Table-3.8. Table shows that in Assam, total 209 numbers of agri-ventures were established so far against 18 different projects. On the other hand, 20,664 numbers of agri-ventures were established against 28 different projects in all India. Thus, the state of Assam has covered only 0.34 per cent of the total agri-ventures established in India. Table also shows that, the Veterinary Clinics top of the list of agri-ventures in terms of numbers (92) followed by Dairy/Poultry/Piggery /Goatary (35), Agri-Clinics and Agribusiness Centres (30) and

**Table: 3.8**  
**Unit- wise Distribution of Agri-Ventures Established for providing Agri. Extension Services to Farmers in Assam during 2002-03 to 2016-17**

Sl. No.	Units/Project providing Agri. Extension Services	No. of Ventures Established		
		Assam	India	% of Assam
1	Agri-Clinics	23	3119	0.74
2	Agri-Clinics and Agribusiness Centres	30	6763	0.44
3	Animal Feed Unit	2	47	4.26
4	Bio-fertilizer production and Marketing	1	102	0.98
5	Cultivation of Medicinal Plants	1	112	0.89
6	Direct Mkt.	1	168	0.60
7	Farm Machinery Unit	3	711	0.42
8	Fisheries Development	4	348	1.15
9	Landscaping + Nursery	1	113	0.88
10	Nursery	5	495	1.01
11	Value Addition	2	271	0.74
12	Seed Processing and Marketing	1	333	0.30
13	Soil Testing Laboratory	1	102	0.98
14	Vegetable Production and Marketing	1	237	0.42
15	Vermi composting / Organic manure	5	495	1.01
16	Veterinary Clinics	92	873	10.54
17	Crop Production	1	197	0.51
18	Dairy/Poultry/Piggery/Goatary	35	5331	0.66
19	Contract Farming	0	58	0
20	Floriculture Unit	0	107	0
21	Horticulture Unit	0	170	0
22	Organic Production Food Chain	0	88	0
23	Pesticides Production and Marketing	0	40	0
24	Rural Godown	0	48	0
25	Production and Marketing of Bio- Control Agent	0	18	0
26	Agriculture Journalism	0	16	0
27	Mushroom Cultivation	0	99	0
28	Apiary	0	101	0
	<b>Total</b>	<b>209</b>	<b>20,664</b>	<b>0.34</b>

*Source: ACABC Database*

Agri-Clinics (23). The other projects were not undertaken by the trainee graduates may be due to various reasons considering their visibility or profitability.

From the above analysis, it can be concluded that the programmes under the ACABC scheme has helped the unemployed agriculture graduates to establish agri ventures and improve their economic status in some extent. But, compared to the other states of the country, the performance of the scheme in terms of establishing the agriventure in Assam and in the North East Region is presumably very poor. The

Government needs to give special focus on the North Eastern States of the country to meet the very objectives of the Agriclincs and Agribusiness Centres, for which it was initiated some 15 years back.

#### **III.4. Contribution of ACABC Scheme in Agricultural Development of the State**

Assam, like most of the states in India is predominantly an agricultural economy especially in respect of workforce. Over 70 per cent of the state's population relies on agriculture as farmers, as agricultural labourers, or both for their livelihood. Therefore, proper implementation of any agricultural development schemes will enhance the agricultural development of the state.

ACABC scheme was launched in 2002 in order to strengthen the agricultural extension services and at the same time tap the potential of the unemployed graduates and provide them with employment opportunities by making them entrepreneurs.

The scheme is implemented by MANAGE and aims at establishing agri-clinic and agri-business centres in rural areas for providing value added services to farmers by promoting self employment opportunities among unemployed agriculture graduates. Agribusiness centres provide paid services for enhancement of agriculture production and income of farmers.

In Assam, ACABC scheme provides a wide range of services to the farming community in agricultural and allied sector since its inception.

Agri-Business units or the input suppliers are the most important link in the entire chain of agricultural activities. They become all the more important in addressing the issues related to the timely availability of inputs, their quality and proper usage. Compared to the traditional fertilizer/seed sellers, the Agri-Business Centers (ABCs) run by agriculture graduates have proved beneficial not only to themselves but also to the farmers as they have addressed the issues mentioned above. Apart from supplying inputs, the Agri Business Centres are also providing custom hiring services. Under these services, agripreneures rent out machineries like tractors, pumps, sprayers, dusters etc. to the farmers at a reasonable rate. This saves the poor farmers from the hazards of investment and maintenance of such implements.

The ACABC scheme have been successful in imparting knowledge to the farmers on the new and scientific methods of farming, thus leading to an increase in the production per hectare and the farm income and boost agricultural development in the state. In case of other type of agripreneurs also, timely advice on production technology,



income enhancement, reduction in production cost and increase in productivity are reported to be the major benefits.

Apart from supplementing the extension services, employment generation is also one of the key objectives of the scheme. The scheme was launched to provide employment to agriculture graduates passing out every year from the agriculture universities throughout the country. Apart from providing employment to graduates, the ventures set up by them have helped in providing gainful employment, both direct and indirect, to several people, depending on the nature of enterprise.

The ACABC Scheme is currently in operation in 26 districts of Assam against 18 numbers of different projects. These projects no doubt increasing employment potentialities to the agriculture graduates along with enhancing agricultural production and income to the farming community. A case study conducted by Global Agrisystem Pvt. Ltd. revealed that ACABC scheme in Assam helped in increasing productivity of crops by 78.00 per cent, improved production knowledge among the farmers by 13.00 per cent, improved cropping pattern by 12.50 per cent and employment generation by 25.00 per cent. Therefore, it may be concluded that ACABC Scheme definitely contributes in Agricultural Development of the State in to a considerable extent.

### **III.5 ACABC Scheme at a glance in the State**

The scheme, Agri Clinics and Agri Business Centers has been launched to enhance the quality of paid extension services to the farmers in India. The scheme provides opportunities for self-employment to agricultural graduates in agricultural and allied enterprises mainly in the tertiary and secondary sectors. This scheme has been perceived to be double-edged in the sense that it envisages gainful employment to agricultural graduates in one hand and also provides for quality extension services to the farmers on payment basis.

There is one Nodal Training Institutes (NTI) in Assam selected by MANAGE in 2007 for conducting the training programmes for selected agriculture graduates and assist them in preparing bankable project and MANAGE also provides fund to each of the NTIs against their specific norms.

In Assam, different banks sanctioned 93 number of projects proposed by three different institutes (Table-3.9). Of the total projects sanctioned, 86 were proposed by Indian Society of Agribusiness Professionals, Guwahati, 6 by Assam Agricultural University, Jorhat and 1 by Institute of Cooperative Management, Imphal.

**Table- 3.9**  
**Institute-wise number of Projects Sanctioned by Banks under ACABC Scheme in Assam**

As on : 11/08/2016

Sl.No.	Name of the Institute	No. of Projects Sanctioned
1	Indian society of Agribusiness Professionals, Guwahati	86
2	Assam Agricultural University , Jorhat	6
3	Institute of Cooperative Management , Imphal	1
Total		<b>93</b>

*Source: ACABC Cell*

Table-3.10 shows the number of projects sanctioned by different banks under ACBCA Scheme in Assam. It is seen from the Table that, State Bank of India sanctioned highest number of projects (41) followed by Assam Gramin Vikas Bank (10) and Central Bank of India (6). The Union Bank of India and Allahabad Bank each sanctioned 5 number of projects, Bank of Baroda and Bank of India sanctioned 4 number of projects each and, Indian Overseas Bank and IDBI Bank each sanctioned 3 number of projects.

From the analysis, it is found that although the ACABC has now become popular among the agrigraduates because of the constant support in the form of specialized training, credit facility and handholding support, the number of agriventures in Assam is not that encouraging. As against this, Maharashtra, Tamil Nadu, Uttar Pradesh, Bihar and

**Table- 3.10**  
**Number of Projects Sanctioned by Banks under ACABC Scheme in Assam**

As on : 11/08/2016

S.No.	Name of the Bank	No. of Projects Sanctioned
1	State Bank of India	41
2	Assam Gramin Vikas Bank	10
3	Central Bank of India	6
4	Union Bank of India	5
5	Allahabad Bank	5
6	Bank of Baroda	4
7	Bank of India	4
8	Indian Overseas Bank	3
9	IDBI Bank	3
10	Punjab National Bank	2
11	UCO Bank	2
12	United Bank of India	2
13	Allahabad Gramin Vikas Bank	2
14	Vijaya Bank	1
15	Canara Bank	1
16	State Bank of Indore	1
17	Punjab and Sind Bank	1
Total		<b>93</b>

*Source: ACABC Cell*

Karnataka are the leading states in overall performance of agriclinics and agribusiness centres scheme. These states have maximum number of trained candidates, agriventure established and nodal training institutes and their success rates are also very high. Therefore, Government may come up with suitable policies with focused attention on this part of the country for proper implementation of ACABCs scheme, so that the objectives of the scheme can be achieved effectively and efficiently.

### III.6 Trend of Growth in ACABC Scheme since inception in the State (2002-2016)

The scheme of ‘Agri-clinics and Agri–business Centers’ was launched to strengthen the transfer of technology and extension services and also to provide self – employment opportunities to the technically trained personnel. This programme apart from providing employment to agriculture graduates, the ventures set up under the scheme also open up avenues for indirect engagement of additional heads, depending on the nature of enterprise. On an average, about 3 persons were employed under each enterprise in Assam with 80% receiving direct employment. Year-wise growth of the Scheme in terms of number of graduated trained and number of ventures established in the State of Assam is depicted in Table -3.11. It is seen from the Table that maximum number of agri. graduates trained under ACABC was in 2007-08 and largest number of agri ventures established in 2009-10.

**Table: 3.11**

#### **Trend of Growth of ACABC Scheme since inception (2002-2016)**

Sl No.	Years	No. of trained graduates	No. of Ventures established
1	2002-03	1	0
2	2003-04	34	4
3	2004-05	0	4
4	2005-06	12	4
5	2006-07	1	3
6	2007-08	106	16
7	2008-09	66	17
8	2009-10	60	42
9	2010-11	54	27
10	2011-12	56	10
11	2012-13	40	32
12	2013-14	60	17
13	2014-15	73	10
14	2015-16	69	14
15	2016 -17	34	9
<b>Total</b>		<b>666</b>	<b>209</b>

*Source: ACABC Database*

### III.6.a Nodal Training Institute -wise progress of ventures established under ACABC in Assam during 2002-2016

The Nodal Training Institute wise numbers of agri. ventures established under ACABC Scheme in Assam from the inception year to 2016 is worked out and presented in Table-3.12. There were two NTIs in Assam for conducting training programmes for

**Table- 3.12**

#### **Nodal Training Institute wise No. of Ventures Established under ACABC Scheme in Assam**

Sl. No.	NTIs in Assam	No. of Ventures Established during 2003-2016														Total
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
1	Assam Agriculture University	4	4	4	3			1				1				17
2	Indian Society of Agri-business Professionals					16	17	41	27	10	32	16	10	14	9	192
<b>Total</b>		<b>4</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>16</b>	<b>17</b>	<b>42</b>	<b>27</b>	<b>10</b>	<b>32</b>	<b>17</b>	<b>10</b>	<b>14</b>	<b>9</b>	<b>209</b>

*Source: ACABC Database*

the agri graduates till the year 2013-14 but after that only one NTI (Indian Society of Agri- business Professionals) is associated with training and establishment of agri ventures under the ACABC scheme. Table shows that out of the total 209 agri ventures established so far, only 17 were established under Assam Agriculture University and rest 192 were established under Indian Society of Agri- business Professionals. It was felt that number of NTIs should increased in order to ensure smooth implementation, monitoring and evaluation of the training programme under the agriclinics and agribusiness scheme.

From the above analysis, it can be concluded that, although ACABC scheme is successful in providing gainful employment to the unemployment agri graduates and the farmers are getting extension support to some extent, yet the success rate of establishing agri-ventures is very poor in Assam (32.59 per cent as against 43.67 per cent for all India). For successful implementation of ACABC scheme, completion of the training is not enough. Value addition to training programme can help the trainees to provide better consultancy to the farmers. The implementing agency (MANAGE) should coordinate with the State Agriculture /Horticulture Departments and urge them to create a special network of agripreneurs, which in turn, can contribute enormously for educating the farmers in specialized areas.

### **III.7 All other relevant latest information relating to ACABC Scheme in the State**

There is only one Nodal Training Institute involving the ACABC scheme in the state. The MANAGE provides them funds for conducting training programmes for agriculture graduates in different areas of agriculture and allied sectors. As reported by the officials of the NTI, MANAGE allocates Rs. 35,000/- against each of the training programme and about 30-35 agri graduates participate in a programme, following the syllabus prepared by MANAGE. During the period of January –November, 2016, 23 numbers of agri graduates have undergone training on different agricultural activities. The ACABC training programmes of 60 days duration consist of class room lectures, exposure visits, hands-on experience, preparation of detailed project reports and submission to banks for availing loan to start agri enterprises for self employment.

From the above analysis, it can be concluded that, ACABC is a novel scheme providing adequate support to the agripreneurs throughout the country. The performance of the scheme in the State of Assam, though not up to the mark, there is ample scope of strengthening the same through vigorous campaign, continuous monitoring, fund-support and a robust networking with State extension machineries and once done with, it can bring about desirable changes in production, income and quality of life to this part of the country as well.

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## Chapter IV

In this chapter, the methodology of the study indicating the design, method of survey and analysis of data are presented for ready reference.

### IV.1 Method of the study

The study was undertaken in four (4) States of the India viz: 1) Assam 2) Maharashtra, 3) Uttar Pradesh, and 4) Telengana at the instance of the Ministry of Agriculture, and farmers welfare, Government of India under the work plan of 2016-17. The AERC, Jorhat was assigned to take up the study for the state of Assam.

On the basis of higher number of Agri-ventures established in the state, two districts were selected randomly viz: Kamrup and Nagoan. From each district five Agri-ventures having higher number of farmers benefited were selected randomly. From each of the 10 Agri-ventures, thus selected, lists of beneficiary farmers were undertaken. These lists were further categorized in (1) Marginal, (2) Small and (3) Medium and Large farms according to (1) Proper Agriculture Services, (2) Allied Agriculture Services and (3) Both Agri+ Other Services. The ultimate sample beneficiary farmers were undertaken at the rate of 10 beneficiary farmers per selected agri-venture making a total of 50 sample beneficiary farmers per district. Thus, on an overall 100 beneficiary farmers were undertaken for the study. Also as control group, 5 non-beneficiary farmers per venture were undertaken from the same area of agri-ventures making 25 non-beneficiary farmers per district and 50 non-beneficiary farmers on an overall were undertaken for seeing the impact of agri extension services through ACABC Scheme.

### IV.2 Sampling Design

#### IV.2 (a) Selection of states/districts

The Directorate of Extension, Ministry of Agriculture and farmers welfare had identified four states for this all India coordinated study viz. (1) Uttar Pradesh, (2) Assam, (3) Telengana and (4) Maharashtra being coordinated by Agro-Economic Research Centre, University of Allahabad. For representing the state of Assam, two districts namely (1) Kamrup and (2) Nagaon were selected on the basis of having higher number of agri-ventures established.

#### IV.2 (b) Selection of Agri-ventures

In consultation with the concerned officials of the Nodal Training Institute five (5) Agri-ventures were selected per district randomly making a total of 10 agri-ventures in all from the state of Assam.

#### IV.2(c) Selection of ultimate sample beneficiary and non- beneficiary farmers

From each of the 10 agri-ventures thus, selected list of beneficiary farmers were undertaken. These lists were further categorized according to (1) Proper Agriculture Services, (2) Allied Agriculture Services and (3) Both Agri+ Other Services. Thereafter, the list of the farmers were further sub-categorized into three farm size-groups, such as (1) Marginal, (2) Small and (3) Medium and Large farmers. From these lists so categorized the ultimate sample beneficiary farmers were undertaken @ 10 farmers per agri-venture randomly proportionate to the total farmers in each category of agriculture services as well as sub-categories of the farm size-groups making a total of 100 sample beneficiary farmers on an overall. Also as control group the samples of non-beneficiary farmers @ of 5 farmers

**Table- 4.1**

#### District and Venture -wise Sampling Design in Assam

Sl.No.	Category	District Kamrup		District Nagaon	
		Sample Beneficiary	Sample Non-Beneficiary	Sample Beneficiary	Sample Non-Beneficiary
1	Venture-1	10	5	10	5
2	Venture-2	10	5	10	5
3	Venture-3	10	5	10	5
4	Venture-4	10	5	10	5
5	Venture-5	10	5	10	5
	<b>Total</b>	<b>50</b>	<b>25</b>	<b>50</b>	<b>25</b>

**Table- 4.2**

#### Holding-size group and Agri. Service wise Sampling Design in Assam

Sl. No.	Agricultural Services of Sample Farmers	Sample Beneficiaries				Sample Non-Beneficiaries				Grand Total	
		Marginal	Small	Medium & Large	Total	Marginal	Small	Medium & Large	Total	Beneficiaries	Non-Beneficiaries
1	Proper Agril. Services	10	15	20	45	12	4	1	17	45	17
2	Allied Agril. Services	20	12	8	40	12	6	2	20	40	20
3	Both Agri+ Other Services	7	8	0	15	6	5	2	13	15	13
	<b>Total</b>	<b>37</b>	<b>35</b>	<b>28</b>	<b>100</b>	<b>30</b>	<b>15</b>	<b>5</b>	<b>50</b>	<b>100</b>	<b>50</b>

per agri-ventures were undertaken from the same area of agri-venture making a total of 50 non-beneficiary sample farmers in total to study the impact of agriculture extension services through ACABC scheme in the state of Assam. The table of sampling design is presented in Table- 4.1 and Table -4.2 respectively.

### **IV.3.Method of investigation and survey of the Area under study**

#### **IV.3.1. Collection of Primary Data**

The collection of primary data was done through the specially prepared schedules and questionnaires by survey method contacting the sample beneficiary and non-beneficiary farmers personally in their villages. Efforts were made to collect data on all the aspects such as socio-economic and educational status, crops grown, inputs incurred, output received, inputs and outputs from animals reared, extension services received from agri-ventures and inputs as well as supports received on payment from ventures.

#### **IV.4 Method of Analysis of Data**

The study was purely empirical in nature and was based on primary as well as secondary level data collected from field and other sources such as, Statistical handbook, Economic survey and from concerned offices/agencies. The primary data were tabulated according to the formats and guidelines prepared by the Co-coordinating Centre, and were analyzed according to three main categories viz- a) Proper Agri Services b) Allied Agri. Services and c) Both Agri+other services. Category wise analysis was also undertaken criss-crossed with various parameters to be cultivated area, irrigation intensity, gross cropped area, cropping intensity etc. Information was also obtained on inputs, outputs, various ratios and net income against the sample beneficiaries and non-beneficiaries, under the ACABC scheme in the sample districts.

#### **IV.5 Reference period of the study**

The reference period for the study was the agricultural year 2015-2016.

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## Chapter – V

### Results and Discussion

An attempt has been made here to analyze the socio economic conditions of the sample households, crops grown during *kharif*, *Rabi* and *Zaid* seasons by the sample farmers, seasonal gross irrigated and gross cropped area, inputs and outputs of all crops, gross inputs, outputs and net incomes of all crops and also the inputs, outputs and net incomes from milch animals, as well as draught animals and total animals reared by beneficiary farmers, agricultural extension services received from agri-ventures by the beneficiaries, details of hiring machines and implements from agri-ventures by the beneficiaries, details of training received and expert advices from agri-ventures which increases incomes of beneficiary farmers. Attempt has been made to analyze the same in case of non-beneficiary farmers also.

#### V.1 Economic status of beneficiary farmers under ACABC scheme in Assam

The size of holding is considered to be one of the important parameters for judging the economic status of a farmer.

Table 5.1 shows the category- wise economic status of the sample beneficiary

**Table-5.1**  
**Category-wise Economic Status of the Sample Beneficiary Farmers**  
**under ACABC Scheme in Assam**

(Area in Hect./Beneficiary, Main Beneficiary/Category)								
Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Area of Holding (Hectare)	Benefits Availed in 2014-15 (In No)	Membership of Agencies (In No)		Subsidiary Occupations (No. of HHS)	
<b>A.</b>	<b>Proper Agri. Services</b>							
I	Marginal Farmers	10	0.93	10	2	8	6	4
II	Small Farmers	15	1.66	15	0	15	10	5
III	Medium & Large Farmers	20	2.54	20	1	19	13	7
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>1.89</b>	<b>45</b>	<b>3</b>	<b>42</b>	<b>29</b>	<b>16</b>
<b>B.</b>	<b>Allied Agri. Services</b>							
I	Marginal Farmers	20	0.84	20	0	20	17	3
II	Small Farmers	12	1.39	12	3	9	9	3
III	Medium & Large Farmers	8	2.43	8	1	7	5	3
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>1.32</b>	<b>40</b>	<b>4</b>	<b>36</b>	<b>31</b>	<b>9</b>
<b>C.</b>	<b>Agri.+ Other Services</b>							
I	Marginal Farmers	7	0.76	7	1	6	4	3
II	Small Farmers	8	1.09	8	2	6	4	4
III	Medium & Large Farmers	0	0	0	0	0	0	0
<b>Sub Total of Agri.+ Other Services</b>		<b>15</b>	<b>0.94</b>	<b>15</b>	<b>3</b>	<b>12</b>	<b>8</b>	<b>7</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>1.52</b>	<b>100</b>	<b>10</b>	<b>90</b>	<b>68</b>	<b>32</b>

*Note:* 1. Subsidiary Occupations includes dairy, poultry, petty business etc.  
2. Other Services include Dairy, Poultry and Fishery

farmers under ACABC scheme in Assam. Table indicates that the average area of holding per beneficiary was 1.52 hectares. Among the three categories of beneficiary farmers the average size of holding was comparatively larger i.e. 1.89 hectares in the category of proper agri. services against the smallest i.e. 0.94 hectares in the category of both agri.+other services. On an average, the size of holding was 1.32 hectares in the category of allied agri. services. Out of the total 100 beneficiary farmers 10 farmers had membership in different agencies. All the farmers under three categories availed benefits from different agri-ventures. Out of the total 100 beneficiary households, 68 households had subsidiary occupation, of which 29 households were from proper agri-services, 31 households from allied agri-services and 8 households were from both agri+other services. Thus, maximum of the sample farmers were practicing subsidiary occupations along with their main occupation in the area under study.

## **V.2 Social and Educational status of beneficiaries under ACABC scheme in Assam**

Table 5.2 shows category-wise social and educational status of the sample beneficiary farmers under ACABC scheme area in Assam. Out of 45 sample beneficiary farmers under proper agri. services 22 belonged to general group, 8 belonged to OBC and 15 beneficiaries were SC & ST. Under allied agri. services out of 40 sample beneficiary households, 17 belonged to general group, 13 belonged to ST and 10 belonged to OBC. Under both agri+ other services, out of 15 sample beneficiary households 4 belonged to general group, 6 belonged to ST and 5 belonged to OBC. Thus, in all the categories of beneficiaries, the maximum i.e. 43 were of upper castes, 34 were of schedule castes and 23 were of backward castes. Education is one of the most important factors which determine the quality of manpower. The level of education also indicated the efficiency of human resources engaged in productive activities including agriculture. By and large 100 per cent literacy was found among the beneficiary farmers across the categories. But there was variation in the level of educational standard. It is seen that, of the total sample beneficiary farmers, 6 farmers were graduates, 49 farmers passed HSLC and HS passed and 45 farmers were below matric standard.

Of the total sample beneficiary farmers under proper agri. services only 24 farmers availed training, similarly, 19 farmers under allied agri- services had the advantage of undergoing training and another 5 farmers were found to avail training under both agri+ other services.

Table-5.2

**Category –wise Social and Educational Status of the Sample Beneficiary Farmers  
under ACABC Scheme in Assam**

(Major Group/Category)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Social Group			Caste			Educational Status				Availed any Training	
			Gen.	OBC	SC & ST	U. Class	B. Class	SC & ST Class	P.G	Graduate	HS & =2 Sec.	Non-Matric	Yes	No
<b>A.</b>	<b>Proper Agri. Services</b>													
I	Marginal Farmers	10	4	3	3	4	3	3	0	0	6	4	4	6
II	Small Farmers	15	7	3	5	7	3	5	0	2	9	4	7	8
III	Medium & Large Farmers	20	11	2	7	11	2	7	0	3	9	8	13	7
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>22</b>	<b>8</b>	<b>15</b>	<b>22</b>	<b>8</b>	<b>15</b>	<b>0</b>	<b>5</b>	<b>24</b>	<b>16</b>	<b>24</b>	<b>21</b>
<b>B.</b>	<b>Allied Agri. Services</b>													
I	Marginal Farmers	20	8	3	9	8	3	9	0	0	11	9	11	9
II	Small Farmers	12	6	4	2	6	4	2	0	1	6	5	5	7
III	Medium & Large Farmers	8	3	3	2	3	3	2	0	0	1	7	3	5
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>17</b>	<b>10</b>	<b>13</b>	<b>17</b>	<b>10</b>	<b>13</b>	<b>0</b>	<b>1</b>	<b>18</b>	<b>21</b>	<b>19</b>	<b>21</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>													
I	Marginal Farmers	7	2	2	3	2	2	3	0	0	4	3	2	5
II	Small Farmers	8	2	3	3	2	3	3	0	0	3	5	3	5
III	Medium & Large Farmers	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Sub Total Agri.+ Other Services</b>		<b>15</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>8</b>	<b>5</b>	<b>10</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>43</b>	<b>23</b>	<b>34</b>	<b>43</b>	<b>23</b>	<b>34</b>	<b>0</b>	<b>6</b>	<b>49</b>	<b>45</b>	<b>48</b>	<b>52</b>

Note: Other Services include Dairy, Poultry and Fishery

### V.3. Details of Crops Grown by the sample beneficiaries under ACABC scheme in Assam

#### V.3.1. Category-wise details of crops grown by the sample beneficiary farmers under ACABC scheme in Assam

Cropping pattern reflects the relative dominance of individual crops to total cropped area. Table-5.3 shows the category-wise details of crops grown in *kharif* season by the sample beneficiary farmers. From the table it is seen that on an average the total *kharif* crop area was estimated at 0.92 hectare, of which 0.48 hectares were irrigated. Of

**Table-5.3**  
**Category-wise Details of Crops Grown in *Kharif* Season by the Sample Beneficiary Farmers under ACABC Scheme in Assam**

(Area in Hect./Beneficiary)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Cereals Area		Pulses Area		Others including Horticulture Crops Area		Total <i>Kharif</i> Crops Area	
			Irri.	Total	Irri.	Total	Irri.	Total	Irri.	Total
<b>A.</b>	<b>Proper Agri. Services</b>									
I	Marginal Farmers	10	0.00	0.61	0.00	0.00	0.00	0.13	0.00	0.74
II	Small Farmers	15	0.62	1.21	0.00	0.00	0.14	0.14	0.76	1.35
III	Medium & Large Farmers	20	1.33	2.19	0.00	0.00	0.26	0.42	1.59	2.61
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>0.80</b>	<b>1.51</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>	<b>0.26</b>	<b>0.96</b>	<b>1.77</b>
<b>B.</b>	<b>Allied Agri. Services</b>									
I	Marginal Farmers	20	0	0	0	0	0	0	0	0
II	Small Farmers	12	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	8	0	0	0	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Agri.+ Other Services</b>									
I	Marginal Farmers	7	0.28	0.61	0	0	0	0	0.28	0.61
II	Small Farmers	8	0.42	0.94	0	0	0	0	0.42	0.94
III	Medium & Large Farmers	0	0.00	0.00	0	0	0	0	0.00	0.00
<b>Sub Total Agri.+ Other Services</b>		<b>15</b>	<b>0.35</b>	<b>0.78</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.35</b>	<b>0.78</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>0.41</b>	<b>0.80</b>	<b>0</b>	<b>0</b>	<b>0.07</b>	<b>0.12</b>	<b>0.48</b>	<b>0.92</b>

Note: 1. Other Horticultural Crops includes Papaya, Babycorn, Vegetables and Banana

2. Other Services includes Dairy, Poultry and Fishery

the total *kharif* crop area, cereal crops covered 0.80 hectares, of which 0.41 hectares were irrigated. Other crops covered 0.12 hectares, of which 0.07 hectares were irrigated. Among the categories, the total *kharif* crop area was higher i.e. 1.77 hectares under the category of proper agri. services against the lower i.e. 0.78 hectares under the category of both agri.+other services .

### **V.3.2. Category-wise details of crops grown in *rabi* season by the sample beneficiary farmers under ACABC scheme**

Table-5.4 shows the category-wise details of crops grown in *rabi* season by the sample beneficiary farmers. From the table, it is seen that the total *rabi* crops area was covered by others including horticultural crops only. On an average the area under *rabi* crops was estimated at 0.13 hectares per farm of which 0.05 hectares was irrigated.

**Table-5.4**  
**Category-wise Details of Crops Grown in *Rabi* Season by the Sample**  
**Beneficiary Farmers under ACABC Scheme in Assam**

(Area in Hect/Beneficiary)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Cereals Area		Pulses Area		Others including Horticulture Crops Area		Total <i>Rabi</i> Crops Area	
			Irri.	Total	Irri.	Total	Irri.	Total	Irri.	Total
<b>A.</b>	<b>Proper Agri. Services</b>									
I	Marginal Farmers	10	0	0	0	0	0.00	0.11	0.00	0.11
II	Small Farmers	15	0	0	0	0	0.10	0.10	0.10	0.10
III	Medium & Large Farmers	20	0	0	0	0	0.20	0.26	0.20	0.26
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.12</b>	<b>0.17</b>	<b>0.12</b>	<b>0.17</b>
<b>B.</b>	<b>Allied Agri. Services</b>									
I	Marginal Farmers	20	0	0	0	0	0	0	0	0
II	Small Farmers	12	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	8	0	0	0	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Agri.+ Other Services</b>									
I	Marginal Farmers	7	0	0	0	0	0	0.32	0	0.32
II	Small Farmers	8	0	0	0	0	0	0.45	0	0.45
III	Medium & Large Farmers	0	0	0	0	0	0	0		
<b>Sub Total Agri.+ Other Services</b>		<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.39</b>	<b>0</b>	<b>0.39</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.05</b>	<b>0.13</b>	<b>0.05</b>	<b>0.13</b>

Note: 1. Other Horticultural Crops includes Papaya, Baby corn, Vegetables and Banana

2. Other Services include Dairy, Poultry and Fishery

### V.3.3 Category-wise details of crops grown during *zaid* season by the sample beneficiary farmers

Table-5.5 shows the category-wise details of crops grown in *zaid* season by the sample beneficiary farmers. From the table, it is seen that under proper agri-services, the total per farm *zaid* crop area covered 1.14 hectares of which 0.84 hectares were irrigated. Under both agri+ other services total per farm *zaid* crop area stood at 0.84 hectares of which 0.43 hectares were irrigated. As a whole, total per farm *zaid* crop area stood at 0.64 hectares of which 0.44 hectares were irrigated.

**Table-5.5**

**Category-wise Details of Crops Grown in *Zaid* Season by the Sample Beneficiary Farmers under ACABC Scheme in Assam**

(Area in Hect/Beneficiary)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Cereals Area		Pulses Area		Others including Horticulture Crops		Total <i>Zaid</i> Crops Area	
			Irri.	Total	Irri.	Total	Irri.	Total	Irri.	Total
<b>A.</b>	<b>Proper Agri. Services</b>									
I	Marginal Farmers	10	0.12	0.36	0	0	0.23	0.35	0.35	0.71
II	Small Farmers	15	0.37	0.59	0	0	0.29	0.72	0.66	1.31
III	Medium & Large Farmers	20	1.03	1.03	0	0	0.21	0.21	1.24	1.24
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>0.60</b>	<b>0.73</b>	<b>0.00</b>	<b>0.00</b>	<b>0.24</b>	<b>0.41</b>	<b>0.84</b>	<b>1.14</b>
<b>B.</b>	<b>Allied Agri. Services</b>									
I	Marginal Farmers	20	0	0	0	0	0	0	0	0
II	Small Farmers	12	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	8	0	0	0	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Agri.+ Other Services</b>									
I	Marginal Farmers	7	0.16	0.37	0	0	0.17	0.34	0.33	0.71
II	Small Farmers	8	0	0	0	0	0.53	0.96	0.53	0.96
III	Medium & Large Farmers	0	0	0	0	0	0			
<b>Sub Total Agri.+ Other Services</b>		<b>15</b>	<b>0.07</b>	<b>0.17</b>	<b>0.00</b>	<b>0.00</b>	<b>0.36</b>	<b>0.67</b>	<b>0.43</b>	<b>0.84</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>0.28</b>	<b>0.36</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>	<b>0.29</b>	<b>0.44</b>	<b>0.64</b>

Note: 1. Other Horticultural Crops includes Papaya, Babycorn, Vegetables and Banana

2. Other Services include Dairy, Poultry and Fishery

#### **V.4 Details of seasonal Total irrigated and Total Cropped Area on the farms of sample beneficiary farmers under ACABC scheme in Assam**

Table-5.6 shows the category-wise details of seasonal total per farm irrigated and total cropped area on the farms of sample beneficiary farmers under ACABC scheme in Assam. It is seen from the table that the total per farm gross cropped area comprising of *kharif*, *rabi* and *zaid* season stood at 1.44 hectares of which 0.74 hectares were irrigated. The total irrigated area per farm during *kharif*, *rabi* and *zaid* season stood at 0.48 hectares, 0.05 hectares and 0.20 hectares respectively. While the total cropped area per farm during *kharif*, *rabi* and *zaid* season were estimated at 0.91 hectares, 0.13 hectares and 0.39 hectares respectively.

**Table-5.6**  
**Category-wise Details of Seasonal Total Irrigated and total Cropped Area on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Assam**

(Area in Hect/Beneficiary)

I. No.	Category of Sample Beneficiary Farmers	No. of Samples	Total Irrigated Area			Gross Irrigated Area	Total Cropped Area			Gross Cropped Area
			<i>Kharif</i>	<i>Rabi</i>	<i>Zaid</i>		<i>Kharif</i>	<i>Rabi</i>	<i>Zaid</i>	
<b>A.</b>	<b>Proper Agri. Services</b>									
I	Marginal Farmers	10	0.00	0.00	0.34	0.34	0.74	0.11	0.71	1.56
II	Small Farmers	15	0.76	0.10	0.66	1.51	1.35	0.10	1.31	2.75
III	Medium & Large Farmers	20	1.59	0.20	1.24	3.02	2.61	0.26	1.24	4.10
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>0.96</b>	<b>0.12</b>	<b>0.84</b>	<b>1.92</b>	<b>1.77</b>	<b>0.17</b>	<b>1.14</b>	<b>3.08</b>
<b>B.</b>	<b>Allied Agri. Services</b>									
I	Marginal Farmers	20	0	0	0	0	0	0	0	0
II	Small Farmers	12	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	8	0	0	0	0	0	0	0	0
Sub Total Allied Agri. Services		<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Agri. + Other Services</b>									
I	Marginal Farmers	7	0.28	0.00	0.33	0.61	0.61	0.32	0.71	1.63
II	Small Farmers	8	0.42	0.00	0.53	0.94	0.94	0.45	0.96	2.35
III	Medium & Large Farmers	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Sub Total Agri. + Other Services</b>		<b>15</b>	<b>0.35</b>	<b>0.00</b>	<b>0.43</b>	<b>0.79</b>	<b>0.78</b>	<b>0.39</b>	<b>0.84</b>	<b>2.01</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>0.48</b>	<b>0.05</b>	<b>0.20</b>	<b>0.74</b>	<b>0.91</b>	<b>0.13</b>	<b>0.39</b>	<b>1.44</b>

Note : Other Services include Dairy, Poultry and Fishery

### **V.5. Details of inputs and outputs of crops in All the Seasons on the farms of sample beneficiary farmers under ACABC scheme in Assam**

#### **V.5.1. Category-wise details of inputs and outputs of kharif crops on the farms of sample beneficiary farmers**

Category-wise details of inputs and outputs of *kharif* crops on the farms of sample beneficiary farmers under ACABC scheme in Assam are presented in Table-5.7. It is seen that the total input cost per farm in *kharif* season stood at Rs 52,296 of which Rs 35,704 was own cost and Rs.16,592 other cost. Of the total input cost, Rs 32,464 was spent on cereal crops and Rs.19, 832 on other crops. The total value of output per farm stood at Rs 86,460 of which Rs 52,003 was from cereal crops and Rs 34,457 from other crops. The category-wise analysis indicates that outputs per farm was recorded maximum i.e. Rs. 1,76,107 in case of the beneficiary farmers of proper agri. services

**Table-5.7**  
**Category-wise Details of Inputs and Outputs of Kharif Crops on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Assam**

(Inputs and outputs in Rs/Beneficiary)

Sl.No	Category of Beneficiary Farmers	No. of Samples	Cereals				Pulses				Others				Total Kharif Crops			
			Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Outputs (Rs)
			Own	Others	Total		Own	Others	Total		Own	Others	Total		Own	Others	Total	
<b>A.</b>	<b>Proper Agri. Services</b>																	
I	Marginal Farmers	10	15052	6451	21503	38065	0	0	0	0	12424	8283	20707	38461	27476	14734	42209	76526
II	Small Farmers	15	32718	10906	43624	68429	0	0	0	0	16221	8735	24956	42211	48939	19640	68580	110641
III	Medium & Large Farmers	20	67542	27076	94618	153602	0	0	0	0	42054	28036	70091	121396	109596	55112	164709	274998
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>44269</b>	<b>17103</b>	<b>61372</b>	<b>99536</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26859</b>	<b>17213</b>	<b>44072</b>	<b>76571</b>	<b>6684</b>	<b>34315</b>	<b>105444</b>	<b>176107</b>
<b>B.</b>	<b>Allied Agri. Services</b>																	
I	Marginal Farmers	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
II	Small Farmers	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Both Agri.+ Other Services</b>																	
I	Marginal Farmers	7	18586	7561	26148	34993	0	0	0	0	0	0	0	0	18586	7561	26148	34993
II	Small Farmers	8	29935	7765	37700	59527	0	0	0	0	0	0	0	0	29935	7765	37700	59527
III	Medium & Large Farmers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Sub Total Both Agri.+ Other Services</b>		<b>15</b>	<b>24639</b>	<b>7670</b>	<b>32309</b>	<b>48078</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24639</b>	<b>7670</b>	<b>32309</b>	<b>48078</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>23617</b>	<b>8847</b>	<b>32464</b>	<b>52003</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12087</b>	<b>7746</b>	<b>19832</b>	<b>34457</b>	<b>35704</b>	<b>16592</b>	<b>52296</b>	<b>86460</b>

Note: Other Services includes Dairy, Poultry and Fishery



against the minimum of Rs 48,078 per farm in case of the beneficiary farmers of both agri.+other services. Thus, the beneficiary farmers of proper agri. services had received comparatively higher outputs and as such ACABC scheme performed better in case of proper agri. services. Accordingly input costs on the farms of beneficiaries were found to be high in case of the farmers of proper agri. services as against Rs 32,309 per farm (lowest) in case of the beneficiary farmers of both agri.+ other services. On the other hand, among the *kharif* crops, cereals were comparatively more profitable in case of the farmers under both the categories.

**V.5.2: Category-wise details of inputs and outputs of Rabi crops on the farms of sample beneficiary farmers under ACABC scheme in Assam**

Category-wise details of inputs and outputs of *rabi* crops on the farms of sample beneficiary farmers under ACABC scheme in Assam are presented in Table-5.8. In *rabi* season, inputs and outputs came from other crops only. Table indicates that the overall gross outputs from *rabi* crops was recorded at Rs 39,382 per farm of which maximum i.e. Rs 1,07,997 was received by the farmers under both agri.+ other services against the minimum of Rs 51,517 for the farmers under proper agri. services. Regarding inputs incurred on *rabi* crops, the gross inputs per farm was estimated at Rs 22,966 of which Rs 14,812 were incurred on own inputs and Rs. 8,154 on other inputs.

**V.5.3: Category-wise details of inputs and outputs of zaid crops on the farms of sample beneficiary farmers under ACABC scheme in Assam**

Category-wise details of inputs and outputs of *zaid* crops on the farms of sample beneficiary farmers under ACABC scheme in Assam are presented in Table-5.9. It is seen that the total input cost per farm in *zaid* season stood at Rs 58,278 of which Rs 39,282 was own cost and Rs 18,997 other cost. Of the total input cost, Rs 12,183 was spent on cereal crops and Rs 46,095 on other crops. The total value of output per farm stood at Rs 95,042 of which Rs 18,431 was from cereal crops and Rs 76,612 from other crops. The category-wise analysis indicates that outputs per farm was recorded maximum i.e. Rs 2, 08,119 in case of the beneficiary farmers of both agri.+ other services against the minimum of Rs 1,41,832 per farm in case of the beneficiary farmers of proper agri services. Thus, the beneficiary farmers of both agri. +other services had received comparatively higher outputs and as such ACABC scheme performed better in case of both agri. +other services. Accordingly inputs cost incurred on the farms of beneficiaries were found to be high i.e. Rs 1, 29,926 in case of the farmers of both agri.+ other services as against Rs 86,199 per farm in case of the beneficiary farmers of proper

**Table-5.8**  
**Category-wise Details of Inputs and Outputs of Rabi Crops on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Assam**  
 (Inputs and outputs in Rs/Beneficiary)

Sl.No	Category of Beneficiary Farmers	No. of Samples	Cereals				Pulses				Others				Total Rabi Crops				
			Inputs (Rs)			Output (Rs)	Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Out-puts (Rs)	
			Own	Others	Total		Own	Others	Total		Own	Others	Total		Own	Others	Total		
<b>A.</b>	<b>Proper Agri. Services</b>																		
I	Marginal Farmers	10	0	0	0	0	0	0	0	0	12731	5456	18187	33050	12731	5456	18187	33050	
II	Small Farmers	15	0	0	0	0	0	0	0	0	11463	6448	17911	29072	11463	6448	17911	29072	
III	Medium & Large Farmers	20	0	0	0	0	0	0	0	0	26033	17355	43388	77585	26033	17355	43388	77585	
<b>Sub Total Proper Agri. Services</b>		<b>45</b>									<b>18220</b>	<b>11075</b>	<b>29295</b>	<b>51517</b>	<b>18220</b>	<b>11075</b>	<b>29295</b>	<b>51517</b>	
<b>B.</b>	<b>Allied Agri. Services</b>																		
I	Marginal Farmers	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
II	Small Farmers	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Both Agri.+ Other Services</b>																		
I	Marginal Farmers	7	0	0	0	0	0	0	0	0	40123	13374	53498	87364	40123	13374	53498	87364	
II	Small Farmers	8	0	0	0	0	0	0	0	0	47555	27929	75483	126051	47555	27929	75483	126051	
III	Medium & Large Farmers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Sub Total Both Agri.+ Other Services</b>		<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>44087</b>	<b>21137</b>	<b>65223</b>	<b>107997</b>	<b>44087</b>	<b>21137</b>	<b>65223</b>	<b>107997</b>	
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14812</b>	<b>8154</b>	<b>22966</b>	<b>39382</b>	<b>14812</b>	<b>8154</b>	<b>22966</b>	<b>39382</b>	

Note: Other Services include Dairy, Poultry and Fishery

Table-5.9

## Category-wise Details of Inputs and Outputs of Zaid Crops on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Assam

(Inputs and outputs in Rs/Beneficiary)

Sl.No	Category of Beneficiary Farmers	No. of Sampl-es	Cereals				Pulses				Others				Total Zaid Crops			
			Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Output (Rs)
			Own	Others	Total		Own	Others	Total		Own	Others	Total		Own	Others	Total	
<b>A.</b>	<b>Proper Agri. Services</b>																	
I	Marginal Farmers	10	9466	2367	11833	19287	0	0	0	0	39912	17105	57018	99362	49378	19472	68850	118649
II	Small Farmers	15	14733	5449	20182	30475	0	0	0	0	63697	34298	97995	169200	78430	39747	118177	199675
III	Medium & Large Farmers	20	21254	14170	35424	53136	0	0	0	0	24117	11349	35466	56906	45371	25519	70890	110042
	<b>Sub Total Proper Agri. Services</b>	<b>45</b>	<b>16461</b>	<b>8640</b>	<b>25101</b>	<b>38060</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40820</b>	<b>20278</b>	<b>61098</b>	<b>103772</b>	<b>57281</b>	<b>28918</b>	<b>86199</b>	<b>141832</b>
<b>B.</b>	<b>Allied Agri. Services</b>																	
I	Marginal Farmers	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
II	Small Farmers	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<b>Sub Total Allied Agri. Services</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Both Agri.+ Other Services</b>																	
I	Marginal Farmers	7	9510	3170	12680	18623	0	0	0	0	49009	30038	79047	128147	58519	33208	91726	146770
II	Small Farmers	8	0	0	0	0	0	0	0	0	117612	45738	163350	261800	117612	45738	163350	261800
III	Medium & Large Farmers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<b>Sub Total Both Agri.+ Other Services</b>	<b>15</b>	<b>4438</b>	<b>1479</b>	<b>5917</b>	<b>8691</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>85597</b>	<b>38411</b>	<b>124008</b>	<b>199429</b>	<b>90035</b>	<b>39890</b>	<b>129926</b>	<b>208119</b>
<b>G.</b>	<b>Total Beneficiaries</b>	<b>100</b>	<b>8073</b>	<b>4110</b>	<b>12183</b>	<b>18431</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31209</b>	<b>14887</b>	<b>46095</b>	<b>76612</b>	<b>39282</b>	<b>18997</b>	<b>58278</b>	<b>95042</b>

Note: Other Services include Dairy, Poultry and Fishery

agri services. On the other hand, among the *zaid* crops, other crops were comparatively more profitable in case of the farmers under both the categories.

#### V.5.4 Category wise details of Total Inputs, Outputs and Net incomes from all crops on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Assam

Table-5.10 represents category-wise details of total inputs, outputs and net incomes from all crops on the farms of sample beneficiary farmers under ACABC scheme in Assam. From the table it is seen that gross outputs from all crops was recorded at Rs 2,20,885, while the gross inputs from all crops was recorded at Rs. 1,33,541 per farm. The overall average net income per farm was found at Rs 87,344. Among the inputs, the other inputs procured from agri. ventures or elsewhere was lower than the own inputs. The category-wise analysis shows that the maximum net income i.e. Rs. 1,48,519 per farm was recorded on the farms under proper agri services against the minimum net income of Rs 1,36,736 on the farms under both agri.+ other services.

**Table: 5.10**

#### Category-wise Details of total Inputs, Outputs and Net Incomes from All Crops on the Farms of the Sample Beneficiary Farmers under ACABC Scheme in Assam

(Inputs & Outputs in Rs/Beneficiary)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Gross Inputs (Rs)			Gross Outputs (Rs)	Net Incomes (Rs)
			Own	Others	Total		
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	10	89585	39661	129247	228225	98978
II	Small Farmers	15	138832	65836	204667	339387	134720
III	Medium & Large Farmers	20	181001	97986	278987	462625	183638
Sub Total Proper Agri. Services		<b>45</b>	<b>146630</b>	<b>74308)</b>	<b>220938</b>	<b>369457</b>	<b>148519</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	20	0	0	0	0	0
II	Small Farmers	12	0	0	0	0	0
III	Medium & Large Farmers	8	0	0	0	0	0
Sub Total Allied Agri. Services		<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Agri.+ Other Services</b>						
I	Marginal Farmers	7	117228	54144	171372	269128	97756
II	Small Farmers	8	1951011	81432	276533	447378	170845
III	Medium & Large Farmers	0	<b>0</b>	0	0	0	0
<b>Sub Total Agri.+ Other Services</b>		<b>15</b>	<b>158761</b>	<b>68697)</b>	<b>227458</b>	<b>364194</b>	<b>136736</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>89797</b>	<b>43743</b>	<b>133541</b>	<b>220885</b>	<b>87344</b>

Note: Other Services include Dairy, Poultry and Fishery

### V.5.5 Category wise details of Total Inputs, Outputs and Net incomes from Milch Animals reared by the Sample Beneficiary Farmers under ACABC Scheme in Assam

Category wise details of total Inputs, Outputs and Net incomes from Milch Animals reared by the Sample Beneficiary Farmers under ACABC Scheme in Assam is presented in Table-5.11. Maximum outputs i.e. Rs 3,56,235 per farm was received under the category of allied agri. services against the outputs of Rs. 1,83,317 per farm under the category of both agri.+ other services. Thus, the farms under allied agri. services were more productive and profitable in comparison of the farms under both agri.+ other services in rearing milch animals in the area under study, because the net income per farm was maximum i.e. Rs 1,53,806 under the category of allied agri. Services. Accordingly, the total inputs per farm were recorded maximum valued at Rs. 2,02,429 per farm on the farms under allied agri. services, against the minimum of Rs 1, 22,426 per farm on the farms under both agri. + other services.

**Table-5.11**  
**Category-wise Details of Inputs, Outputs and Net Incomes from Milch Animals**  
**Reared by Sample Beneficiary Farmers under ACABC Scheme in Assam**

(Inputs & Outputs in Rs/Beneficiary)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Input Incurred (Rs)/ annum			Outputs Received (Rs)/annum	Net Income (Rs)/annum
			Own Sources	Other Sources	Total (Rs)		
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	10	0	0	0	0	0
II	Small Farmers	15	0	0	0	0	0
III	Medium & Large Farmers	20	0	0	0	0	0
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	20 (12)	1,30,915	80,238	2,11,153	3,52,900	1,41,748
II	Small Farmers	12 (6)	1,43,493	94,670	2,38,163	4,47,159	2,08,997
III	Medium & Large Farmers	8 (2)	86,374	40,646	1,27,020	2,28,187	1,01,167
<b>Sub Total Allied Agri. Services</b>		<b>40(20)</b>	<b>1,25,780</b>	<b>76,649</b>	<b>2,02,429</b>	<b>3,56,235</b>	<b>1,53,806</b>
<b>C.</b>	<b>Agri.+ Other Services</b>						
I	Marginal Farmers	7	74,093	26,033	1,00,126	1,71,215	71,089
II	Small Farmers	8	97,938	44,001	1,41,939	1,93,906	51,967
III	Medium & Large Farmers	0	0	0	0	0	0
<b>Sub Total Agri.+ Other Services</b>		<b>15</b>	<b>86,810</b>	<b>35,616</b>	<b>1,22,426</b>	<b>1,83,317</b>	<b>60,891</b>
<b>G. Total beneficiaries</b>		<b>100 (20)</b>	<b>19931</b>	<b>8594</b>	<b>28526</b>	<b>45753</b>	<b>17227</b>

*Note: 1. Figures in Parentheses indicate Number of household having Dairy as a main occupation.*

*2. Other Services include Dairy, Poultry and Fishery*

### V.5.5.a Category wise details of Total Inputs, Outputs and Net incomes from Poultry reared by the Sample Beneficiary Farmers under ACABC Scheme in Assam

Category-wise details of inputs, outputs and net incomes from poultry reared by sample beneficiary farmers under ACABC scheme in Assam are presented in Table-5.11(a). Table indicates that the overall average outputs from poultry per farm were estimated at Rs 84,284. While the inputs incurred in rearing poultry were estimated at Rs 65,891 of which the maximum (Rs 51,961) was incurred on other inputs and Rs 13,930 on own inputs. Thus, the net income from poultry was recorded at Rs 18,393 per farm. The category-wise analysis indicates that the Maximum outputs valued at Rs 1,91,832 per farm was received under the category of allied agri. services against the outputs of Rs. 50,344 per farm under the category of both agri.+ other services. Thus, the farms under allied agri. services were more productive and profitable in comparison of the farms under both agri.+ other services in rearing poultry in the area under study, because the net income per farm was maximum i.e.

**Table-5.11(a)**

#### Category-wise Details of Inputs, Outputs and Net Incomes from Poultry reared by Sample Beneficiary Farmers under ACABC Scheme in Assam

(Inputs & Outputs in Rs/Beneficiary)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Input cost Incurred (Rs)/ annum			Outputs Received (Rs)/annum	Net Incomes (Rs)/annum
			Own Sources	Other Sources	Total (Rs)		
<b>A. Proper Agri. Services</b>							
I	Marginal Farmers	10	0	0	0	0	0
II	Small Farmers	15	0	0	0	0	0
III	Medium & Large Farmers	20	0	0	0	0	0
Sub Total Proper Agri. Services		<b>45</b>	0	0	0	0	0
<b>B. Allied Agri. Services</b>							
I	Marginal Farmers	20 (4)	20,400	81,600	1,02,000	1,32,600	30,600
II	Small Farmers	12 (4)	49,573	1,75,760	2,25,333	2,86,173	60,840
III	Medium & Large Farmers	8 (2)	30,157	1,28,562	1,58,719	1,98,398	39,680
Sub Total Allied Agri. Services		<b>40 (10)</b>	<b>31,103</b>	<b>1,19,240</b>	<b>1,50,344</b>	<b>1,91,832</b>	<b>41,488</b>
<b>C. Agri.+ Other Services</b>							
I	Marginal Farmers	7	7,832	22,290	30,122	43,505	13,384
II	Small Farmers	8	11,755	33,807	45,562	56,328	10,766
III	Medium & Large Farmers	0	0	0	0	0	0
Sub Total Agri.+ Other Services		<b>15</b>	<b>9,924</b>	<b>28,433</b>	<b>38,357</b>	<b>50,344</b>	<b>11,987</b>
G. Total Beneficiaries		<b>100</b>	<b>13930</b>	<b>51961</b>	<b>65891</b>	<b>84284</b>	<b>18393</b>

*Note:1. Figures in parentheses indicate number of household having Poultry as a main occupation.*

*2. Other Services include Dairy, Poultry and Fishery*

Rs 41,488 under the category of allied agri. Services. Accordingly the total inputs per farm were incurred maximum i.e. Rs 1, 50,344 per farm on the farms under allied agri. services, against the minimum i.e. Rs 38,357 per farm on the farms under both agri. + other services.

#### V.5.5.b Category wise details of Total Inputs, Outputs and Net incomes from Fishery Farming by the Sample Beneficiary Farmers under ACABC Scheme in Assam

Table-5.11(b) shows the category-wise details of inputs, outputs and net incomes from fishery by sample beneficiary farmers under ACABC scheme in Assam. Table indicates that the overall average outputs from fishery per farm were estimated at Rs 23,241. While the inputs incurred in fishery were estimated at Rs 9,997 of which the maximum i.e. Rs 7,658 was incurred on other inputs and Rs 2,339 on own inputs. Thus, the net income from fishery was recorded at Rs 13,244 per farm. The category-wise analysis indicates that

**Table-5.11 (b)**  
**Category-wise Details of Inputs, Outputs and Net Incomes from Fishery reared by Sample Beneficiary Farmers under ACABC Scheme in Assam**

(Inputs & Outputs in Rs/Beneficiary)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Input cost Incurred (Rs)/ annum			Outputs Received (Rs)/annum	Net Incomes (Rs)/annum
			Own Sources	Other Sources	Total (Rs)		
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	10	0	0	0	0	0
II	Small Farmers	15	0	0	0	0	0
III	Medium & Large Farmers	20	0	0	0	0	0
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	20 (4)	2,284	7,866	10,150	25,781	15,631
II	Small Farmers	12 (2)	3,719	10,865	14,583	36,604	22,021
III	Medium & Large Farmers	8 (4)	5,644	21,231	26,875	66,919	40,044
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>3,386</b>	<b>11,439</b>	<b>14,825</b>	<b>37,256</b>	<b>22,431</b>
<b>C.</b>	<b>Agri.+ Other Services</b>						
I	Marginal Farmers	7	3,886	15,069	18,955	36,443	17,488
II	Small Farmers	8	8,905	25,345	34,250	72,347	38,097
III	Medium & Large Farmers	0	0	0	0	0	0
<b>Sub Total Agri.+ Other Services</b>		<b>15</b>	<b>6,563</b>	<b>20,550</b>	<b>27,112</b>	<b>55,592</b>	<b>28,480</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>2339</b>	<b>7658</b>	<b>9997</b>	<b>23241</b>	<b>13244</b>

Note: 1. Figures in parentheses indicate number of household having Fishery as a main occupation.

2. Other Services include Dairy, Poultry and Fishery

the Maximum outputs i.e. Rs 55,592 per farm was received under the category of both agri.+ other services against an output of Rs. 37,256 per farm under the category of allied agri. services. The net income per farm was maximum i.e. Rs 28,480 under the category of both agri. + other Services. Accordingly the total input costs per farm were recorded maximum of Rs. 27,112 on the farms under both agri. + other Services, against the minimum i.e. Rs 14,825 per farm on the farms under allied agri. services.

### V.5.6 Category wise details of Total Inputs, Outputs and Net incomes from Draught Animals reared by the Sample Beneficiary Farmers under ACABC Scheme in Assam

Category-wise details of inputs, outputs and net incomes from draught animals reared by sample beneficiary farmers under ACABC scheme in Assam are presented in Table-5.12. Table shows that overall average outputs from draught animals was found at Rs. 6,849 per

**Table-5.12**  
**Category-wise Details of Inputs and Outputs from Draught Animals Reared by Sample Beneficiary Farmers under ACABC Scheme in Assam**

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Input cost Incurred (Rs)			Outputs Received (Rs)	Net Incomes (Rs)
			Own	Others	Total		
(Inputs & Outputs in Rs/ per beneficiary)							
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	10	17520	4380	21900	24536	2636
II	Small Farmers	15	5577	1373	6950	8201	1251
III	Medium & Large Farmers	20	981	2289	3270	3695	425
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>6188</b>	<b>2448</b>	<b>8639</b>	<b>9828</b>	<b>1192</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	20	5950	1050	7000	8470	1470
II	Small Farmers	12	4913	800	5713	5998	286
III	Medium & Large Farmers	8	3516	923	4450	4717	267
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>5152</b>	<b>952</b>	<b>6104</b>	<b>6978</b>	<b>874</b>
<b>C.</b>	<b>Agri.+ Other Services</b>						
I	Marginal Farmers	7	3513	6523	10036	14861	4825
II	Small Farmers	8	6132	9198	15330	17323	1993
III	Medium & Large Farmers	0	0	0	0	0	0
<b>Sub Total Agri.+ Other Services</b>		<b>15</b>	<b>4910</b>	<b>7950</b>	<b>12859</b>	<b>16174</b>	<b>3315</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>3521</b>	<b>2294</b>	<b>5815</b>	<b>6849</b>	<b>1034</b>

*Note: Other Services include Dairy, Poultry and Fishery*



farm, while the inputs incurred was Rs 5,815 per farm of which Rs 3,521 was incurred on own inputs and Rs. 2,294 was on other inputs. The net income received from the rearing of draught animals was estimated at Rs 1,034 per farm only. The category-wise analysis shows that the maximum output valued at Rs.16,174 per farm was recorded on the farms of both agri.+ other services, against the minimum Rs. 6,978 per farm on the farms under allied agri. services. On the farms under proper agri. services, the output was recorded at Rs 9,828 per farm. The farmers under both agri.+ other services had received maximum return from rearing draught animals.

There were no other animals reared by the sample beneficiary farmers under ACABC scheme in Assam. As such, the analysis of Table 5.13 is not necessary in case of Assam.

**Table-5.13**  
**Category-wise Details of Inputs and Outputs from Other Animals Reared by Sample Beneficiary Farmers under ACABC Scheme in Assam**

(Inputs & Outputs in Rs)							
Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Input cost Incurred (Rs)			Outputs Received (Rs)	Net Incomes (Rs)
			Own	Others	Total		
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	10	Nil	Nil	Nil	Nil	Nil
II	Small Farmers	15	Nil	Nil	Nil	Nil	Nil
III	Medium & Large Farmers	20	Nil	Nil	Nil	Nil	Nil
	Sub Total Proper Agri. Services	<b>45</b>	Nil	Nil	Nil	Nil	Nil
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	20	Nil	Nil	Nil	Nil	Nil
II	Small Farmers	12	Nil	Nil	Nil	Nil	Nil
III	Medium & Large Farmers	8	Nil	Nil	Nil	Nil	Nil
	Sub Total Allied Agri. Services	<b>40</b>	Nil	Nil	Nil	Nil	Nil
<b>C.</b>	<b>Agri.+ Other Services</b>						
I	Marginal Farmers	7	Nil	Nil	Nil	Nil	Nil
II	Small Farmers	8	Nil	Nil	Nil	Nil	Nil
III	Medium & Large Farmers	0	0	0	0	0	0
	Sub Total Agri.+ Other Services	<b>15</b>	Nil	Nil	Nil	Nil	Nil
<b>G.</b>	<b>Total Beneficiaries</b>	<b>100</b>	Nil	Nil	Nil	Nil	Nil

*Note: Other Services include Dairy, Poultry and Fishery*

### V.5.7 Category wise details of Total Inputs, Outputs and Net incomes from Total Animals reared by the Sample Beneficiary Farmers under ACABC Scheme in Assam

Table-5.14 shows the category-wise details of inputs, outputs and net incomes from total animals reared by sample beneficiary farmers under ACABC scheme in Assam.

Table indicates that the total outputs received from total animals was maximum i.e. Rs 3, 63,213 per farm under allied agri. services as against the minimum of Rs. 9, 828 per farm under proper agri. services. While on the farm under both agri.+other services it was recorded at Rs 1,99,491 per farm. The farms under allied agri. services were found to be more productive in rearing animals. The net income per farm was also estimated as higher i.e. Rs 1, 54,681 under the category of allied agri. services against the lowest i.e. Rs 1,192 per farm under the category of proper agri. services. Under both agri.+other services, it was estimated at Rs. 64,205 per farm. Table reveals that the farms under allied agri. services were comparatively more profitable in rearing animals in the area under study. The overall output from rearing animals was recorded at Rs 52,601 per farm while the total inputs per farm was recorded at Rs 34,341 and the net income per farm stood at Rs. 18,261.

**Table-5.14**  
**Category-wise Details of Inputs, Outputs and Net Incomes from total Animals Reared by Sample Beneficiary Farmers under ACABC Scheme in Assam**

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Inputs Incurred (Rs)			Outputs Received (Rs)	Net Incomes (Rs)
			Own	Others	Total		
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	10	17520	4380	21900	24536	2636
II	Small Farmers	15	5577	1373	6950	8201	1251
III	Medium & Large Farmers	20	981	2289	3270	3695	425
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>6188</b>	<b>2448</b>	<b>8637</b>	<b>9828</b>	<b>1192</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	20	136865	81288	218153	361370	143218
II	Small Farmers	12	148406	95469	243875	453158	209283
III	Medium & Large Farmers	8	89889	41581	131470	232905	101435
<b>Sub Total Allied Agri.</b>		<b>40</b>	<b>130932</b>	<b>77601</b>	<b>208533</b>	<b>363213</b>	<b>154681</b>

(Inputs & Outputs in Rs/Beneficiary)

Services							
<b>C.</b>	<b>Agri.+ Other Services</b>						
I	Marginal Farmers	7	77606	32556	110161	186076	75914
II	Small Farmers	8	104070	53199	157269	211229	53960
III	Medium & Large Farmers	0	0	0	0	0	0
<b>Sub Total Agri.+ Other Services</b>		<b>15</b>	<b>91720</b>	<b>43566</b>	<b>135286</b>	<b>199491</b>	<b>64205</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>23453</b>	<b>10888</b>	<b>34341</b>	<b>52601</b>	<b>18261</b>

*Note: Other Services include Dairy, Poultry and Fishery*

### V.6 Category wise details of Extension Services received from Agri-ventures by the Sample Beneficiary Farmers under ACABC Scheme in Assam

Table-5.15 shows the category-wise details of extension services received from Agri-ventures by the sample beneficiary farmers under ACABC scheme in Assam. Out of 45 sample beneficiary farmers under proper agri. Services, 22 farmers received services on farm machine etc. of which 5 beneficiary farmers belonged to marginal group, 8 belonged to small group and 9 beneficiary farmers belonged to medium and large groups; 39 farmers received other services including production trend etc, of which 10 beneficiary farmers belonged to marginal group, 13 belonged to small group and 16 beneficiary farmers

**Table-5.15**

### Category-wise Details of Extension Services received from Agri. Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Assam

(In No. of Beneficiaries)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Extension Services Received From Ventures on				
			Farm Machine etc	Dairy, Poultry etc.	Apiary, Sericulture etc.	Others including Production Trend etc.	All Extension Services Received
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	10	5	0	0	10	0
II	Small Farmers	15	8			13	
III	Medium & Large Farmers	20	9	0	0	16	0
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>39</b>	<b>0</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	20	0	20	4	8	0
II	Small Farmers	12	0	12	2	6	0
III	Medium & Large Farmers	8	0	8	4	4	0
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>0</b>	<b>40</b>	<b>10</b>	<b>18</b>	<b>0</b>
<b>C.</b>	<b>Agri.+ Other Services</b>						

I	Marginal Farmers	7	3			4	0
II	Small Farmers	8	4	0	0	6	0
III	Medium & Large Farmers	0					
<b>Sub Total Agri.+ Other Services</b>		<b>15</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>29</b>	<b>40</b>	<b>10</b>	<b>67</b>	<b>0</b>

*Note: Other Services include Dairy, Poultry and Fishery*

belonged to medium and large groups. Under allied agri. services, 40 sample households received extension services on dairy, poultry etc, 10 beneficiary farmers received extension services on apiary, sericulture etc, and 18 farmers received extension services on others including production trend etc.

Under both agri+ other services, 7 beneficiary farmers received extension services on farm machine etc and 10 more on production related issues. As a whole, total 29 farmers received extension services on farm machine etc, 40 beneficiary farmers received extension services on dairy, poultry etc, 10 beneficiary farmers received extension services on apiary, sericulture etc and 67 beneficiary farmers received extension services on others including production trend etc.

#### **V.7 Category wise details of Hiring Machines from Agri-ventures by the Sample Beneficiary Farmers under ACABC Scheme in Assam**

Table-5.16 shows the category-wise details of hiring machines from Agri-ventures by the sample beneficiary farmers under ACABC scheme in Assam. Under proper agri- services, the beneficiary farmers hired only tractors from the ventures. The hiring charges of tractor varied from Rs 3,508 to Rs 7,942 per farm across the categories and the total charges was worked out at Rs 4,100 per farm. The hiring charges of tractor was maximum i.e. Rs 7,942 per farm under the category of proper agri-services as against a minimum of Rs 3,508 per farm both agri+ other services category.

In the study area beneficiary farmers were not hiring any implement from the agri-ventures. As such, Analysis of Table 5-17 is not necessary.

**Table-5.16**

#### **Category-wise Details of Hiring Machines from Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Assam**

(Charges in Rs/Beneficiary)

Sl.	Category of	No. of	Details of Hiring Machines from Ventures
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<b>C. Both Agri. + Other Services</b>												
I	Marginal Farmers	7	0	0	0	0	0	0	0	0	0	0
II	Small Farmers	8	0	0	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	0	0	0	0	0	0	0	0	0	0	0
<b>Sub Total Both Agri. + Other Services</b>		<b>15</b>		0	0	0	0	0	0	0	0	0
<b>G. Total Beneficiaries</b>		<b>100</b>		0	0	0	0	0	0	0	0	0

*Note: Other Services include Dairy, Poultry and Fishery*

**Table : 5.18**  
**Category-wise Details of Inputs on Payment Received from Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Assam**  
 (Input Costs in Rs./Beneficiary)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Seeds		Fertilizers		Others		Total Inputs	
			Crops	Costs (Rs)	Crops	Costs (Rs)	Crops	Costs (Rs)	Crops	Costs (Rs)
<b>A. Proper Agri. Services</b>										
I	Marginal Farmers	10	Paddy, Veg., Horticultural Crops	19844	Paddy, Veg., Horticultural Crops	5953	0	0	Paddy, Veg., Horticultural Crops	25,797
II	Small Farmers	15	Paddy, Veg., Horticultural Crops	30,914	Paddy, Veg., Horticultural Crops	0	0	0	Paddy, Veg., Horticultural Crops	30,914
III	Medium & Large Farmers	20	Paddy, Veg., Horticultural Crops	18,677	Paddy, Veg., Horticultural Crops	0	0	0	Paddy, Veg., Horticultural Crops	18,677
Sub Total Proper Agri. Services		<b>45</b>		<b>23,015</b>		<b>1323</b>	0	0		<b>24,338</b>
<b>B. Allied Agri. Services</b>										
I	Marginal Farmers	20	0	0	0	0	Fodder, Poultry chick, Fingerlings, Medicine	70,377	Fodder, Poultry chick, Fingerlings, Medicine	70,377
II	Small Farmers	12	0	0	0	0	Fodder, Poultry chick, Fingerlings, Medicine	1,34,854	Fodder, Poultry chick, Fingerlings, Medicine	1,34,854
III	Medium & Large Farmers	8	0	0	0	0	Fodder, Poultry chick, Fingerlings, Medicine	1,67,449	Fodder, Poultry chick, Fingerlings, Medicine	1,67,449
Sub Total Allied Agri. Services		<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>1,09,134</b>		<b>1,09,134</b>
<b>C. Both Agri. + Other Services</b>										
I	Marginal Farmers	7	Paddy, Veg., Horticultural Crops	26,919	Paddy, Veg., Horticultural Crops	2019	0		Paddy, Veg., Horticultural Crops	2,894
II	Small Farmers	8	Paddy, Veg., Horticultural Crops	43,036	Paddy, Veg., Horticultural Crops	18,444	0		Paddy, Veg., Horticultural Crops	61,480
III	Medium & Large Farmers	0	0	0	0	0	0	0	0	0
Sub Total Both Agri. + Other Services		<b>15</b>		<b>35,515</b>		<b>10,779</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46,294</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>0</b>	<b>15,684</b>	<b>0</b>	<b>2212</b>	<b>0</b>	<b>43,654</b>	<b>0</b>	<b>61,550</b>

Note: Other Services include Dairy, Poultry and Fishery

### **V.8 Details of Inputs on Payment Received from Agri-ventures by the Sample Beneficiary Farmers under ACABC Scheme in Assam**

Category-wise details of receipt of inputs on payment basis from the ventures by sample beneficiary farmers under ACABC scheme in Assam are presented in Table-5.18. In the study area, the beneficiary farmers received inputs such as seed, fertilizers for paddy, vegetables and for horticultural crops on payment basis from the ventures. The cost of seed stood at Rs.1,98,44 per farm in marginal groups, Rs. 30,914 per farm in small groups and Rs. 18,677 in medium and large farms with an average seed cost of Rs. 23,015 per farm under proper agri-services. The cost of fertilizer was found to be Rs.5,953 per farm only in marginal groups. Under allied agri. Services, 40 sample beneficiary households received inputs such as fodder, poultry chick and fingerlings etc. on payment basis from the ventures. The charges for inputs were recorded at Rs 70,377 per farm for marginal groups, Rs 1, 34,854 for small farms and Rs 1, 67,449 per farm for medium and large farms with a total of Rs.1,09,134 per farm by all the farm size groups. Under both agri+ other services, the beneficiary farmers received inputs such as seed and fertilizer for paddy, vegetables and horticultural crops on payment from the ventures. The cost of seed stood at Rs.26, 919 per farm in marginal groups and Rs 43,036 per farm in small groups with a total of Rs. 35,515 per farm. The cost of fertilizer was recorded at Rs 2,019 per farm in marginal groups and Rs. 18,444 per farm in small groups. As a whole the total cost was worked out at Rs. 61, 550 per farm of which Rs 15,684 was attributed to seed, Rs. 2,212 to fertilizer and the remaining Rs. 43,654 was attributed to other inputs like fodder, poultry chicks and fingerlings.

### **V.9 Category wise details of Training Received from Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Assam**

Category-wise details of training received from the ventures by the sample beneficiary farmers under ACABC scheme in Assam are presented in Table-5.19. From the Table, it is observed that out of 100 sample beneficiary farmers from all the categories, 83 farmers received informal training from ventures, of which 38 beneficiary farmers were under proper agri. services, 36 under allied agri. services and 9 under both agri.+ other services. All the beneficiary farmers reported that the training was useful.



Table-5.19

**Category-wise Details of Training Received from Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Assam**

(In Numbers)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Nature of Training		Was it Useful	
			Formal	Informal	Yes	No
<b>A.</b>	<b>Proper Agri. Services</b>					
I	Marginal Farmers	10	0	8	8	0
II	Small Farmers	15	0	12	12	0
III	Medium & Large Farmers	20	0	18	18	0
	<b>Sub Total Proper Agri. Services</b>	<b>45</b>	<b>0</b>	<b>38</b>	<b>38</b>	<b>0</b>
<b>B.</b>	<b>Allied Agri. Services</b>					
I	Marginal Farmers	20	0	20		0
II	Small Farmers	12	0	10		0
III	Medium & Large Farmers	8	0	6		0
	<b>Sub Total Allied Agri. Services</b>	<b>40</b>	<b>0</b>	<b>36</b>		<b>0</b>
<b>C.</b>	<b>Agri.+ Other Services</b>					
I	Marginal Farmers	7	0	5		0
II	Small Farmers	8	0	4		0
III	Medium & Large Farmers	0	0	0	0	0
	<b>Sub Total Agri.+ Other Services</b>	<b>15</b>	<b>0</b>	<b>9</b>		<b>0</b>
<b>G.</b>	<b>Total Beneficiaries</b>	<b>100</b>	<b>0</b>	<b>83</b>		<b>0</b>

*Note: Other Services include Dairy, Poultry and Fishery*

**V.10 Details of Supports Received from Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Assam**

Table-5.20 shows the category-wise details of supports received from Agri-ventures by the sample beneficiary farmers under ACABC scheme in Assam. Table shows that almost all the beneficiary farmers had reported that that most of the inputs were available with the agri. ventures established in their areas. Out of 100 sample beneficiary farmers 73 farmers had be receive supports from the ventures on marketing of outputs, 29 beneficiary farmers had reported that they received other supports on the production trends from the agri. ventures. Among the three different categories, the maximum 14 sample farmers under the category of proper agri. services had reported to receive supports on marketing of outputs and 18 sample farmers had received other supports. Under allied agri. services category, 9 sample farmers had received supports on marketing of outputs and 7 beneficiary farmers received other supports. Under both agri+ other services, out of 15 sample beneficiary farmers, 10 farmers received input supports in terms of availability, 3

beneficiary farmers received supports for marketing of outputs and 4 beneficiary farmers received other supports.

**Table-5.20**  
**Category-wise Details of Supports Received from Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Assam**

(In Numbers)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Availability of Inputs	Marketing of Outputs	Repairs & Maintenance	Others Supports
<b>A.</b>	<b>Proper Agri. Services</b>					
I	Marginal Farmers	10	10	3	0	4
II	Small Farmers	15	15	4	0	6
III	Medium & Large Farmers	20	20	7	0	8
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>45</b>	<b>14</b>	<b>0</b>	<b>18</b>
<b>B.</b>	<b>Allied Agri. Services</b>					
I	Marginal Farmers	20	8	4	0	3
II	Small Farmers	12	6	3	0	2
III	Medium & Large Farmers	8	4	2	0	2
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>18</b>	<b>9</b>	<b>0</b>	<b>7</b>
<b>C.</b>	<b>Agri.+ Other Services</b>					
I	Marginal Farmers	7	5	1		3
II	Small Farmers	8	5	2		1
III	Medium & Large Farmers	0				
<b>Sub Total Agri.+ Other Services</b>		<b>15</b>	<b>10</b>	<b>3</b>	<b>0</b>	<b>4</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>100</b>	<b>73</b>	<b>0</b>	<b>29</b>

*Note: Other Services include Dairy, Poultry and Fishery*

### **V.11 Details of Extension Services and Expert advices received from Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Assam**

Table-5.21 shows the category-wise details of extension services and expert advices received from the ventures which increased the income of beneficiary farmers under ACABC scheme. Out of total 100 beneficiary farmers, 77 beneficiary farmers received support on farm technology, 50 beneficiary farmers received support on cropping practices, 26 beneficiary farmers received support on protection from pests and diseases, 40 beneficiary farmers received support on prices of crop outputs and 35 beneficiary farmers

received support on animal health services. Under proper agri. services, out of total 45 beneficiary farmers, 22 farmers received support on farm technology, 45 beneficiary farmers

**Table-5.21**  
**Category-wise Details of Extension Services and Expert Advices from Ventures**  
**which increased Income of Beneficiary Farmers under ACABC Scheme in Assam**

(In Number of Farmers)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Advices and Extension Services on				
			Farm Technology	Cropping Practices	Protection from Pests & Diseases	Prices of Crop Outputs in Market	Animals Health Services
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	10	6	10	2	3	0
II	Small Farmers	15	7	15	4	4	0
III	Medium & Large Farmers	20	9	20	6	7	0
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>22</b>	<b>45</b>	<b>12</b>	<b>14</b>	<b>0</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	20	20		7	10	16
II	Small Farmers	12	12		4	7	10
III	Medium & Large Farmers	8	8		3	3	5
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>40</b>	<b>0</b>	<b>14</b>	<b>20</b>	<b>31</b>
<b>C.</b>	<b>Agri.+ Other Services</b>						
I	Marginal Farmers	7	7	3		3	2
II	Small Farmers	8	8	2		3	2
III	Medium & Large Farmers	0	0	0	0	0	0
<b>Sub Total Agri.+ Other Services</b>		<b>15</b>	<b>15</b>	<b>5</b>	<b>0</b>	<b>6</b>	<b>4</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>77</b>	<b>50</b>	<b>26</b>	<b>40</b>	<b>35</b>

*Note: Other Services include Dairy, Poultry and Fishery*

received support on cropping practices, 12 beneficiary farmers received support on protection from pests and diseases, 14 beneficiary farmers received support on prices of crop outputs. Under allied agri. services, out of 40 sample beneficiary farmers, all the beneficiary farmers received supports on farm technology, 14 beneficiary farmers received supports on protection from pests and diseases, 20 beneficiary farmers received supports on prices of crop outputs and 31 beneficiary farmers received supports on animals health services. Under both agri+ other services, out of 15 sample beneficiary farmers, all the beneficiary farmers received supports on farm technology, 5 beneficiary farmers received supports on cropping practices, 6 beneficiary farmers received supports on prices of crop outputs and 4 beneficiary farmers received supports on animal health services.

### V.12 Details on Increase incomes through Production of Crops and Animals on the Farms of Beneficiary Farmers under ACABC Scheme in Assam

Table-5.22 shows the category-wise details on increase in income through production of crops and animals on the farms of beneficiary farmers under ACABC scheme. Out of 100 beneficiary farmers 56 sample farmers reported that the production of cereals had increased after the implementation of ACABC scheme in their areas. Also, 38 sample farmers had told that the production of other horticultural crops had increased satisfactorily.

**Table-5.22**

#### Category-wise Details on Increase in incomes through Production of Crops and Animals on the Farms of Beneficiary Farmers under ACABC Scheme in Assam

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Names of Crops whose production increased			(Names of Crops and Animals) Names of animals whose production increased				
			Cereals	Pulses	Others	Milch Animal	Drought Animals	Poultry	Fishery	Other Animals
<b>A.</b>	<b>Proper Agri. Services</b>									
I	Marginal Farmers	10	10		8					
II	Small Farmers	15	15		11					
III	Medium & Large Farmers	20	20		12					
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>45</b>		<b>31</b>					
<b>B.</b>	<b>Allied Agri. Services</b>									
I	Marginal Farmers	20				12		4	4	
II	Small Farmers	12				6		4	2	
III	Medium & Large Farmers	8				2		2	4	
<b>Sub Total Allied Agri. Services</b>		<b>40</b>				<b>20</b>		<b>10</b>	<b>10</b>	
<b>C.</b>	<b>Both Agri. + Other Services</b>									
I	Marginal Farmers	7	5		4	3		2	3	
II	Small Farmers	8	6		3	5		3	2	
III	Medium & Large Farmers	0								
<b>Sub Total Both Agri. + Other Services</b>		<b>15</b>	11		7	8		5	5	
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>56</b>		<b>38</b>	<b>28</b>		<b>15</b>	<b>15</b>	

Note: Other Services include Dairy, Poultry and Fishery

Out of the total sample farmers, 28 farmers had reported that the production of milch animals had increased substantially. Fifteen sample farmers reported that the production of

poultry and fish and fingerlings also increased after the establishment of agri. ventures under ACABC scheme in Assam.

### V.13 Category-wise Details of Inputs Sales and Other Services done by Ventures to the Beneficiary Farmers under ACABC Scheme in Assam

Table-5.23 represents the category-wise details of inputs sales and other services rendered by the ventures to the beneficiary farmers. It is seen from the table that per farm charges of farm machines was found highest i.e. Rs 7,942 on the farms under proper agri. services and lowest i.e. Rs 3,508 on the farms under both agri.+ other services category and the overall charges stood at Rs 4,100 per farm. Overall cost of farm inputs stood at Rs 61,550 per farm, of which Rs 24,338 was under proper agri. services category and Rs 46,294 under both agri.+ other services category.

**Table-5.23**  
**Category-wise Details of Inputs Sales and Other Services done by**  
**Ventures to the Beneficiary Farmers under ACABC Scheme in Assam**

(Costs of Inputs & Charges of Services in Rs/Beneficiary.)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Charges of Farm Machines (Rs)	Charges of Farm Equipments	Costs of Farm Inputs (Rs.)	Charges of Other Services
<b>A.</b>	<b>Proper Agri. Services</b>					
I	Marginal Farmers	10	3299	0	25,797	0
II	Small Farmers	15	6030	0	30,914	0
III	Medium & Large Farmers	20	11,698	0	18,677	0
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>7,942</b>	<b>0</b>	<b>24,338</b>	<b>0</b>
<b>B.</b>	<b>Allied Agri. Services</b>					
I	Marginal Farmers	20	0	0	70,377	0
II	Small Farmers	12	0	0	1,34,85	0
III	Medium & Large Farmers	8	0	0	1,67,449	0
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>0</b>	<b>0</b>	<b>1,09,134</b>	<b>0</b>
<b>C.</b>	<b>Agri.+ Other Services</b>					
I	Marginal Farmers	7	2,715	0	28,938	0
II	Small Farmers	8	4,202	0	61,480	0
III	Medium & Large Farmers	0	0	0	0	0
<b>Sub Total Agri.+ Other Services</b>		<b>15</b>	<b>3,508</b>	<b>0</b>	<b>46,294</b>	<b>0</b>
<b>G. Total Beneficiaries</b>		<b>100</b>	<b>4,100</b>	<b>0</b>	<b>61,550</b>	<b>0</b>

Note: Other Services include Dairy, Poultry and Fishery

#### V.14 Category-wise Details of the Economic Status of Sample Non-Beneficiary Farmers of the ACABC Scheme Area of Assam

In this section, an attempt has been made to analyse the socio-economic condition, crops grown in different season, details of inputs and outputs, net income from all crops, category wise details of inputs, outputs and net income from milch animals, poultry and fishery etc. among the non-beneficiary farmers of the study area. Table -5.24 shows the area of holding by farm size groups for non-beneficiary farmers and by category of agri-ventures under ACABC in Assam.

Table indicates that the average area of holding per non-beneficiary was 1.05 hectares. Among the three categories of non-beneficiary farmers, the average size of holding was comparatively larger i.e. 1.32 hectares in the category of both agri.+ other services as against the allied agri. services (0.73 ha.). On an average, the size of holding

**Table: 5.24**

#### Category-wise Details of the Economic Status of Sample Non-Beneficiary farmers of the ACABC Scheme Area of Assam

(Area in Hectare)

Sl.No.	Category of Non-Beneficiary Farmers	No. of Samples	Area of Holding	Membership of Agencies (if any)		Subsidiary Occupation	
				Yes	No	Yes	No
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	12	0.84	5	7	7	5
II	Small Farmers	4	1.43	2	2	1	3
III	Medium & Large Farmers	1	4.67	0	1	0	1
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>1.2</b>	<b>7</b>	<b>10</b>	<b>8</b>	<b>9</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	12	0.28	4	8	3	9
II	Small Farmers	6	1.16	2	4	2	4
III	Medium & Large Farmers	2	2.14	1	1	1	1
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>0.73</b>	<b>7</b>	<b>13</b>	<b>6</b>	<b>14</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>						
I	Marginal Farmers	6	1.28	2	4	4	2
II	Small Farmers	5	1.12	0	5	2	3
III	Medium & Large Farmers	2	1.96	0	2	1	1
<b>Sub Total Agri. + Other Services</b>		<b>13</b>	<b>1.32</b>	<b>2</b>	<b>11</b>	<b>7</b>	<b>6</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>1.05</b>	<b>16</b>	<b>34</b>	<b>21</b>	<b>29</b>

*Note: Other Services include Dairy, Poultry and Fishery*

was 1.20 hectares in the category of proper agri. services. Out of the total 50 non-beneficiary farmers 16 farmers had membership in different agencies and 21 sample farmers practiced subsidiary occupations along with their main occupation.

### V.15 Social and educational status of the sample non-beneficiary farmers under ACABC scheme area of Assam

Table 5.25 shows category-wise social and educational status of the sample non-beneficiary farmers under ACABC scheme area of Assam. Out of 17 sample non-beneficiary farmers under proper agri. services, 10 belonged to general group, 3 belonged to SC & ST and 4 non-beneficiaries were OBC. Under allied agri. services out of 20 sample non-beneficiary households 14 belonged to general group, 4 belonged to SC & ST and 2 belonged to OBC. Under both agri+ other services out of 13 sample non-beneficiary households, 10 belonged to general group, 2 belonged to SC & ST and 1 belonged to OBC.

**Table-5.25**

#### Category –wise Social and Educational Status of the Sample Non- Beneficiary Farmers under ACABC Scheme in Assam

(Major Group/Category)

Sl. No.	Category of Sample Beneficiary Farmers	No. of Samples	Social Group			Caste			Educational Status			
			Gen.	OBC	SC & ST	U. Class	B. Class	SC & ST Class	P.G	Graduate	HS & +2 Sec.	Non-Matric
<b>A.</b>	<b>Proper Agri. Services</b>											
I	Marginal Farmers	12	6	4	2	6	4	2	0	2	5	5
II	Small Farmers	4	3	0	1	3	0	1	0	0	2	2
III	Medium & Large Farmers	1	1	0	0	1	0	0	0	0	0	1
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>10</b>	<b>4</b>	<b>3</b>	<b>10</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>7</b>	<b>8</b>
<b>B.</b>	<b>Allied Agri. Services</b>											
I	Marginal Farmers	12	9	1	2	9	1	2	0	0	5	7
II	Small Farmers	6	3	1	2	3	1	2	0	0	4	2
III	Medium & Large Farmers	2	2	0	0	2	0	0	0	0	1	1
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>14</b>	<b>2</b>	<b>4</b>	<b>14</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>10</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>											
I	Marginal Farmers	6	4	1	1	4	1	1	0	1	3	2
II	Small Farmers	5	4	0	1	4	0	1	0	0	2	3
III	Medium & Large Farmers	2	2	0	0	2	0	0	0	0	1	1
<b>Sub Total Agri.+ Other Services</b>		<b>13</b>	<b>10</b>	<b>1</b>	<b>2</b>	<b>10</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>6</b>
<b>G. Total Beneficiaries</b>		<b>50</b>	<b>34</b>	<b>7</b>	<b>9</b>	<b>34</b>	<b>7</b>	<b>9</b>	<b>0</b>	<b>3</b>	<b>23</b>	<b>24</b>

*Note: Other Services include Dairy, Poultry and Fishery*

Of the total non- beneficiary farmers, the maximum i.e. 34 were of upper castes, 9 were of schedule castes and 7 were of backward castes. Education is one of the most important factors which determine the quality of manpower. The level of education also indicate the efficiency of human resources engaged in productive activities including agriculture. By and large, 100 per cent literacy was found among the non- beneficiary farmers across the categories. But there was variation in the level of educational standard. It was seen that, of the total sample non- beneficiary farmers, 3 farmers were graduates, 23 farmers passed HSLC and HS and 24 farmers were below matric standard.

#### V.15.1. Details of crops grown in *Kharif* Season by the sample non- beneficiary farmers under ACABC scheme in Assam

##### Category-wise details of crops grown by the sample non- beneficiary farmers of ACABC scheme area of Assam

Table-5.26 shows the category-wise details of crops grown in *kharif* season by the sample non-beneficiary farmers. From the table it is seen that on an average the total *kharif*

**Table-5.26**  
**Category-wise Details of Crops Grown in *Kharif* Season by the Sample Non-Beneficiary Farmers of ACABC Scheme Area of Assam**

(Area in Hect./Non-Beneficiary)

Sl. No.	Category of Sample Non-Beneficiary Farmers	No. of Samples	Cereals Area		Pulses Area		Others including Horticulture Crops Area		Total <i>Kharif</i> Crops Area	
			Irri.	Total	Irri.	Total	Irri.	Total	Irri.	Total
<b>A.</b>	<b>Proper Agri. Services</b>									
I	Marginal Farmers	12	0	0.55	0	0	0	0.14	0	0.69
II	Small Farmers	4	0.21	1.23	0	0	0	0.14	0.21	1.37
III	Medium & Large Farmers	1	1.68	3.78	0	0	0	0.42	1.68	4.20
	<b>Sub Total Proper Agri. Services</b>	<b>17</b>	<b>0.15</b>	<b>0.90</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.15</b>	<b>0.15</b>	<b>1.06</b>
<b>B.</b>	<b>Allied Agri. Services</b>									
I	Marginal Farmers	12	0	0	0	0	0	0	0	0
II	Small Farmers	6	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	2	0	0	0	0	0	0	0	0
	<b>Sub Total Allied Agri. Services</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>									
I	Marginal Farmers	6	0	0.98	0	0	0	0.10	0	1.08
II	Small Farmers	5	0.20	0.55	0	0	0	0.11	0.20	0.66
III	Medium & Large Farmers	2	0.76	1.39	0	0	0	0.18	0.76	1.57
	<b>Sub Total Both Agri.+ Other Services</b>	<b>13</b>	<b>0.19</b>	<b>0.88</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.12</b>	<b>0.19</b>	<b>1.00</b>
	<b>G. Total Non-Beneficiaries</b>	<b>50</b>	<b>0.10</b>	<b>0.54</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.08</b>	<b>0.10</b>	<b>0.62</b>

Note: Other Services include Dairy, Poultry and Fishery



crop area was estimated at 0.62 hectare, of which 0.10 hectare was irrigated. Of the total *kharif* crop area, cereal crops covered 0.54 hectare, of which 0.10 hectare was irrigated. Other crops covered 0.08 hectare and the entire area was un- irrigated. Among the categories, the total *kharif* crop area was almost same i.e. 1.06 hectares and 1.00 hectare under the category of proper agri. services and under the category of both agri.+ other. services, respectively.

#### V.15.2. Details of crops grown in *Rabi* Season by the sample non- beneficiary farmers under ACABC scheme in Assam

Table-5.27 shows the category-wise details of crops grown in *rabi* season by the sample non- beneficiary farmers. From the table, it is seen that the total *rabi* crops area was covered by others including horticultural crops only. Under proper agri-services, the total

**Table 5.27**

#### Category-wise Details of Crops Grown in *Rabi* Season by the Sample Non-Beneficiary Farmers of ACABC Scheme Area of Assam

(Area in Hect./Non-Beneficiary)

Sl. No.	Category of Sample Non-Beneficiary Farmers	No. of Samples	Cereals Area		Pulses Area		Others including Horticulture Crops Area		Total <i>Rabi</i> Crops Area	
			Irri.	Total	Irri.	Total	Irri.	Total	Irri.	Total
<b>A.</b>	<b>Proper Agri. Services</b>									
I	Marginal Farmers	12	0	0	0	0	0	0.09	0	0.09
II	Small Farmers	4	0	0	0	0	0	0.06	0	0.06
III	Medium & Large Farmers	1	0	0	0	0	0.45	0.45	0.45	0.45
	<b>Sub Total Proper Agri. Services</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.03</b>	<b>0.10</b>	<b>0.03</b>	<b>0.10</b>
<b>B.</b>	<b>Allied Agri. Services</b>									
I	Marginal Farmers	12	0	0	0	0	0	0	0	0
II	Small Farmers	6	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	2	0	0	0	0	0	0	0	0
	<b>Sub Total Allied Agri. Services</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>									
I	Marginal Farmers	6	0	0	0	0	0	0.05	0	0.05
II	Small Farmers	5	0	0	0	0	0	0.32	0	0.32
III	Medium & Large Farmers	2	0	0	0	0	0	0.45	0	0.45
	<b>Sub Total Both Agri.+ Other Services</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.22</b>	<b>0</b>	<b>0.22</b>
	<b>G. Total Non-Beneficiaries</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.01</b>	<b>0.09</b>	<b>0.01</b>	<b>0.09</b>

Note: Other Services include Dairy, Poultry and Fishery

per farm *rabi* crop area covered 0.10 hectare of which 0.03 hectare was irrigated. Under both agri+ other services total per farm *rabi* crop area stood at 0.22 hectare. On an average the total area under *rabi* crops was estimated at 0.09 hectares per farm of which 0.01 hectare was irrigated.

### V.15.2 Category-wise details of crops grown in *zaid* season by the sample Non-beneficiary farmers of ACABC Scheme Area of Assam

Table-5.28 shows the category-wise details of crops grown in *zaid* season by the sample non-beneficiary farmers. From the table, it is seen that as a whole, total per farm *zaid* crop area stood at 0.45 hectare of which 0.06 hectare was irrigated. Of the total *zaid* crop area, cereal crops covered 0.38 hectare, of which 0.06 hectare was irrigated. Other crops covered 0.07 hectare and the entire area was un- irrigated.

**Table-5.28**  
**Category-Wise Details of Crops Grown in Zaid Season by the Sample Non-Beneficiary Farmers of ACABC Scheme Area of Assam**

(Area in Hect/ Non-beneficiary)

Sl. No.	Category of Sample Non-Beneficiary Farmers	No. of Samples	Cereals Area		Pulses Area		Others including Horticulture Crops Area		Total Zaid Crops Area	
			Irri.	Total	Irri.	Total	Irri.	Total	Irri.	Total
<b>A. Proper Agri. Services</b>										
I	Marginal Farmers	12	0.00	0.38	0.00	0.00	0.00	0.17	0.00	0.54
II	Small Farmers	4	0.06	0.70	0.00	0.00	0.00	0.06	0.06	0.76
III	Medium & Large Farmers	1	1.20	2.30	0.00	0.00	0.00	0.15	1.20	2.45
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>0.09</b>	<b>0.57</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.14</b>	<b>0.09</b>	<b>0.71</b>
<b>B. Allied Agri. Services</b>										
I	Marginal Farmers	12	0	0	0	0	0	0	0	0
II	Small Farmers	6	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	2	0	0	0	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C. Both Agri. + Dairy Services</b>										
I	Marginal Farmers	6	0.00	0.70	0.00	0.00	0.00	0.15	0.00	0.85
II	Small Farmers	5	0.21	0.67	0.00	0.00	0.00	0.04	0.21	0.71
III	Medium & Large Farmers	2	0.28	0.84	0.00	0.00	0.00	0.08	0.28	0.92
<b>Sub Total Both Agri.+ Dairy Services</b>		<b>13</b>	<b>0.12</b>	<b>0.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.10</b>	<b>0.12</b>	<b>0.81</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>0.06</b>	<b>0.38</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.06</b>	<b>0.45</b>

Note: Other Services include Dairy, Poultry and Fishery

**V.16. Details of seasonal Total irrigated and Total Cropped Area on the farms of sample Non- Beneficiary farmers of ACABC scheme area of Assam.**

Table-5.29 shows the category-wise details of seasonal total per farm irrigated and total cropped area on the farms of sample non- beneficiary farmers under ACABC scheme area of Assam. It is seen from the table that the total per farm gross cropped area comprising of *kharif*, *rabi* and *zaid* season stood at 1.16 hectares of which 0.18 hectare were irrigated. The total irrigated area per farm during *kharif*, *rabi* and *zaid* season stood at 0.10 hectares, 0.02 hectare and 0.06 hectare respectively. While the total cropped area per farm during *kharif*, *rabi* and *zaid* season were estimated at 0.62 hectare, 0.09 hectare and 0.45 hectare, respectively.

**Table-5.29**  
**Category-wise Details of Seasonal Total Irrigated and Cropped Area on the Farms of Sample Non-Beneficiary Farmers of ACABC Scheme Area of Assam**

(Area in Hect/ Non-beneficiary)

Sl. No.	Category of Sample Non-Beneficiary Farmers	No. of Samples	Total Irrigated Area			Gross Irrigated Area	Total Cropped Area			Gross Cropped Area
			<i>Kharif</i>	<i>Rabi</i>	<i>Zaid</i>		<i>Kharif</i>	<i>Rabi</i>	<i>Zaid</i>	
<b>A.</b>	<b>Proper Agri. Services</b>									
I	Marginal Farmers	12	0.00	0.00	0.00	0.00	0.69	0.09	0.54	1.32
II	Small Farmers	4	0.21	0.00	0.06	0.27	1.37	0.06	0.76	2.19
III	Medium & Large Farmers	1	1.68	0.45	1.20	3.33	4.20	0.45	2.45	7.10
Sub Total Proper Agri. Services		<b>17</b>	<b>0.15</b>	<b>0.03</b>	<b>0.09</b>	<b>0.26</b>	<b>1.06</b>	<b>0.10</b>	<b>0.71</b>	<b>1.87</b>
<b>B.</b>	<b>Allied Agri. Services</b>									
I	Marginal Farmers	12	0	0	0	0	0	0	0	0
II	Small Farmers	6	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	2	0	0	0	0	0	0	0	0
Sub Total Allied Agri. Services		<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Both Agri. + Dairy Services</b>									
I	Marginal Farmers	6	0.00	0.00	0.00	0.00	1.08	0.05	0.85	1.98
II	Small Farmers	5	0.20	0.00	0.21	0.41	0.66	0.32	0.71	1.69
III	Medium & Large Farmers	2	0.76	0.23	0.28	1.27	1.57	0.45	0.92	2.94
Sub Total Both Agri.+ Dairy Services		<b>13</b>	<b>0.19</b>	<b>0.03</b>	<b>0.12</b>	<b>0.35</b>	<b>1.00</b>	<b>0.22</b>	<b>0.81</b>	<b>2.02</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>0.10</b>	<b>0.02</b>	<b>0.06</b>	<b>0.18</b>	<b>0.62</b>	<b>0.09</b>	<b>0.45</b>	<b>1.16</b>

*Note: Other Services include Dairy, Poultry and Fishery*

### **V.17.1 Details of inputs and outputs of *kharif* crops on the farms of sample non-beneficiary farmers of the ACABC scheme area in Assam**

Category-wise details of inputs and outputs of *kharif* crops on the farms of sample non-beneficiary farmers of the ACABC scheme area in Assam are presented in Table-5.30. It is seen that the total input cost per farm in *kharif* season stood at Rs 27,651 of which Rs 19,214 was own cost and Rs 8,437 other cost. Of the total input cost, Rs 15,239 was spent on cereal crops and Rs 12,412 on other crops. The total value of output per farm stood at Rs 41,423 of which Rs 21,894 was from cereal crops and Rs 19,528 from other crops. The category-wise analysis indicates that outputs per farm was recorded higher i.e. Rs 75,097 in case of the non-beneficiary farmers of proper agri. services as compared to both agri.+other services (Rs.61,114 per farm). Thus, the non-beneficiary farmers of proper agri. services had received comparatively higher outputs. Accordingly input costs incurred on the farms of non-beneficiaries were found to be high i.e. Rs 47,456 per farm in case of the farmers of proper agri. services.

### **V.17.2 category-wise details of inputs and outputs of *Rabi* crops on the farms of sample non-beneficiary farmers of ACABC scheme area of Assam**

Category-wise details of inputs and outputs of *rabi* crops on the farms of sample non-beneficiary farmers of ACABC scheme area of Assam are presented in Table-5.31. In *rabi* season, inputs and outputs came from other crops only. Table indicates that the overall gross outputs from *rabi* crops was recorded at Rs 25,939 per farm of which maximum i.e. Rs 64,167 was received by the farmers under both agri.+other services against the minimum of Rs. 27,221 by the farmers under proper agri. services. Regarding inputs used on *rabi* crops, the gross inputs per farm was estimated at Rs 14,434 of which Rs 10,581 were incurred on own inputs and Rs 3854 on other inputs. It is observed that the non-beneficiary farmers had invested more on own inputs.

### **V.17.3 Category-wise details of inputs and outputs of *zaid* crops on the farms of non-beneficiary farmers of ACABC scheme area of Assam**

Category-wise details of inputs and outputs of *zaid* crops on the farms of sample non-beneficiary farmers of ACABC scheme area of Assam are presented in Table-5.32. It is seen that the total input cost per farm in *zaid* season stood at Rs 25,851 of which Rs 19,741 was own cost and Rs 6,111 other cost. Of the total input cost, Rs 11,642 was spent on cereal

Table-5.30

**Category-wise Details of Inputs and Outputs of Kharif Crops on the Farms of Sample Non-Beneficiary Farmers of the ACABC Scheme Area in Assam**  
(Inputs and Outputs in Rs/Non-beneficiary)

Sl.No	Category of Non-Beneficiary Farmers	No. of Samples	Cereals			Pulses			Others			Total Kharif Crops						
			Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Outputs (Rs)
			Own	Others	Total		Own	Others	Total		Own	Others	Total		Own	Others	Total	
<b>A.</b>	<b>Proper Agri. Services</b>																	
I	Marginal Farmers	12	10503	2626	13128	18178	0	0	0	0	11270	6069	17339	32802	21773	8694	30468	50980
II	Small Farmers	4	30898	10299	41197	54222	0	0	0	0	12490	8327	20817	40411	43388	18626	62013	94633
III	Medium & Large Farmers	1	83692	35868	119560	154876	0	0	0	0	42650	30884	73534	131491	126342	66752	193094	286367
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>19607</b>	<b>6387</b>	<b>25993</b>	<b>34700</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13403</b>	<b>8060</b>	<b>21463</b>	<b>40397</b>	<b>33010</b>	<b>14446</b>	<b>47456</b>	<b>75097</b>
<b>B.</b>	<b>Allied Agri. Services</b>																	
I	Marginal Farmers	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
II	Small Farmers	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>																	
I	Marginal Farmers	6	17477	4930	22407	40989	0	0	0	0	15016	8819	23835	13197	32493	13749	46242	54186
II	Small Farmers	5	15626	3907	19533	28539	0	0	0	0	6404	3925	10330	21488	22030	7832	29862	50027
III	Medium & Large Farmers	2	28583	15391	43974	58094	0	0	0	0	18625	11908	30533	51522	47209	27299	74507	109616
<b>Sub Total Both Agri.+ Other Services</b>		<b>13</b>	<b>18474</b>	<b>6145</b>	<b>24619</b>	<b>38832</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12259</b>	<b>7412</b>	<b>19671</b>	<b>22282</b>	<b>30733</b>	<b>13557</b>	<b>44290</b>	<b>61114</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>11469</b>	<b>3769</b>	<b>15239</b>	<b>21894</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7744</b>	<b>4667</b>	<b>12412</b>	<b>19528</b>	<b>19214</b>	<b>8437</b>	<b>27651</b>	<b>41423</b>

Note: Other Services include Dairy, Poultry and Fishery

**Table-5.31**  
**Category-wise Details of Inputs and Outputs of Rabi Crops on the Farms of Sample Non-Beneficiary Farmers of the**  
**ACABC Scheme Area in Assam**

(Inputs and Outputs in Rs/Non-beneficiary)

Sl.No	Category of Non-Beneficiary Farmers	No. of Samples	Cereals				Pulses				Others				Total Rabi Crops			
			Inputs (Rs)			Output (Rs)	Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Outputs (Rs)
			Own	Others	Total		Own	Others	Total		Own	Others	Total		Own	Others	Total	
<b>A.</b>	<b>Proper Agri. Services</b>																	
I	Marginal Farmers	12	0	0	0	0	0	0	0	0	8076	2692	10768	17993	8076	2692	10768	17993
II	Small Farmers	4	0	0	0	0	0	0	0	0	10782	4621	15403	24000	10782	4621	15403	24000
III	Medium & Large Farmers	1	0	0	0	0	0	0	0	0	52749	28404	81153	150843	52749	28404	81153	150843
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11340</b>	<b>4658</b>	<b>15999</b>	<b>27221</b>	<b>11340</b>	<b>4658</b>	<b>15999</b>	<b>27221</b>
<b>B.</b>	<b>Allied Agri. Services</b>																	
I	Marginal Farmers	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
II	Small Farmers	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>																	
I	Marginal Farmers	6	0	0	0	0	0	0	0	0	10318	4012	14330	18868	5661	2202	7862	18868
II	Small Farmers	5	0	0	0	0	0	0	0	0	34934	12274	47208	92216	37942	13331	51274	92216
III	Medium & Large Farmers	2	0	0	0	0	0	0	0	0	54933	16409	71342	129941	56289	16814	73103	129941
<b>Sub Total Both Agri.+ Other Services</b>		<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26649</b>	<b>9097</b>	<b>35746</b>	<b>64167</b>	<b>25866</b>	<b>8730</b>	<b>34596</b>	<b>64167</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10785</b>	<b>3949</b>	<b>14734</b>	<b>25939</b>	<b>10581</b>	<b>3854</b>	<b>14434</b>	<b>25939</b>

*Note: Other Services include Dairy, Poultry and Fishery*

**Table-5.32**  
**Category-wise Details of Inputs and Outputs of Zaid Crops on the Farms of Sample Non-Beneficiary Farmers of the ACABC**  
**Scheme Area in Assam**

(Inputs and Outputs in Rs/Non-beneficiary)																		
Sl No.	Category of Non-Beneficiary Farmers	No. of Samples	Cereals				Pulses				Others				Total Zaid Crops			
			Inputs (Rs)			Output (Rs)	Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Outputs (Rs)	Inputs (Rs)			Out-puts (Rs)
			Own	Others	Total		Own	Others	Total		Own	Others	Total		Own	Others	Total	
<b>A.</b>	<b>Proper Agri. Services</b>																	
I	Marginal Farmers	12	8727	1540	10267	12109	0	0	0	0	22077	5519	27596	45826	30804	7059	37863	57934
II	Small Farmers	4	21125	5958	27084	35462	0	0	0	0	15074	7094	22168	44206	36199	13052	49251	79668
III	Medium & Large Farmers	1	56651	24279	80930	100669	0	0	0	0	24147	13583	37730	65692	80798	37862	118660	166361
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>14463</b>	<b>3917</b>	<b>18381</b>	<b>22813</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20551</b>	<b>6364</b>	<b>26915</b>	<b>46613</b>	<b>35014</b>	<b>10281</b>	<b>45295</b>	<b>69426</b>
<b>B.</b>	<b>Allied Agri. Services</b>																	
I	Marginal Farmers	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
II	Small Farmers	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>																	
I	Marginal Farmers	6	19370	6117	25487	41197	0	0	0	0	26810	6703	33513	64885	46180	12819	59000	106082
II	Small Farmers	5	9997	3888	13884	11478	0	0	0	0	3815	2054	5870	1832	13812	5942	19754	13310
III	Medium & Large Farmers	2	16079	7567	23645	25591	0	0	0	0	6748	4499	11247	11797	22827	12065	34892	37387
<b>Sub Total Both Agri.+ Other Services</b>		<b>13</b>	<b>15258</b>	<b>5482</b>	<b>20741</b>	<b>27366</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14879</b>	<b>4576</b>	<b>19455</b>	<b>32466</b>	<b>30138</b>	<b>10058</b>	<b>40196</b>	<b>59832</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>8885</b>	<b>2757</b>	<b>11642</b>	<b>14872</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10856</b>	<b>3353</b>	<b>14209</b>	<b>24290</b>	<b>19741</b>	<b>6111</b>	<b>25851</b>	<b>39161</b>

*Note: Other Services include Dairy, Poultry and Fishery*

crops and Rs 14,209 on other crops. The total value of output per farm stood at Rs 39,161 of which Rs 14,872 was from cereal crops and Rs 24,290 from other crops. The category-wise analysis indicates that outputs per farm was recorded comparatively higher i.e. Rs 69,426 in case of the non-beneficiary farmers of proper agri. services as against the non-beneficiary farmers of both agri+other services (Rs.59,832 per farm). Accordingly, input costs incurred on the farms of non-beneficiaries were found to be higher i.e. Rs 45,295 in case of the farmers of proper agri services as compared to both agri.+other services (Rs.40,196 per farm). On the other hand, among the *zaid* crops, other crops were comparatively more profitable in case of the farmers under both the categories.

#### V.18 Category-wise details of inputs and outputs and Net Incomes from all crops on the farms of non-beneficiary farmers of ACABC scheme area of Assam

Table-5.33 represents category-wise details of input cost, outputs and net incomes from all crops on the farms of sample non-beneficiary farmers of ACABC scheme

**Table-5.33**  
**Category-wise Details of total Inputs, Outputs and Net Incomes from All Crops on the Farms of the Sample Non-Beneficiary Farmers of ACABC Scheme Area of Assam**

Sl. No.	Category of Sample Non-Beneficiary Farmers	No. of Samples	Gross Inputs (Rs)			Gross Outputs (Rs)	Net Incomes (Rs)
			Own	Others	Total		
(Inputs and Outputs in Rs/Non-beneficiary)							
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	12	60653	18446	79098	126907	47809
II	Small Farmers	4	90369	36299	126667	198301	71634
III	Medium & Large Farmers	1	259889	133018	392907	603571	210664
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>79788</b>	<b>28655</b>	<b>108443</b>	<b>192072</b>	<b>83629</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	12	0	0	0	0	0
II	Small Farmers	6	0	0	0	0	0
III	Medium & Large Farmers	2	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Both Agri. + Other Service</b>						
I	Marginal Farmers	6	84334	28769	113104	179137	66033
II	Small Farmers	5	73785	27105	100890	155553	54663
III	Medium & Large Farmers	2	126324	56178	182501	276944	94443
<b>Sub Total Both Agri. + Other Service</b>		<b>13</b>	<b>86737</b>	<b>32346</b>	<b>119082</b>	<b>185113</b>	<b>66031</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>49680</b>	<b>18153</b>	<b>67832</b>	<b>113434</b>	<b>45602</b>

*Note: Other Services include Dairy, Poultry and Fishery*



area in Assam. Table indicates that the overall gross outputs from all crops were Rs 1, 13,434 per farm. While the total inputs incurred per farm was estimated at Rs 67,832 of which maximum i.e. Rs 49,680 was incurred on own inputs and Rs. 18,153 on other inputs. On an average the net income stood at Rs 45,602. The category-wise distribution of gross outputs as well as net incomes shows that the gross outputs was higher i.e. Rs. 1, 92,072 per farm under the category of proper agri. services as compared to both agri.+ other services (Rs.1,85,883). Accordingly, net income per farm was higher on the farms under proper agri. services.

#### V.19.1 Details of Inputs, Outputs and Net Incomes from Milch Animals reared by Sample Non-Beneficiary Farmers of ACABC Scheme Area of Assam

Category-wise details of input cost, outputs and net income from milch animals reared by sample non-beneficiary farmers of ACABC scheme area in Assam are presented

**Table-5.34**  
**Category-wise Details of Inputs, Outputs and Net Incomes from Milch Animals Reared by Sample Non-Beneficiary Farmers of ACABC Scheme Area of Assam**

Sl. No.	Category of Sample Non-Beneficiary Farmers	No. of Samples	Inputs Incurred (Rs)			Outputs Received (Rs)	Net Incomes (Rs)
			Own Sources	Others Sources	Total (Rs)		
(Inputs and Outputs in Rs/Non-beneficiary)							
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	12	0	0	0	0	0
II	Small Farmers	4	0	0	0	0	0
III	Medium & Large Farmers	1	0	0	0	0	0
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	12 (7)	114961	49269	164230	266052	101822
II	Small Farmers	6 (2)	61548	28964	90512	143914	53402
III	Medium & Large Farmers	2 (1)	81165	54110	135275	209677	74402
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>95557</b>	<b>43662</b>	<b>139219</b>	<b>223773</b>	<b>84554</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>						
I	Marginal Farmers	6	62052	24131	86183	140479	54296
II	Small Farmers	5	35431	16674	52105	82326	30221
III	Medium & Large Farmers	2	83984	47241	131225	204711	73486
<b>Sub Total Both Agri. + Other Service</b>		<b>13</b>	<b>55187</b>	<b>24818</b>	<b>80006</b>	<b>127994</b>	<b>47988</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>52572</b>	<b>23917</b>	<b>76489</b>	<b>122788</b>	<b>46299</b>

Note: 1. Figures in Parentheses indicate number of households having Dairy as a main occupation

2. Other Services include Dairy, Poultry and Fishery

in Table-5.34. Under allied agri. services, out of total 20 non- beneficiary households 10 households had dairy as main occupation. Table indicates that the overall average outputs from milch animals per farm was estimated at Rs 1, 22,788. While the inputs incurred in rearing milch animals were estimated at Rs 76,489 of which the maximum i.e. Rs 52,572 was incurred on own inputs and Rs 23,917 on other inputs. Thus, the net income from milch animals was recorded at Rs 46,299 per farm which is a considerable income in addition to raising crops on the farms of non- beneficiary farmers in the area under study. The category-wise analysis indicates that the maximum outputs i.e. Rs 2,23,773 per farm was received under the category of allied agri. services as against the outputs valued at Rs. 1,27,994 per farm under the category of both agri.+ other services. Thus, the farms under allied agri. services were more productive and profitable in comparison to the farms under both agri.+ other services in rearing milch animals in the area under study, because the net income per farm was maximum i.e. Rs 84,554 under the category of allied agri. services. Accordingly, the total input costs per farm was recorded maximum i.e. Rs 1, 39,219 per farm on the farms under allied agri. services, against a minimum of Rs. 80,006 per farm on the farms under both agri. + other services.

#### **V.19.1.a Details of Inputs, Outputs and Net Incomes from Poultry reared by Sample Non-beneficiary Farmers of ACABC Scheme Area of Assam**

Category-wise details of inputs, outputs and net incomes from poultry reared by sample non- beneficiary farmers of ACABC scheme area of Assam are presented in Table-5.34(a). Under allied agri.services, out of total 20 non- beneficiary households, 5 households had poultry as main occupation. Table indicates that the overall average outputs from poultry per farm were estimated at Rs 60,306. While the input costs incurred in rearing poultry were estimated at Rs 47,952 of which the maximum i.e. Rs 37,189 was incurred on other inputs and Rs 10,763 on own inputs. Thus, the net income from poultry was recorded at Rs 12,345 per farm. The category-wise analysis indicates that the maximum outputs valued at Rs 1,25,420 per farm was received under the category of allied agri. services against the outputs of Rs. 38,992 per farm under the category of both agri.+ other services. Thus, the farms under allied agri.services were more productive and profitable in comparison to the farms under both agri.+ other services in rearing poultry in the area under

study, because the net income per farm was maximum i.e. Rs 27,420 under the category of allied agri. services. Accordingly the total inputs per farm were incurred maximum i.e. Rs 98,000 per farm on the farms under allied agri. services, against a minimum of Rs. 33,660 per farm on the farms under both agri. + other services.

**Table-5.34 (a)**  
**Category-wise Details of Inputs, Outputs and Net Incomes from Poultry Reared by Sample Non-Beneficiary Farmers of ACABC Scheme Area of Assam**  
(Inputs and Outputs in Rs/Non-beneficiary)

Sl. No.	Category of Sample Non-Beneficiary Farmers	No. of Samples	Inputs Incurred (Rs)			Outputs Received (Rs)	Net Incomes (Rs)
			Own Sources	Others Sources	Total (Rs)		
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	12	0	0	0	0	0
II	Small Farmers	4	0	0	0	0	0
III	Medium & Large Farmers	1	0	0	0	0	0
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	12 (3)	22550	79950	102500	131200	28700
II	Small Farmers	6 (1)	10350	47150	57500	74175	16675
III	Medium & Large Farmers	2 (1)	32725	159775	192500	244475	51975
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>19908</b>	<b>78093</b>	<b>98000</b>	<b>125420</b>	<b>27420</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>						
I	Marginal Farmers	6	11821	21954	33775	40530	6755
II	Small Farmers	5	9440	20060	29500	33335	3835
III	Medium & Large Farmers	2	10928	32785	43713	48521	4809
<b>Sub Total Both Agri. + Other Service</b>		<b>13</b>	<b>10768</b>	<b>22892</b>	<b>33660</b>	<b>38992</b>	<b>5332</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>10763</b>	<b>37189</b>	<b>47952</b>	<b>60306</b>	<b>12354</b>

Note: 1. Figures in Parentheses indicate number of households having Poultry as a main occupation  
2. Other Services include Dairy, Poultry and Fishery

#### V.19.1.b Details of Inputs, Outputs and Net Incomes from Fishery by Sample Non-Beneficiary Farmers of ACABC Scheme Area of Assam

Table-5.34(b) shows the category-wise details of inputs, outputs and net incomes from fishery by sample non-beneficiary farmers of ACABC scheme area in Assam. Table indicates that the overall average outputs from fishery per farm was Rs. 16,559, while the input costs incurred in fishery were estimated at Rs. 7,513 of which the maximum i.e. Rs 5,636 was recorded for other inputs and Rs 1,877 on own inputs. Thus, the net income from fishery was recorded at Rs 9,046 per farm. The category-wise analysis indicates that the Maximum outputs i.e. Rs 26,779 per farm was received under the category

of allied agri. services against the outputs of Rs. 22,492 per farm under the category of both agri.+ other services. The net income per farm was maximum i.e. Rs 16,024 under the category of allied agri. Services. Accordingly, the total input costs per farm were recorded maximum i.e. Rs.12,350 on the farms under both agri. + other Services, against a minimum of Rs. 10,755 per farm on the farms under allied agri. services.

**Table-5.34 (b)**

**Category-wise Details of Inputs, Outputs and Net Incomes from Fishery Farming by Sample Non-Beneficiary Farmers of ACABC Scheme Area of Assam**

(Inputs and Outputs in Rs/Non-beneficiary)

Sl. No.	Category of Sample Non-Beneficiary Farmers	No. of Samples	Inputs Incurred (Rs)			Outputs Received (Rs)	Net Incomes (Rs)
			Own Sources	Others Sources	Total (Rs)		
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	12	0	0	0	0	0
II	Small Farmers	4	0	0	0	0	0
III	Medium & Large Farmers	1	0	0	0	0	0
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	12 (2)	2219	6656	8875	22188	13313
II	Small Farmers	6 (3)	3620	14480	18100	44888	26788
III	Medium & Large Farmers	2 (0)	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>2417</b>	<b>8338</b>	<b>10755</b>	<b>26779</b>	<b>16024</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>						
I	Marginal Farmers	6	4728	11033	15761	29158	13397
II	Small Farmers	5	3431	9765	13196	23489	10293
III	Medium & Large Farmers	2	0	0	0	0	0
<b>Sub Total Both Agri. + Other Service</b>		<b>13</b>	<b>3502</b>	<b>8848</b>	<b>12350</b>	<b>22492</b>	<b>10142</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>1877</b>	<b>5636</b>	<b>7513</b>	<b>16559</b>	<b>9046</b>

*Note: 1. Figures in Parentheses indicate number of households having Poultry as a main occupation*

*2. Other Services include Dairy, Poultry and Fishery*

**V.20.1 Details of Inputs, Outputs and Net Income from Draught Animals Reared by Non-Beneficiary Farmers of ACABC Scheme Area of Assam**

Category-wise details of inputs, outputs and net incomes from draught animals reared by sample non- beneficiary farmers of ACABC scheme area in Assam are presented in Table-5.35. Table shows that overall average outputs from draught animals was found at Rs. 12,979 per farm, while the input cost incurred was Rs 10,535 per farm of which Rs 8,903 was incurred on own inputs and Rs. 1,632 was on other inputs. The net income

received from rearing of draught animals was estimated at Rs 2,444 per farm only. The category-wise analysis shows that the maximum output i.e. 15,361 per farm was recorded on the farms of proper agri. services, against a minimum of Rs. 10,377 per farm on the farms under allied agri. services. For the farms under both agri.+ other services, it was recorded at Rs 13,867 per farm. The farmers under proper agri. services had received maximum returns from rearing draught animals.

**Table-5.35**  
**Category-wise Details of Inputs and Outputs from Draught Animals Reared by**  
**Sample Non-Beneficiary Farmers of ACABC Scheme Area of Assam**

(Inputs and Outputs in Rs/Non-beneficiary)

Sl. No.	Category of Sample Non-Beneficiary Farmers	No. of Samples	Inputs Incurred (Rs)			Outputs Received (Rs)	Net Incomes (Rs)
			Own	Others	Total		
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	12	10031	1240	11271	14089	2818
II	Small Farmers	4	16036	2830	18866	23017	4151
III	Medium & Large Farmers	1	0	0	0	0	0
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>10854</b>	<b>1541</b>	<b>12395</b>	<b>15361</b>	<b>2966</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	12	6982	1232	8214	10185	1971
II	Small Farmers	6	6314	1386	7700	9317	1617
III	Medium & Large Farmers	2	9889	2789	12678	14706	2029
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>7072</b>	<b>1434</b>	<b>8506</b>	<b>10377</b>	<b>1871</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>						
I	Marginal Farmers	6	10215	1527	11742	14560	2818
II	Small Farmers	5	9545	3182	12727	15272	2545
III	Medium & Large Farmers	2	5083	828	5910	8274	2364
<b>Sub Total Both Agri. + Other Service</b>		<b>13</b>	<b>9168</b>	<b>2056</b>	<b>11223</b>	<b>13867</b>	<b>2643</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>8903</b>	<b>1632</b>	<b>10535</b>	<b>12979</b>	<b>2444</b>

*Note: Other Services include Dairy, Poultry and Fishery*

There were no other animals reared by the sample non- beneficiary farmers under ACABC scheme in Assam. Therefore, there is no need of analysis against the Table -5.36.

**Table-5.35**  
**Category-wise Details of Inputs and Outputs from Other Animals Reared by Sample Non-Beneficiary Farmers of ACABC Scheme Area of Assam**

(Inputs and Outputs in Rs/Non-beneficiary)

Sl. No.	Category of Sample Non-Beneficiary Farmers	No. of Samples	Inputs Incurred (Rs)			Outputs Received (Rs)	Net Incomes (Rs)
			Own	Others	Total		
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	12	0	0	0	0	0
II	Small Farmers	4	0	0	0	0	0
III	Medium & Large Farmers	1	0	0	0	0	0
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	12	0	0	0	0	0
II	Small Farmers	6	0	0	0	0	0
III	Medium & Large Farmers	2	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>						
I	Marginal Farmers	6	0	0	0	0	0
II	Small Farmers	5	0	0	0	0	0
III	Medium & Large Farmers	2	0	0	0	0	0
<b>Sub Total Both Agri. + Other Service</b>		<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

*Note: Other Services include Dairy, Poultry and Fishery*

### **V.20.2 Details of Inputs, Outputs and Net Incomes from total Animals Reared by Non-Beneficiary Farmers of ACABC Scheme Area of Assam**

Table-5.37 shows the category-wise details of inputs, outputs and net incomes from total animals reared by sample non-beneficiary farmers of ACABC scheme area of Assam. Table indicates that the total outputs received from total animals was maximum i.e. Rs 2,34,150 per farm under allied agri. services and minimum (Rs 15,361 per farm) under proper agri. services. It was recorded at Rs 1,41,861 per farm in case of both agri + other services. The farms under allied agri. services were found to be more productive in rearing animals. The net income per farm was also found higher i.e. Rs 86,425 under the category of allied agri. services against Rs 2,966 per farm under proper agri. services category.

**Table-5.37**  
**Category-wise Details of Inputs, Outputs and Net Incomes from total Animals Reared by**  
**Sample Non-Beneficiary Farmers of ACABC Scheme Area of Assam**

(Inputs and Outputs in Rs/Non-beneficiary)

Sl. No.	Category of Sample Non-Beneficiary Farmers	No. of Samples	Inputs Incurred (Rs)			Outputs Received (Rs)	Net Incomes (Rs)
			Own	Others	Total		
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	12	10031	1240	11271	14089	2818
II	Small Farmers	4	16036	2830	18866	23017	4151
III	Medium & Large Farmers	1	0	0	0	0	0
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>10854</b>	<b>1541</b>	<b>12395</b>	<b>15361</b>	<b>2966</b>
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	12	121943	50501	172444	276237	103794
II	Small Farmers	6	67862	30350	98212	153231	55019
III	Medium & Large Farmers	2	91054	56899	147953	224382	76430
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>102630</b>	<b>45095</b>	<b>147725</b>	<b>234150</b>	<b>86425</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>						
I	Marginal Farmers	6	72267	25658	97925	155039	57114
II	Small Farmers	5	44977	19855	64832	97598	32766
III	Medium & Large Farmers	2	89067	48069	137135	212985	75850
<b>Sub Total Both Agri. + Other Service</b>		<b>13</b>	<b>64355</b>	<b>26874</b>	<b>91229</b>	<b>141861</b>	<b>50632</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>61475</b>	<b>25549</b>	<b>87024</b>	<b>135766</b>	<b>48743</b>

*Note: Other Services include Dairy, Poultry and Fishery*

Under both agri.+ other services, it was estimated at Rs 50,632 per farm. Table reveals that the farms under allied agri. services were comparatively more profitable in rearing animals in the area under study. The overall outputs from rearing animals were recorded at Rs. 1,35,766 per farm while the total inputs per farm was recorded at Rs. 87,024 and the net income per farm stood at Rs. 48,743.

#### **V.21 Details of Answers against the Questions asked from Non- Beneficiary Farmers of the ACABC Scheme area in Assam**

Category-wise details of answers against the questions asked from non- beneficiary farmers of the ACABC scheme area in Assam are presented in Table-5.38. Table shows that, out of 50 non-beneficiaries, 26 farmers had heard about agri-clinic and another 24 farmers had not heard about agri- clinic. Thus, it is clear that about 50 per cent of non-

**Table -5.38**  
**Category-wise Details of Answers against the Questions asked from Non- Beneficiary Farmers of the ACABC Scheme area in Assam**

(In Numbers)

Sl.No.	Category of Non-Beneficiary Farmers	No. of Samples	Heard about Agri-Clinic		If yes reasons for not Availing Services			Heard about the Agri-Business Centres		If yes reasons for not Purchasing Inputs		
			Yes	No	(1)	(2)	(3)	Yes	No	(1)	(2)	(3)
<b>A.</b>	<b>Proper Agri. Services</b>											
I	Marginal Farmers	12	4	8	1	2	3	10	2	1	2	3
II	Small Farmers	4	1	3	4	5	6	3	1	1	3	4
III	Medium & Large Farmers	1	1	0	7	1	2	1	0	5	4	1
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>6</b>	<b>11</b>				<b>14</b>	<b>3</b>			
<b>B.</b>	<b>Allied Agri. Services</b>											
I	Marginal Farmers	12	4	8	4	2	7	9	3	6	1	7
II	Small Farmers	6	4	2	2	1	7	5	1	3	4	6
III	Medium & Large Farmers	2	2	0	2	3	5	2	0	2	1	3
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>10</b>	<b>10</b>				<b>16</b>	<b>4</b>			
<b>C.</b>	<b>Agri. + Other Services</b>											
I	Marginal Farmers	6	5	1	7	1	2	4	2	3	2	1
II	Small Farmers	5	3	2	1	2	4	4	1	4	6	3
III	Medium & Large Farmers	2	2	0	5	1	7	2	0	4	1	5
<b>Sub Total Agri.+Other Services</b>		<b>13</b>	<b>10</b>	<b>3</b>				<b>10</b>	<b>3</b>			
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>26</b>	<b>24</b>				<b>40</b>	<b>10</b>			

Note: 1.other Services include Dairy, Poultry and Fishery

Note: 2. Reason numbers indicated for not availing the agri clinic services are : 1.Timely support of VLEW

are available 2.Felt not necessary 3.Small size of holding 4.not interested 5.Felt not beneficial6.high rate 7.benefits availing from other programmes

beneficiary farmers of the ACABC scheme area of Assam were not at all aware about the agri-clinic till the survey period. There were farmers who had heard about the agri-clinic, but they did not avail any services from the agri ventures. The reasons for not availing the services as reported were 1) Timely support of VLEW was available, 2) It was felt not necessary, 3) small size of holding, 4) not interested, 5) it was felt not beneficial, 6) high rate of inputs and 7) benefits availing from other programmes. Similarly, majority of the non-beneficiary farmers i.e. 40 out of 50 had reported that they had heard about agri-business centres but they did not purchase any inputs from the agri business centres. The



reason for not purchasing the inputs from the agri-business centres were 1) seeds and other inputs were locally available, 2) small scale cultivation, 3) same rate in market and in business centre, 4) not available in proper time, 5) quality of inputs was not so good, 6) Not much profitable, as they have to sale their product to the business centre and 7) the contract was not favourable for the farmers.

#### V. 22 Details of the sources of procuring inputs by the sample non-beneficiary farmers of the area of ACABC scheme in Assam

Category-wise details of the sources of procuring inputs by the sample non-beneficiary farmers of the area of ACABC scheme in Assam are presented in Table-5.39. It is observed that all the non-beneficiary farmers of the area procured inputs from their own

**Table 5.39**  
**Category-wise Details of the Sources of Procuring Inputs by the Sample Non-Beneficiary Farmers of the Area of ACABC Scheme in Assam**

(In Numbers)

Sl.No.	Category of Non-Beneficiary Farmers	No. of Samples	Own Sources	On hire from Shopkeepers	As Subsidy by Govt. Deptt.	Other Sources
<b>A.</b>	<b>Proper Agri. Services</b>					
I	Marginal Farmers	12	12	0	0	0
II	Small Farmers	4	4	0	0	0
III	Medium & Large Farmers	1	1	0	0	0
	Sub Total Proper Agri. Services	<b>17</b>	<b>17</b>	0	0	0
<b>B.</b>	<b>Allied Agri. Services</b>					
I	Marginal Farmers	12	12	0	0	0
II	Small Farmers	6	6	0	0	0
III	Medium & Large Farmers	2	2	0	0	0
	Sub Total Allied Agri. Services	<b>20</b>	<b>20</b>	0	0	0
<b>C.</b>	<b>Agri.+ Other Services</b>					
I	Marginal Farmers	6	6	0	0	0
II	Small Farmers	5	5	0	0	0
III	Medium & Large Farmers	2	2	0	0	0
	Sub Total Agri.+ Other Services	<b>13</b>	<b>13</b>	0	0	0
	G. Total Non-Beneficiaries	<b>50</b>	<b>50</b>	0	0	0

*Note : Other Services include Dairy, Poultry and Fishery*

sources. No other sources of procurement of inputs was reported by any of the non-beneficiary farmers.

#### V.23 Details of extension services received by the non-beneficiary farmers of the ACABC scheme area in Assam

Category wise details of extension services received by the non-beneficiary farmers of the ACABC scheme area in Assam are presented in Table-5.40. Out of the total 17 non-

beneficiary farmers under proper agri. services, 6 non-beneficiary farmers received extension services from the State Agriculture Department and State Horticulture Department. Under allied agri. services, out of 20 farmers, 5 non-beneficiary farmers received extension services from the Department of Animal Husbandry and Veterinary and

**Table-5.40**  
**Category-wise Details of Extension Services Received by Non-Beneficiary Farmers of the Same Area of ACABC Scheme in Assam**

(In Numbers)

Sl.No.	Category of Non-Beneficiary Farmers	No. of Samples	Received any Extension Services		If yes , Received from whom		
			Yes	No	(1)	(2)	(3)
<b>A.</b>	<b>Proper Agri. Services</b>						
I	Marginal Farmers	12	5	7	1	2	0
II	Small Farmers	4	1	3	1	2	0
III	Medium & Large Farmers	1		1	1	2	0
Sub Total Proper Agri. Services		<b>17</b>	<b>6</b>	<b>11</b>			
<b>B.</b>	<b>Allied Agri. Services</b>						
I	Marginal Farmers	12	3	9	3	4	0
II	Small Farmers	6	1	5	3	4	0
III	Medium & Large Farmers	2	1	1	3	4	0
Sub Total Allied Agri. Services		<b>20</b>	<b>5</b>	<b>15</b>			
<b>C.</b>	<b>Both Agri. + Dairy Services</b>						
I	Marginal Farmers	6	2	4	1	3	4
II	Small Farmers	5	2	3	1	3	4
III	Medium & Large Farmers	2	1	1	1	3	4
Sub Total Agri.+ Other Services		<b>13</b>	<b>5</b>	<b>8</b>			
G. Total Non-Beneficiaries		<b>50</b>	<b>16</b>	<b>34</b>			

*Note: Numbers in parentheses indicate the Departments from whom services was received viz.1.State Agriculture Department 2. State Horticulture Department 3.Department of Animal Husbandry & Veterinary 4.Department of Fishery*

from the Department of Fishery. Under agri.+ other services, out of the total 13 non-beneficiary farmers, 5 non-beneficiary farmers received extension services from the State Agriculture Department, Department of Animal Husbandry and Veterinary and the Department of Fishery. As a whole out of 50 non-beneficiary farmers, 16 farmers had reported to receive extension services from the government departments. Another 34 non-beneficiary farmers had reported not to receive any extension services from any of the government or private agencies.

#### **V. 24 Details about satisfaction with the availability of inputs and outputs to the non-beneficiary farmers of the ACABC scheme**

Category wise details about satisfaction with the availability of inputs and outputs

**Table -5.41**  
**Category-wise Details about Satisfaction with the Availability of Inputs and Outputs to the Non-Beneficiary Farmers of the Area of ACABC Scheme in Assam**

(In Numbers)

Sl.No.	Category of Non-Beneficiary Farmers	No. of Samples	Satisfied with Availability of Inputs		If No, Give Reasons			Satisfied with Output of Crops		If No, Give Reasons		
			Yes	No	(1)	(2)	(3)	Yes	No	(1)	(2)	(3)
<b>A.</b>	<b>Proper Agri. Services</b>											
I	Marginal Farmers	12	12	0				7	5	1	2	3
II	Small Farmers	4	4	0				2	2	4	5	6
III	Medium & Large Farmers	1	1	0				1	0	0	0	0
<b>Sub Total Proper Agri. Services</b>		<b>17</b>	<b>17</b>	<b>0</b>				<b>10</b>	<b>7</b>			
<b>B.</b>	<b>Allied Agri. Services</b>											
I	Marginal Farmers	12	12	0				9	3	7	2	1
II	Small Farmers	6	6	0				4	2	7	1	3
III	Medium & Large Farmers	2	2	0				2	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>20</b>	<b>20</b>	<b>0</b>				<b>15</b>	<b>5</b>			
<b>C.</b>	<b>Both Agri. + Other Services</b>											
I	Marginal Farmers	6	6	0				5	1	2	3	5
II	Small Farmers	5	5	0				3	2	1	4	2
III	Medium & Large Farmers	2	2	0				1	1	7	2	5
<b>Sub Total Agri. + Other Services</b>		<b>13</b>	<b>13</b>	<b>0</b>				<b>9</b>	<b>4</b>	<b>6</b>	<b>1</b>	<b>3</b>
<b>G. Total Non-Beneficiaries</b>		<b>50</b>	<b>50</b>	<b>0</b>				<b>34</b>	<b>16</b>			

*Note:1. Other Services include Dairy, Poultry and Fishery*

*Note :2.Numbers in parentheses indicate the reasons of not satisfying with outputs are: 1.Inadequate irrigation facility 2.Poor quality seed 3.Lack of knowledge4.inadequate extension service 5.high rate of inputs 6.partial use of required inputs 7.Insufficient measures of disease control*

In respect of the non-beneficiary farmers of the ACABC scheme area in Assam are presented in Table- 5.41. It is seen from the table that all the 50 non-beneficiary farmers were satisfied with the availability of inputs. As regards to outputs, 34 non-beneficiary farmers were satisfied with the outputs of crops and the remaining 16 non-beneficiary farmers were not satisfied . The reason for not satisfying with the output of crops were, 1) Inadequate irrigation facility, 2) poor quality seed, 3) lack of knowledge, 4) inadequate extension service, 5) high rate of inputs, 6) partial use of required inputs and 7) Insufficient measures of disease control.

### **V.25 Category-wise cultivated area and irrigation intensity on the farms of sample beneficiary and non-beneficiary farmers under ACABC scheme in Assam**

Table-5.42 shows category-wise cultivated area and irrigation intensity on the farms of sample beneficiary and non-beneficiary farmers under ACABC scheme in Assam. Table indicates that the net cultivated area on the farms of beneficiaries was 1.04 hectares per farm and on the farms of non-beneficiaries it was estimated at 0.75 hectare per farm. The total net irrigated area on the farms of beneficiaries was estimated at 0.50 hectare per farm and on the farms of non-beneficiaries, it was estimated at 0.10 hectare per farm. While, the gross irrigated area on the sample beneficiary farms was recorded at 0.98 hectare against 0.16 hectare per farm in case of sample non-beneficiary farms. The irrigation intensity on the sample beneficiary farms was estimated at 1.98 per cent and 1.79 per cent on the farms of non-beneficiaries. The irrigation intensity was found higher under the category of both agri.+ other services in both sample beneficiary (2.23%) and non-beneficiary farms (1.82%).

### **V.26 Category-wise cultivated area, gross-cropped area and cropping intensity on the farms of beneficiary and non-beneficiary farmers under ACABC scheme area in Assam**

Table-5.43 shows the category-wise cultivated area, gross-cropped area and cropping intensity on the farms of beneficiary and non-beneficiary farmers under ACABC scheme area in Assam. Table indicates that the net cultivated area, for beneficiary farmers stood at 1.04 hectares per farm and for non-beneficiary farmers it was estimated at 0.75 hectare per farm. The gross cropped area for beneficiary and non-beneficiary farmers stood at 1.69 hectare and 1.16 hectares, respectively. Category-wise analysis shows that the net-cultivated area and gross cropped area on the farms of beneficiaries was found higher, in the category of proper agricultural services, as against the farms of non-beneficiary farmers. As a whole cropping intensity was found to be higher i.e.163 per cent for beneficiary farmers against the

**Table-5.42**  
**Category-wise Comparative Cultivated Area and Irrigation Intensity on the Farms of Sample Beneficiary**  
**and Non-Beneficiary Farmers under ACABC Scheme in Assam**

(Area in Hect. Per farm &amp; Irri. Intensity in %)

Sl. No	Category of Beneficiary & Non-Beneficiary Farmers	No. of Samples		Net -Cultivated Area		Net -Irrigated Area		Gross Irrigated Area		Irrigation Intensity (%)	
		Beneficiary Farmers	Non-Beneficiary Farmers	Beneficiary Farmers	Non-Beneficiary Farmers	Beneficiary Farmers	Non-Beneficiary Farmers	Beneficiary Farmers	Non-Beneficiary Farmers	Beneficiary Farmers	Non-Beneficiary Farmers
<b>A.</b>	<b>Proper Agri. Services</b>										
I	Marginal Farmers	10	12	0.93	0.84	0.12	0	0.34	0.00	2.96	0.00
II	Small Farmers	15	4	1.66	1.43	0.76	0.21	1.51	0.27	2.00	1.30
III	Medium & Large Farmers	20	1	2.54	4.67	1.59	1.68	3.02	3.33	1.90	1.98
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>17</b>	<b>1.89</b>	<b>1.20</b>	<b>0.98</b>	<b>0.15</b>	<b>1.92</b>	<b>0.26</b>	<b>1.95</b>	<b>1.76</b>
<b>B.</b>	<b>Allied Agri. Services</b>										
I	Marginal Farmers	20	12	0	0	0	0	0	0	0	0
II	Small Farmers	12	6	0	0	0	0	0	0	0	0
III	Medium & Large Farmers	8	2	0	0	0	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>										
I	Marginal Farmers	7	6	1.00	1.28	0.28	0.00	0.61	0.00	2.18	0
II	Small Farmers	8	5	1.46	1.12	0.42	0.20	0.94	0.41	2.25	2.06
III	Medium & Large Farmers	0	2	0.00	1.96	0.00	0.76	0.00	0.78	0	1.66
<b>Sub total Both Agri. + Other Services</b>		<b>15</b>	<b>13</b>	<b>1.24</b>	<b>1.32</b>	<b>0.35</b>	<b>0.19</b>	<b>0.79</b>	<b>0.28</b>	<b>2.23</b>	<b>1.82</b>
<b>G. Total Beneficiary &amp; Non Beneficiary Farmers</b>		<b>100</b>	<b>50</b>	<b>1.04</b>	<b>0.75</b>	<b>0.50</b>	<b>0.10</b>	<b>0.98</b>	<b>0.16</b>	<b>1.98</b>	<b>1.79</b>

*Note: other Services include Dairy, Poultry and Fishery*

**Table-5.43**  
**Category-wise Comparative Cultivated Area, Gross- Cropped Area and Cropping Intensity on**  
**the Farms of Beneficiary and Non-Beneficiary Farmers under ACABC Sample**  
**Scheme area in Assam**

(Area in Hect. Per farm, Cropping Intensity in %)

Sl. No	Category of Beneficiary & Non-Beneficiary Farmers	No. of Samples		Net -Cultivated Area		Gross Cropped Area		Cropping Intensity (%)	
		Beneficiary Farmers	Non-Beneficiary Farmers	Beneficiary Farmers	Non-Beneficiary Farmers	Beneficiary Farmers	Non-Beneficiary Farmers	Beneficiary Farmers	Non-Beneficiary Farmers
<b>A.</b>	<b>Proper Agri. Services</b>								
I	Marginal Farmers	10	12	0.93	0.84	1.55	1.32	167	157
II	Small Farmers	15	4	1.66	1.43	2.73	2.19	165	154
III	Medium & Large Farmers	20	1	2.54	4.67	4.10	7.10	161	152
<b>Sub Total Proper Agri. Services</b>		<b>45</b>	<b>17</b>	<b>1.89</b>	<b>1.20</b>	<b>3.08</b>	<b>1.87</b>	<b>163</b>	<b>155</b>
<b>B.</b>	<b>Allied Agri. Services</b>								
I	Marginal Farmers	20	12	0	0	0	0	0	0
II	Small Farmers	12	6	0	0	0	0	0	0
III	Medium & Large Farmers	8	2	0	0	0	0	0	0
<b>Sub Total Allied Agri. Services</b>		<b>40</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>C.</b>	<b>Both Agri. + Other Services</b>								
I	Marginal Farmers	7	6	1.00	1.28	1.63	1.98	164	155
II	Small Farmers	8	5	1.46	1.12	2.35	1.69	161	151
III	Medium & Large Farmers	0	2	0.00	1.96	0.00	2.94	0	150
<b>Sub Total Both Agri.+ Other Services</b>		<b>15</b>	<b>13</b>	<b>1.24</b>	<b>1.32</b>	<b>2.01</b>	<b>2.02</b>	<b>162</b>	<b>153</b>
<b>G. Total Beneficiary &amp; Non Beneficiary Farmers</b>		<b>100</b>	<b>50</b>	<b>1.04</b>	<b>0.75</b>	<b>1.69</b>	<b>1.16</b>	<b>163</b>	<b>154</b>

Note: 1.Net Cultivated area includes area under agricultural crops, dairy, fishery, poultry etc.

Note: 2.Other Services include Dairy, Poultry and Fishery

cropping intensity of 154 per cent for non-beneficiary farmers. It is observed that the net cultivated area and gross-cropped area of beneficiary farmers were higher than that of non-beneficiary farmers which indicated the positive impact of ACABC scheme.

#### **V. 27 Category-wise input cost, output, net income and input-output ratios on the farms of beneficiary and non-beneficiary farmers under ACABC scheme in Assam**

Table-5.44 and figure.1, figure.2, figure.3 & figure.4 represents category-wise input cost, output, net income and input-output ratios on the farms of beneficiary and non-

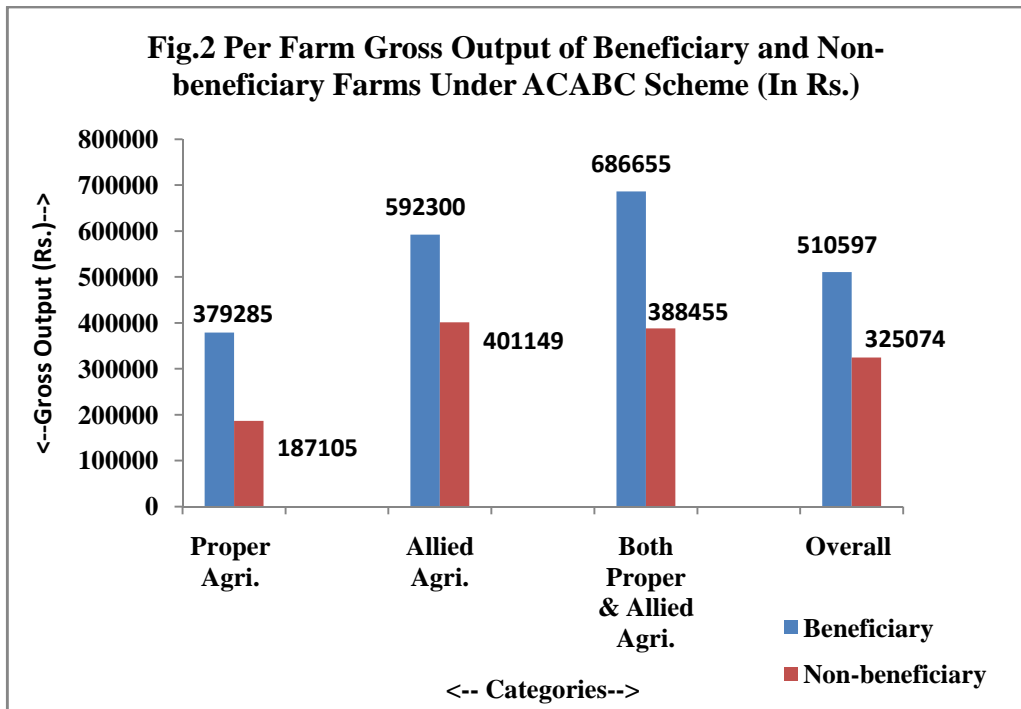
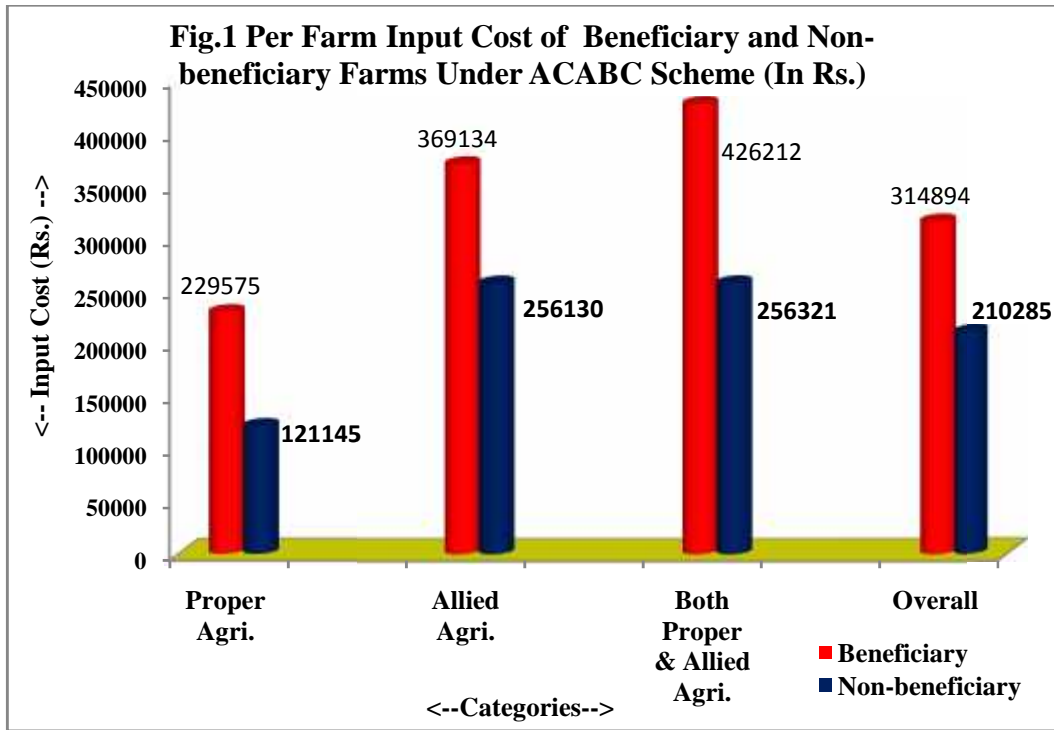
111  
Table-5.44

**Category-wise Comparative Inputs, Outputs, Net Income and Input- Output Ratios on the Farms of Sample Beneficiary and Non-Beneficiary Farmers under ACABC Scheme in Assam**

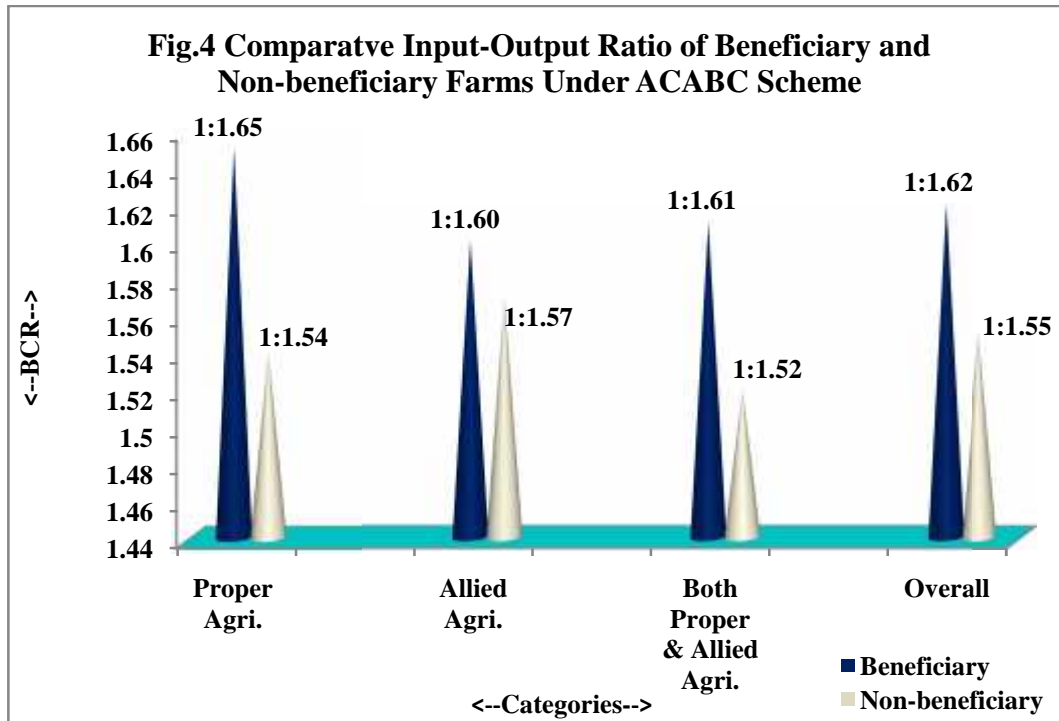
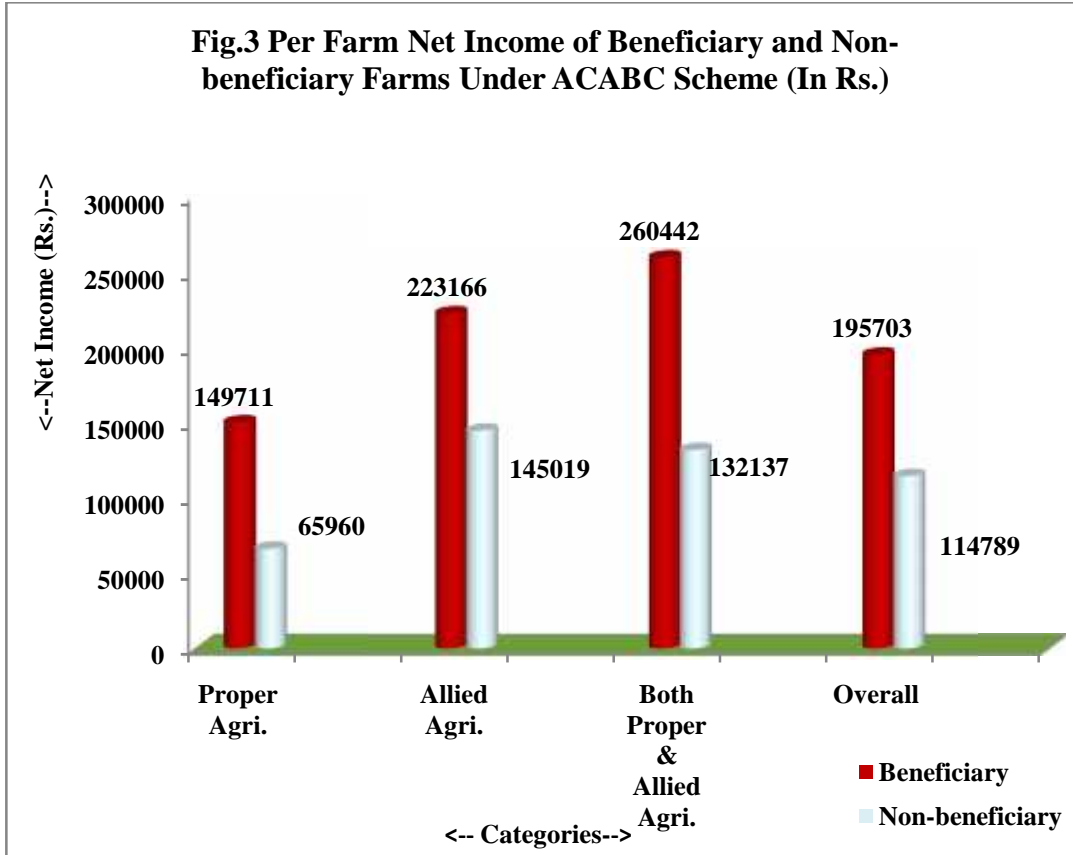
Sl.No	Category of Beneficiary & Non-Beneficiary Farmers	No. of Samples		Total Inputs (Rs/Farm)		Gross Output (Rs/Farm)		Net-Income (Rs/Farm)		Input-Output Ratios	
		Beneficiary Farmers	Non-Beneficiary Farmers	Beneficiary Farmers	Non-Beneficiary Farmers	Beneficiary Farmers	Non-Beneficiary Farmers	Beneficiary Farmers	Non-Beneficiary Farmers	Beneficiary Farmers	Non-Beneficiary Farmers
<b>A.</b>	<b>Proper Agri. Services *</b>										
I	Marginal Farmers	10	12	151147	90369	252761	140996	101614	50627	1.67	1.56
II	Small Farmers	15	4	211617	145534	347588	221318	135971	75784	1.64	1.52
III	Medium & Large Farmers	20	1	282257	392907	466320	603571	184063	210664	1.65	1.54
	<b>Sub Total Proper Agri. Services</b>	<b>45</b>	<b>17</b>	<b>229575</b>	<b>121145</b>	<b>379285</b>	<b>187105</b>	<b>149711</b>	<b>65960</b>	<b>1.65</b>	<b>1.54</b>
<b>B.</b>	<b>Allied Agri. Services **</b>										
I	Marginal Farmers	20	12	321168	283819	519751	447625	198584	163806	1.62	1.58
II	Small Farmers	12	6	483792	173812	775935	272294	292143	98482	1.6	1.57
III	Medium & Large Farmers	8	2	317064	336953	498222	508857	181158	171905	1.57	1.51
	<b>Sub Total Allied Agri. Services</b>	<b>40</b>	<b>20</b>	<b>369134</b>	<b>256130</b>	<b>592300</b>	<b>401149</b>	<b>223166</b>	<b>145019</b>	<b>1.6</b>	<b>1.57</b>
<b>C.</b>	<b>Agri. + Other Services ***</b>										
I	Marginal Farmers	7	6	326324	260564	535151	403863	208827	143298	1.64	1.55
II	Small Farmers	8	5	513615	208418	819220	309975	305605	101557	1.6	1.49
III	Medium & Large Farmers	0	2	0	363349	0	538450	0	175101	0	1.48
	<b>Sub Total Agri. + Other Services</b>	<b>15</b>	<b>13</b>	<b>426212</b>	<b>256321</b>	<b>686655</b>	<b>388458</b>	<b>260442</b>	<b>132137</b>	<b>1.61</b>	<b>1.52</b>
	<b>G. Total Beneficiary &amp; Non Beneficiary Farmers</b>	<b>100</b>	<b>50</b>	<b>314894</b>	<b>210285</b>	<b>510597</b>	<b>325074</b>	<b>195703</b>	<b>114789</b>	<b>1.62</b>	<b>1.55</b>

Note 1: Other Services include Dairy, Poultry and Fishery

Note 2: \*indicates Total Inputs and Outputs of Agri+ Drought Animals, \*\* indicates Poultry, Fishery and Drought Animals, \*\*\* indicates Agriculture, Dairy, Poultry, Fishery and Drought Animals.







beneficiary farmers under ACABC scheme in Assam. Table indicates that overall average total inputs per farm in case of beneficiary farmers was estimated at Rs 3,14,894 as against Rs 2,10,285 per farm in case of non-beneficiaries. Thus, inputs incurred on the farms of beneficiaries were higher than that of the non-beneficiaries. Accordingly, the gross outputs per farm was also higher i.e. Rs 5,10,597 in case of beneficiaries and Rs 3,25,074 per farm in case of non- beneficiaries. The net income per farm was estimated at Rs 1, 95,703 in case of beneficiary farmers and Rs.1,14,789 per farm in case of non-beneficiaries. The overall average input output ratio was estimated at 1:1.62 in case of beneficiaries and 1:1.55 in case of non-beneficiaries. Category-wise input output ratio was also found higher in case of beneficiaries in all the three categories.

From the input-output ratios, it may be said that ACABC scheme had a positive impact on different activities of all the three categories of services *viz.* proper agriculture, allied agriculture and other services.

\*\*\*

## Chapter-VI

### Summary of Main Findings, Conclusion and Policy Implication

In this chapter an attempt has been made to present briefly the summary of major findings, policy implications and suggestions on the basis of the study undertaken in the state of Assam.

The Agri–Clinics and Agri-Business Centres (ACABC) Scheme was launched in 2002 by the Ministry of Agriculture, Government of India, in order to strengthen the agricultural extension services as well as to tap the potential of huge unemployed agriculture graduates and to provide them employment opportunities by making them entrepreneurs, with the support of National Bank for Agriculture and Rural Development (NABARD). The main objectives of the ACABC scheme were (1) To provide extension and other services to the farmers on payment basis, (2) To support agricultural development and entrepreneurship and (3) To promote self-employment. The Agri-Clinics are envisaged to provide expert advice and services to the farmers on technology, cropping practices, protection from pests and diseases, market trends, prices of various crops in the markets and also clinical services for animal health *etc.* which would enhance the productivity of crops and animals and ultimately, the farmers' income.

#### **Analysis of primary level data garnered from the study area yielded the following major findings**

The total number of beneficiary household under the three categories was 100 and the total area of holding per beneficiary was 1.52 hectares. Among the three categories of beneficiary farmers the average size of holding was comparatively larger *i.e.* 1.89 hectares in the category of proper agri. services against the smallest *i.e.* 0.94 hectare in the category of both agri.+ other services. On an average, the size of holding was 1.32 hectares in the category of allied agri. services. Out of the total 100 beneficiary farmers 10 farmers had membership in different agencies. All the farmers under three categories availed benefits from different agri-ventures. Out of the total 100 beneficiary households, 68 households had subsidiary occupation. Thus, maximum of the sample farmers were practicing subsidiary occupations along with their main occupation in the area under study.

- In all the categories of beneficiaries, the maximum i.e. 43 were of upper castes, 34 were of schedule castes and 23 were of backward castes. By and large 100 per cent literacy was found among the beneficiary farmers across the categories. But there was variation in the level of educational standard. It is seen that, of the total sample beneficiary farmers, 6 farmers were graduates, 49 farmers passed HSLC and HS passed and 45 farmers were below matric standard.
- Of the total sample beneficiary farmers 48 farmers availed training.
- On an average the total *kharif* crop area was estimated at 0.92 hectare, of which 0.48 hectares were irrigated. Of the total *kharif* crop area, cereal crops covered 0.80 hectares, of which 0.41 hectares were irrigated. Other crops covered 0.12 hectares, of which 0.07 hectares were irrigated.
- On an average the area under *rabi* crops was estimated at 0.13 hectare per farm of which 0.05 hectares was irrigated.
- The total per farm *zaid* crop area stood at 0.64 hectares of which 0.44 hectares were irrigated.
- The total per farm gross cropped area comprising of *kharif*, *rabi* and *zaid* season stood at 1.44 hectares of which 0.74 hectares were irrigated. The total irrigated area per farm during *kharif*, *rabi* and *zaid* season stood at 0.48 hectares, 0.05 hectares and 0.20 hectares respectively. While the total cropped area per farm during *kharif*, *rabi* and *zaid* season were estimated at 0.91 hectares, 0.13 hectares and 0.39 hectares respectively.
- The total input cost per farm in *kharif* season stood at Rs 52,296 of which Rs 35,704 was own cost and Rs 16,592 other cost. Of the total input cost, Rs 32,464 was spent on cereal crops and Rs 19,832 on other crops. The total value of output per farm stood at Rs 86,460 of which Rs 52,003 was from cereal crops and Rs 34,457 from other crops. The category-wise analysis indicates that outputs per farm was recorded maximum i.e. Rs 1,76,107 in case of the beneficiary farmers of proper agri. services against the minimum of Rs 48,078 per farm in case of the beneficiary farmers of both agri.+ other services. Thus, the beneficiary farmers of proper agri. services had received comparatively higher outputs and as such ACABC scheme performed better in case of proper agri. services. Accordingly input costs on the farms of beneficiaries were found to be high in case of the farmers of proper agri. services as against Rs. 32,309 per farm (lowest) in case of the beneficiary farmers of both agri.+ other services. On the other

hand, among the *kharif* crops, cereals were comparatively more profitable in case of the farmers under both the categories.

- In *rabi* season, inputs and outputs came from other crops only. The overall gross outputs from *rabi* crops was recorded at Rs. 39,382 per farm of which maximum *i.e.* Rs. 1,07,997 was received by the farmers under both agri.+ other services against the minimum *i.e.* Rs 51,517 by the farmers under proper agri. services. Regarding inputs incurred on *rabi* crops, the gross inputs per farm was estimated at Rs. 22,966 of which Rs. 14,812 were incurred on own inputs and Rs. 8,154 on other inputs. It is observed that the beneficiary farmers had invested more on own inputs.
- The total input cost per farm in *zaid* season stood at Rs. 58,278 of which Rs. 39,282 own cost and Rs. 18,997 other cost. Of the total input cost, Rs. 12,183 was spent on cereal crops and Rs 46,095 on other crops. The total value of output per farm stood at Rs. 95,042 of which Rs. 18,431 was from cereal crops and Rs. 76,612 from other crops. The category-wise analysis indicates that outputs per farm was recorded comparatively maximum *i.e.* Rs 2, 08,119 in case of the beneficiary farmers of both agri.+ other services against the minimum *i.e.* Rs 1,41,832 per farm in case of the beneficiary farmers of proper agri services. Thus, the beneficiary farmers of both agri. +other services had received comparatively higher outputs and as such ACABC scheme performed better in cases of both agri. +other services to the farmers. Accordingly inputs incurred on the farms of beneficiaries were found to be high *i.e.* Rs.1,29,926 in case of the farmers of both agri.+ other services against lowest *i.e.* Rs. 86,199 per farm in case of the beneficiary farmers of proper agri services. On the other hand, among the *zaid* crops, other crops were comparatively more profitable in cases of the farmers under both the categories.
- It is seen that gross outputs from all crops was recorded at Rs. 2,20,885, while the gross inputs from all crops was recorded at Rs. 1,33,541 per farm. The overall average net income per farm was found at Rs 87,344. Among the inputs, the other inputs procured from agri. ventures or elsewhere was lower than the own inputs. The category-wise analysis shows that the maximum net income *i.e.* Rs 1,48,519 per farm was recorded on the farms under proper agri services against the minimum net income of Rs 1,36,736 on the farms under both agri.+ other services.
- The overall average outputs from milch animals per farm were estimated at Rs 45,753. While the inputs incurred in rearing milch animals were estimated at Rs 28,526 of

which the maximum i.e. Rs 19,931 was incurred on own inputs and Rs 8,594 on other inputs. Thus, the net income from milch animals was recorded at Rs 17,227 per farm which is a considerable income in addition to raising crops on the farms of beneficiaries in the area under study. The category-wise analysis indicates that the Maximum outputs i.e. Rs 3,56,235 per farm was received under the category of allied agri. services against the outputs of Rs. 1,83,317 per farm under the category of both agri.+ other services. Thus, the farms under allied agri. services were more productive and profitable in comparison of the farms under both agri.+ other services in rearing milch animals in the area under study, because the net income per farm was maximum i.e. Rs 1,53,806 under the category of allied agri. Services. Accordingly the total inputs per farm were incurred maximum i.e. Rs 2, 02,429 per farm on the farms under allied agri. services, against the minimum i.e. Rs 1, 22,426 per farm on the farms under both agri. + other services.

- The overall average outputs from poultry per farm were estimated at Rs 84,284. While the inputs incurred in rearing poultry were estimated at Rs 65,891 of which the maximum i.e. Rs 51,961 was incurred on other inputs and Rs 13,930 on own inputs. Thus, the net income from poultry was recorded at Rs 18,393 per farm. The category-wise analysis indicates that the Maximum outputs i.e. Rs 1,91,832 per farm was received under the category of allied agri. services against the outputs of Rs. 50,344 per farm under the category of both agri.+ other services. Thus, the farms under allied agri. services were more productive and profitable in comparison of the farms under both agri.+ other services in rearing poultry in the area under study, because the net income per farm was maximum i.e. Rs 41,488 under the category of allied agri. Services. Accordingly the total inputs per farm were incurred maximum i.e. Rs 1, 50,344 per farm on the farms under allied agri. services, against the minimum i.e. Rs 38,357 per farm on the farms under both agri. + other services.
- The overall average outputs from fishery per farm were estimated at Rs 23,241. While the inputs incurred in fishery were estimated at Rs 9,997 of which the maximum i.e. Rs 7,658 was incurred on other inputs and Rs 2,339 on own inputs. Thus, the net income from fishery was recorded at Rs 13,244 per farm. The category-wise analysis indicates that the Maximum outputs i.e. Rs 55,592 per farm was received under the category of both agri.+ other services against the outputs of Rs. 37,256 per farm under the category of allied agri. services. The net income per farm was maximum i.e. Rs 28,480 under the category of both agri. + other Services. Accordingly the total inputs per farm were

incurred maximum *i.e.* Rs 27,112 on the farms under both agri. + other Services, against the minimum *i.e.* Rs 14,825 per farm on the farms under allied agri. services.

- The overall average outputs from draught animals found to be at Rs 6,849 per farm, while the inputs incurred was Rs 5,815 per farm of which Rs 3,521 was incurred on own inputs and Rs 2,294 was on other inputs. The net income received from the rearing of draught animals was estimated at Rs 1,034 per farm only. The category-wise analysis shows that the maximum output *i.e.* 16,174 per farm was recorded on the farms of both agri.+ other services, against the minimum *i.e.* Rs. 6,978 per farm on the farms under allied agri. services. On the farms under proper agri. services, it was recorded at Rs 9,828 per farm. The farmers under both agri.+ other services had received maximum return from rearing draught animals.

There were no other animals reared by the sample beneficiary farmers.

- The total outputs received from total animals was maximum *i.e.* Rs 3,63,213 per farm under allied agri. services against the minimum *i.e.* Rs 9, 828 per farm under proper agri. services. While on the farm under both agri.+ other services it was recorded at Rs 1,99,491 per farm. The farms under allied agri. services were found to be more productive in rearing animals. The net income per farm was also estimated as higher *i.e.* Rs 1, 54,681 under the category of allied agri. services against the lowest *i.e.* Rs 1,192 per farm under the category of proper agri. services. Under both agri.+ other services, it was estimated at Rs 64,205 per farm. The overall outputs from rearing animals were recorded at Rs 52,601 per farm while the total inputs per farm were recorded at Rs 34,341 and the net income per farm stood at Rs 18,261.
- Out of 45 sample beneficiary farmers under proper agri. Services, 22 farmers received services on farm machine *etc.* 39 farmers received other services including production trend *etc.* Under allied agri. Services, 40 sample households received extension services on dairy, poultry *etc.* 10 beneficiary farmers received extension services on apiary, sericulture *etc.* and 18 farmers received extension services on others including production trend *etc.* Under both agri+ other services, 7 beneficiary farmers received extension services on farm machine *etc.* and 10 more on production related issues. As a whole, total 29 farmers received extension services on farm machine *etc.* 40 beneficiary farmers received extension services on dairy, poultry *etc.* 10 beneficiary farmers received extension services on apiary, sericulture *etc.* and 67 beneficiary farmers received extension services on others including production trend *etc.*

- The beneficiary farmers hired only tractors from the ventures. The hiring charges of tractor varied from Rs 3,508 to Rs 7,942 per farm across the categories and the total charges was worked out at Rs 4,100 per farm. The hiring charges of tractor was maximum *i.e.* Rs 7,942 per farm under the category of proper agri-services against the minimum of Rs 3,508 per farm under the category of both agri+ other services. In the study area beneficiary farmers were not hiring any implements from the agri ventures.
- The beneficiary farmers received inputs such as seed, fertilizers for paddy, vegetables and for horticultural crops on payment basis from the ventures. As a whole the total cost was worked out at Rs 61, 550 per farm of which Rs 15,684 was attributed to seed, Rs 2,212 to fertilizer and the remaining Rs 43,654 was attributed to other inputs like fodder, poultry chicks and fingerlings.
- Out of 100 sample beneficiary farmers from all the categories ,83 farmers received informal training from ventures, of which 38 beneficiary farmers under proper agri. services, 36 under allied agri. services and 9 under both agri.+ other services. All the beneficiary farmers reported that the training was useful.
- Almost all the beneficiary farmers had reported that there was availability of inputs through the full supports of agri. ventures established in their areas. Out of 100 sample beneficiary farmers 73 farmers had told to receive supports form the ventures on marketing of outputs, 29 beneficiary farmers had told to receive other supports on the production trends from agri. ventures.
- Out of total 100 beneficiary farmers, 77 beneficiary farmers received support on farm technology, 50 beneficiary farmers received support on cropping practices, 26 beneficiary farmers received support on protection from pests and diseases, 40 beneficiary farmers received support on prices of crop outputs and 35 beneficiary farmers received support on animal health services.
- Out of 100 beneficiary farmers 56 sample farmers reported that the production of cereals had increased after the implementation of ACABC scheme in their areas. Also, 38 sample farmers had told that the production of other horticultural crops had increased satisfactorily. Out of the total sample farmers 28 farmers had told that the production of milch animals had increased, 15 sample farmers reported that the production of poultry, fish and fingerlings also increased after the establishment of agri. ventures in their areas under ACABC scheme in Assam.



- It is seen that per farm charges of farm machines was found highest i.e. Rs 7,942 on the farms under proper agri. services and lowest i.e. Rs 3,508 on the farms under both agri.+ other services category and the overall charges stood at Rs 4,100 per farm. Overall cost of farm inputs stood at Rs 61,550 per farm of which Rs 24,338 on the farms of sample beneficiary farmers under proper agri. services category and Rs 46,294 on the farms of sample beneficiary farmers under both agri.+ other services category.
- The average area of holding per non- beneficiary was 1.05 hectares. Among the three categories of non- beneficiary farmers the average size of holding was comparatively larger i.e. 1.32 hectares in the category of both agri.+ other services against the smallest i.e. 0.73 hectare in the category of allied agri. services. On an average, the size of holding was 1.20 hectares in the category of proper agri. services. Out of the total 50 non- beneficiary farmers 16 farmers had membership in different agencies. Of the total non-beneficiary farmers, 21 sample farmers were practicing subsidiary occupations along with their main occupation in the area under study.
- Out of 17 sample non- beneficiary farmers under proper agri. services 10 belonged to general group, 3 belonged to ST and 4 non- beneficiaries were OBC. Under allied agri. services out of 20 sample non-beneficiary households 14 belonged to general group, 4 belonged to ST and 2 belonged to OBC. Under both agri+ other services out of 13 sample non- beneficiary households 10 belonged to general group, 2 belonged to ST and 1 belonged to OBC. Thus, in all the categories of non- beneficiaries, the maximum i.e. 34 were of upper castes, 9 were of schedule castes and 7 were of backward castes. Education is one of the most important factors which determine the quality of manpower. The level of education also indicated the efficiency of human resources engaged in productive activities including agriculture. By and large 100 per cent literacy was found among the non- beneficiary farmers across the categories. But there was variation in the level of educational standard. It was seen that, of the total sample non- beneficiary farmers, 3 farmers were graduates, 23 farmers passed HSLC and HS and 24 farmers were below matric standard.
- It is seen that on an average the total *kharif* crop area was estimated at 0.62 hectare, of which 0.10 hectare were irrigated. Of the total *kharif* crop area, cereal crops covered 0.54 hectare, of which 0.10 hectare were irrigated. Other crops covered 0.08 hectare and the entire area was un- irrigated. Among the categories, the total *kharif* crop area

was almost same *i.e.* 1.06 hectares and 1.00 hectare under the category of proper agri. services and under the category of both agri.+ other services .

- The total *rabi* crops area was covered by others including horticultural crops only. Under proper agri-services, the total per farm *rabi* crop area covered 0.10 hectare of which 0.03 hectare were irrigated. Under both agri+ other services total per farm *rabi* crop area stood at 0.22 hectare. On an average the total area under *rabi* crops was estimated at 0.09 hectare per farm of which 0.01 hectare was irrigated.
- As a whole, total per farm *zaid* crop area stood at 0.45 hectare of which 0.06 hectare were irrigated. Of the total *zaid* crop area, cereal crops covered 0.38 hectare, of which 0.06 hectare were irrigated. Other crops covered 0.07 hectare and the entire area was un- irrigated.
- It is seen that the total per farm gross cropped area comprising of *khariif*, *rabi* and *zaid* season stood at 1.16 hectares of which 0.18 hectares were irrigated. The total irrigated area per farm during *khariif*, *rabi* and *zaid* season stood at 0.10 hectare, 0.02 hectare and 0.06 hectare respectively. While the total cropped area per farm during *khariif*, *rabi* and *zaid* season were estimated at 0.62 hectare, 0.09 hectare and 0.45 hectare respectively.
- It is seen that the total input cost per farm in *khariif* season stood at Rs 27,651 of which Rs 19,214 own cost and Rs 8,437 other cost. Of the total input cost, Rs 15,239 was spent on cereal crops and Rs 12,412 on other crops. The total value of output per farm stood at Rs 41,423 of which Rs 21,894 was from cereal crops and Rs 19,528 from other crops. The category-wise analysis indicates that outputs per farm was recorded comparatively higher *i.e.* Rs 75,097 in case of the non- beneficiary farmers of proper agri. services against the lower of Rs 61,114 per farm in case of the non- beneficiary farmers of both agri.+ other services. Thus, the non- beneficiary farmers of proper agri. services had received comparatively higher outputs. Accordingly inputs incurred on the farms of non- beneficiaries were found to be high *i.e.* Rs 47,456 per farm in cases of the farmers of proper agri. services.
- In *rabi* season, inputs and outputs came from other crops only. The overall gross outputs from *rabi* crops was recorded at Rs 25,939 per farm of which maximum *i.e.* Rs 64,167 was received by the farmers under both agri.+ other services against the minimum *i.e.* Rs 27,221 by the farmers under proper agri. services. Regarding inputs incurred on *rabi* crops, the gross inputs per farm was estimated at Rs 14,434 of which

Rs 10,581 were incurred on own inputs and Rs 3854 on other inputs. It is observed that the non- beneficiary farmers had invested more on own inputs.

- It is seen that the total input cost per farm in *zaid* season stood at Rs 25,851 of which Rs 19,741 own cost and Rs 6,111 other cost. Of the total input cost, Rs 11,642 was spent on cereal crops and Rs 14,209 on other crops. The total value of output per farm stood at Rs 39,161 of which Rs 14,872 was from cereal crops and Rs 24,290 from other crops. The category-wise analysis indicates that outputs per farm was recorded comparatively maximum i.e. Rs 69,426 in case of the non- beneficiary farmers of proper agri. services against the minimum i.e. Rs 59,832 per farm in case of the non- beneficiary farmers of both agri+ other services. Accordingly inputs incurred on the farms of non- beneficiaries were found to be high i.e. Rs 45,295 in cases of the farmers of proper agri services against lowest i.e. Rs 40,196 per farm in case of the non- beneficiary farmers of both agri.+ other services. On the other hand, among the *zaid* crops, other crops were comparatively more profitable in cases of the farmers under both the categories.
- The overall gross outputs from all crops were Rs 1,13,434 per farm. While the total inputs incurred per farm was estimated at Rs 67,832 of which maximum i.e. Rs 49,680 was incurred on own inputs and RS 18,153 on other inputs. On an average the net income stood at Rs 45,602. The category-wise distribution of gross outputs as well as net incomes shows that the gross outputs was higher i.e. RS 1, 92,072 per farm under the category of proper agri. services against the lower i.e. Rs 1, 85,113 under the category of both agri.+ other services. Accordingly, net income per farm was higher on the farms under proper agri. services.
- The overall average outputs from milch animals per farm were estimated at Rs 1, 22,788. While the inputs incurred in rearing milch animals were estimated at Rs 76,489 of which the maximum i.e. Rs 52,572 was incurred on own inputs and Rs 23,917 on other inputs. Thus, the net income from milch animals was recorded at Rs 46,299 per farm which is a considerable income in addition to raising crops on the farms of non- beneficiaries in the area under study. The category-wise analysis indicates that the Maximum outputs i.e. Rs 2,23,773 per farm was received under the category of allied agri. services against the outputs of Rs. 1,27,994 per farm under the category of both agri.+ other services. Thus, the farms under allied agri. services were more productive and profitable in comparison of the farms under both agri.+

other services in rearing milch animals in the area under study, because the net income per farm was maximum i.e. Rs 84,554 under the category of allied agri. Services. Accordingly the total inputs per farm were incurred maximum i.e. Rs 1,39,219 per farm on the farms under allied agri. services, against the minimum i.e. Rs 80,006 per farm on the farms under both agri. + other services.

- The overall average outputs from poultry per farm were estimated at Rs 60,306. While the inputs incurred in rearing poultry were estimated at Rs 47,952 of which the maximum i.e. Rs 37,189 was incurred on other inputs and Rs 10,763 on own inputs. Thus, the net income from poultry was recorded at Rs 12,345 per farm. The category-wise analysis indicates that the Maximum outputs i.e. Rs 1,25,420 per farm was received under the category of allied agri. services against the outputs of Rs. 38,992 per farm under the category of both agri.+ other services. Thus, the farms under allied agri. services were more productive and profitable in comparison of the farms under both agri.+ other services in rearing poultry in the area under study, because the net income per farm was maximum i.e. Rs 27,420 under the category of allied agri. Services. Accordingly the total inputs per farm were incurred maximum i.e. Rs 98,000 per farm on the farms under allied agri. services, against the minimum i.e. Rs 33,660 per farm on the farms under both agri. + other services.
- The overall average outputs from fishery per farm were estimated at Rs 16,559. While the inputs incurred in fishery were estimated at Rs 7,513 of which the maximum i.e. Rs 5,636 was incurred on other inputs and Rs 1,877 on own inputs. Thus, the net income from fishery was recorded at Rs 9,046 per farm. The category-wise analysis indicates that the Maximum outputs i.e. Rs 26,779 per farm was received under the category of allied agri. services against the outputs of Rs. 22,492 per farm under the category of both agri.+ other services. The net income per farm was maximum i.e. Rs 16,024 under the category of allied agri. Services. Accordingly the total inputs per farm were incurred maximum i.e. Rs 12,350 on the farms under both agri. + other Services, against the minimum i.e. Rs 10,755 per farm on the farms under allied agri. services.
- The overall average outputs from draught animals found to be at Rs 12,979 per farm, while the inputs incurred was Rs 10,535 per farm of which Rs 8,903 was incurred on own inputs and Rs 1,632 was on other inputs. The net income received from the rearing of draught animals was estimated at Rs 2,444 per farm only. The category-

wise analysis shows that the maximum output i.e. 15,361 per farm was recorded on the farms of proper agri. services, against the minimum i.e. 10,377 per farm on the farms under allied agri. services. On the farms under both agri.+ other services, it was recorded at Rs 13,867 per farm. The farmers under proper agri services had received maximum return from rearing draught animals.

- There were no other animals reared by the sample beneficiary farmers under ACABC scheme in Assam.
- The total outputs received from total animals was maximum i.e. Rs 2, 34,150 per farm under allied agri. services against the minimum i.e. Rs 15,361 per farm under proper agri. services. While on the farm under both agri.+ other services it was recorded at Rs 1,41,861 per farm. The farms under allied agri. services were found to be more productive in rearing animals. The net income per farm was also estimated as higher i.e. Rs 86,425 under the category of allied agri. services against the lowest i.e. Rs 2,966 per farm under the category of proper agri. services. Under both agri.+ other services, it was estimated at Rs 50,632 per farm. The overall outputs from rearing animals were recorded at Rs 1,35,766 per farm while the total inputs per farm was recorded at Rs 87,024 and the net income per farm stood at Rs 48,743.
- Out of 50 non-beneficiaries, 26 farmers had heard about agri-clinic and another 24 farmers had not heard about agri-clinic. Thus, it is clear that about 50 per cent of non-beneficiary farmers of the ACABC scheme area of Assam were not at all aware about the agri-clinic till the survey period. The farmers who had heard about the agri-clinic, but they did not availing services from thr agri ventures. The reasons for not availing the services as recorded were: 1) Timely support of VLEW was available, 2) It was felt not necessary, 3) small size of holding, 4) not interested, 5) It was felt not beneficial, 6) high rate and 7) benefits availing from other programmes. Similarly, majority of the non-beneficiary farmers i.e. 40 out of 50 had reported to hear about agri-business centres but they were not purchasing inputs from the agri-business centres. The reason for not purchasing inputs from the agri-business centres are 1) Seeds and other inputs were locally available, 2) Small scale cultivation, 3) Same rate in market and in business centre, 4) Not available in proper time, 5) Quality of inputs was not so good, 6) Not much profitable, as they have to sale their product to the business centre and 7) the contract is not favourable for the farmers.

- All the non-beneficiary farmers of ACABC scheme area procured inputs from their own sources.
- It is seen from the table that all the 50 non-beneficiary farmers were satisfied with the availability of inputs. As regards the satisfaction about outputs, 34 non-beneficiary farmers were satisfied with the outputs of crops and 16 non-beneficiary farmers were not satisfied with the output of crops. The reason for not satisfying with the output of crops were, 1) Inadequate irrigation facility, 2) poor quality seed, 3) lack of knowledge, 4) inadequate extension service, 5) high rate of inputs, 6) partial use of required inputs and 7) Insufficient measures of disease control.
- The net cultivated area on the farms of beneficiaries was estimated at 1.04 hectares per farm and on the farms of non-beneficiaries it was estimated at 0.75 hectare per farm. The total net irrigated area on the farms of beneficiaries was estimated at 0.50 hectare per farm and on the farms of non-beneficiaries it was estimated at 0.10 hectare per farm. While, the gross irrigated area on the sample beneficiary farms was recorded at 0.98 hectare against 0.16 hectare per farm on the sample non-beneficiary farms. The irrigation intensity on the sample beneficiary farms was estimated at 1.98 per cent and 1.79 per cent on the farms of non-beneficiaries. The irrigation intensity was estimated higher under the category of both agri.+ other services in case of beneficiary farms and non-beneficiary farmers.
- The net cultivated area, for beneficiary farmers stood at 1.04 hectares per farm and for non-beneficiary farmers it was estimated at 0.75 hectare per farm. The gross cropped area for beneficiary and non-beneficiary farmers stood at 1.69 hectare and 1.16 hectares respectively. Category-wise analysis shows that the net-cultivated area and gross cropped area on the farms of beneficiaries was found higher, in the category of proper agriculture services, as against the farms of non-beneficiary farmers. As a whole cropping intensity was found to be higher i.e. 163 per cent for beneficiary farmers, as against the cropping intensity of 154 per cent for non-beneficiary farmers. It is observed that the net cultivated area and gross-cropped area of beneficiary farmers were higher than that of non-beneficiary farmers which indicated the positive impact of ACABC scheme.
- The overall average total inputs per farm in case of beneficiaries was estimated at Rs 3,14,894 against Rs 2,10,285 per farm in case of non-beneficiaries. Thus, inputs incurred on the farms of beneficiaries were higher than that of the farms of non-

beneficiaries. Accordingly, the gross outputs per farm was also higher i.e. Rs 5,10,597 in case of beneficiaries against Rs 3,25,074 per farm case of non-beneficiaries. The net income per farm was estimated at Rs 1, 95,703 in case of beneficiary farmers against 1, 14,789 per farm in case of non-beneficiaries. Thus, the overall average input output ratio was estimated as 1:1.62 in case of beneficiaries against 1:1.55 in case of non-beneficiaries. Category-wise input output ratio was also found higher in case of beneficiaries in all the three categories.

- From the input-output ratios, it may be said that ACABC scheme had a positive impact on different activities of all the three categories of services, *viz.* proper agriculture, allied agriculture and other services.

Based on the field level observations, the pressing problems as perceived by the sample farmers can be enumerated as follows;

Though the ACABC scheme was implemented since 2002 in the state, it could not make any significant headway in the operational area because of the under-noted factors:

1. The farmers in the remote areas were not fully aware of the ACABC scheme.
2. Lack of proper extension net-work to educate the farmers on livestock components, *i.e.* Dairy/poultry/fishery enterprise.
3. Lack of own money to start business.
4. Fear of business failure.
5. No adequate mechanism to ascertain the exact needs of the farmers in the field.
6. The Primary Agricultural Credit society (PACs) hesitate to issue 'No Objection Certificate' to the agripreneurs for obtaining license for fertilizer sale.
7. Unwillingness of the banks to extend credit facility.
8. The recurring expenditure in some activities, *viz.* poultry, agri-business and dairy were quite high and were considered as limiting factors in managing day to day activities of the business units.
9. The profit margins were low and was vulnerable to fluctuations in prices.

#### **Suggestion and policy implications**

Based on the findings of the study and field observations, the following suggestions can be forwarded for improvement of ACABC scheme in the state of Assam.

1. To ensure long-term viability and sustainability of the agri-enterprises, the banks may engage Business Facilitators and use their technical/advisory services for identification of potential enterprises and prospective borrowers.
2. Comprehensive livestock development policy should be adopted to encourage the farmers to go for livestock enterprises including dairies.
3. Training programs should be conducted by the agripreneurs to educate and assist the farmers to avail the benefits of ACABC *viz.* advisory services, input support & custom hiring services etc.
4. Farmers should have easy access to credit at an affordable rate of interest, whenever necessary.
5. The agripreneurs may be given preference over other applicants for issuance of dealership license for fertilizers, pesticides, insecticides *etc.*
6. May be because of resource limitations, a large majority of the farmers remained untouched under ACABC scheme and therefore, adequate promotional measures should be taken to drive away the elements of dissatisfaction /disinterest, if any from among the non-participating farmers.
7. There is urgent necessity of developing road communication and infrastructural facilities in the remote areas so that the agripreneurs can build up their ventures for the interest of the farmers.
8. Also, the entire marketing system is required to be revamped so that each and every farmer can be an active player in the market for getting remunerative price for their produces.

### **Conclusion**

The ACABC scheme was conceived with twin objectives of providing employment opportunities to the agricultural graduates in one hand, and also to supplement useful extension services to the farmers on the other.

Although the ACABC scheme has become popular in many parts of the country, it is yet to make significant headway in the state of Assam. As compared to the absolute number of agri-graduate trainees, the number of ventures established is far from satisfactory and as such, horizontal expansion of the scheme is very limited. And whatever ventures have come up in recent years, they are located at distant places, away from the farmers' habitat. In spite of all odds, it has been observed from the field investigation that the scheme has positive impact on various agriculture and allied



activities like dairy, poultry, fisheries *etc.* Given a boost in terms of aggressive campaign, input and output support, the ACABC scheme in Assam can go a long way in bringing some perceptible changes in the minds of the farmers, which thereby can contribute handsomely for the betterment of the state agriculture.

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## **Executive Summary**

Following the Central Government's initiatives, the Central Sector Scheme, Agri-Clinics and Agri-Business Centres (AC&ABC) was initiated in the state of Assam in 2002 with the prime objective to supplement the efforts of public extension by facilitating qualified agricultural professionals to set up Agri-ventures that can deliver value-added extension advisory services to the farmers at their door step, besides providing self-employment opportunities to Agripreneurs. The Agri-Clinics are envisaged to provide expert advice and services to the farmers on technology, cropping practices, protection from pests and diseases, market trends, prices of various crops in the markets and also clinical services for animal health *etc.* which would enhance the productivity of crops and animals and ultimately, the farmers' income.

### **Objectives of the Study**

1. To identify the benefits accrued to farmers through extension services by ACABCs.
2. To analyse comparative effectiveness of extension services to beneficiary farmers by ACABCs and non-beneficiary farmers of the same area.
3. To assess the extent of effects on income of beneficiary farmers through extension services by ACABCs and the income of non-beneficiary farmers.
4. To examine the problems / factors hampering the effects of extension services on farmers by ACABCs.
5. To explore measures and suggestions for strengthening extension services by ACABCs more effective to farmers.
6. To suggest changes in imparting extension services to farmers under the ACABCs Scheme.

### **Methodology of the study**

On the basis of higher number of Agri-ventures established in the state, two districts were selected randomly viz: Kamrup and Nagoan. In consultation with the concerned officials of the Nodal Training Institute, five (5) Agri-ventures were selected per district randomly making a total of 10 agri-ventures. From each of the 10 agri-ventures, selected list of beneficiary farmers were undertaken. These lists were further categorized according to (1) Proper Agriculture Services, (2) Allied Agriculture Services and (3) Both Agri+ Other Services. Thereafter, the list of the farmers were further sub-categorized into three farm size-groups, such as (1) Marginal, (2) Small and (3) Medium

and Large farmers. From these lists so categorized the ultimate sample beneficiary farmers were undertaken @ 10 farmers per agri-venture randomly proportionate to the total farmers in each category of agriculture services as well as sub-categories of the farm size-groups making a total of 100 sample beneficiary farmers. Also, as control group, the samples of non-beneficiary farmers @ of 5 farmers per agri-ventures were undertaken from the same area of agri-venture making a total of 50 non-beneficiary sample farmers in total to study the impact of agriculture extension services through ACABC scheme in the state of Assam.

The study was purely empirical in nature and was based on primary as well as secondary level data collected from field and other sources such as, Statistical Handbook, Economic Survey and from concerned offices/agencies. The primary data were tabulated according to the formats and guidelines prepared by the Co-coordinating Centre.

### **Summary of Major Findings and Policy Suggestions**

- The total number of beneficiary household under the three categories was 100 and the total number of non- beneficiary household was 50. Area of holding per beneficiary was 1.52 hectares and 1.05 hectares for non-beneficiary farmers. Out of the total beneficiary and non-beneficiary farmers respectively, 10 and 16 farmers had membership in different agencies. All the farmers under three categories availed benefits from different agri-ventures. Out of the total 100 beneficiary households, 68 households had subsidiary occupation and out of 50 non-beneficiary households, 21 households had subsidiary occupation.
- By and large 100 per cent literacy was found among the beneficiary and non-beneficiary farmers across the categories.
- On an average the total *kharif* crop area for beneficiary farmers was estimated at 0.92 hectare, of which 0.48 hectare was irrigated. For non-beneficiary farmers, it was estimated at 0.62 hectare, of which 0.10 hectare was irrigated.
- For beneficiary farmers, on an average, the area under *rabi* crops was estimated at 0.13 hectare per farm of which 0.05 hectare was irrigated and for non-beneficiary farmers it was estimated at 0.09 hectare per farm of which 0.01 hectare was irrigated.
- The total per farm *zaid* crop area stood at 0.64 hectare of which 0.44 hectare was irrigated for beneficiary farmers and for non-beneficiary farmers it was estimated at 0.45 hectare per farm of which 0.06 hectare was irrigated.

- For beneficiary farmers, the total per farm gross cropped area comprising of *kharif*, *rabi* and *zaid* season stood at 1.44 hectares of which 0.74 hectare were irrigated. While the total cropped area per farm during *kharif*, *rabi* and *zaid* season were estimated at 0.91 hectare, 0.13 hectare and 0.39 hectare respectively. For non-beneficiary farmers it was estimated at 1.16 hectares of which 0.18 hectare were irrigated. The total cropped area per farm during *kharif*, *rabi* and *zaid* season were estimated at 0.62 hectare, 0.09 hectare and 0.45 hectare respectively.
- For beneficiary farmers the total input cost per farm in *kharif* season stood at Rs 52,296 of which Rs 35,704 was own cost and Rs 16,592 other cost. The total value of output per farm stood at Rs 86,460. Similarly, for non-beneficiary farmers, the total input cost per farm stood at Rs 27,651 of which Rs 19,214 was own cost and Rs 8,437 other cost. The total value of output per farm stood at Rs 41,423.
- the overall gross outputs from *rabi* crops was recorded at Rs. 39,382 per farm and the gross inputs per farm was estimated at Rs. 22,966 of which Rs. 14,812 were incurred on own inputs and Rs. 8,154 on other inputs. For non- beneficiary farmers, the overall gross outputs from *rabi* crops was recorded at Rs 25,939 per farm. The gross inputs per farm was estimated at Rs 14,434 of which Rs 10,581 were incurred on own inputs and Rs 3854 on other inputs.
- The total input cost per farm in *zaid* season for beneficiary farmers, stood at Rs. 58,278 of which Rs. 39,282 was own cost and Rs. 18,997 other cost. The total value of output per farm stood at Rs. 95,042. The total input cost per farm for non- beneficiary farmers in *zaid* season stood at Rs 25,851 of which Rs 19,741 was own cost and Rs 6,111 other cost. The total value of output per farm stood at Rs 39,161.
- It is seen that gross outputs from all crops was recorded at Rs. 2,20,885, while the gross inputs from all crops was recorded at Rs. 1,33,541 per farm. The overall average net income per farm was found at Rs 87,344 for beneficiary farmers and for non-beneficiary farmers, gross outputs, gross inputs and net income per farm stood at Rs.1,13,434, Rs. 67,832 and Rs.45,602, respectively .
- The overall average outputs from milch animals per farm for beneficiary farmers were estimated at Rs 45,753. While the inputs incurred in rearing milch animals were estimated at Rs 28,526 and the net income was recorded at Rs 17,227 per farm. For non-beneficiary farmers, outputs, inputs and net income per farm stood at Rs. 1,22,788, Rs. 76,489 and Rs. 46,299, respectively

- The overall average outputs from poultry per farm were estimated at Rs 84,284. While the inputs incurred in rearing poultry were estimated at Rs 65,891 and the net income from poultry was recorded at Rs 18,393 per farm for beneficiary farmers. For non-beneficiary farmers, the overall average outputs from poultry per farm were estimated at Rs 60,306. While the inputs incurred in rearing poultry were estimated at Rs 47,952 and the net income from poultry was recorded at Rs 12,345 per farm.
- The overall average outputs from fishery per farm were estimated at Rs 23,241. While the inputs incurred in fishery were estimated at Rs 9,997, the net income was recorded at Rs 13,244 per farm for beneficiary farmers. For non-beneficiary farmers, the overall average outputs per farm were estimated at Rs 16,559. While the inputs incurred were estimated at Rs 7,513 and the net income was recorded at Rs 9,046 per farm.
- The overall average outputs from draught animals were found at Rs 6,849 per farm, while the inputs incurred was Rs 5,815 per farm. The net income was estimated at Rs 1,034 per farm among the beneficiary farmers. For non-beneficiary farmers, the overall average outputs per farm were estimated at Rs 12,979 per farm, while the inputs incurred was Rs 10,535 per farm. The net income was estimated at Rs 2,444 per farm.
- There were no other animals reared by the sample beneficiary and non-beneficiary farmers.
- The overall outputs from rearing total animals were recorded at Rs 52,601 per farm while the total inputs per farm were recorded at Rs 34,341 and the net income per farm stood at Rs 18,261 for beneficiary farmers. For non-beneficiary farmers the overall outputs were recorded at Rs 1,35,766 per farm while the total inputs per farm was recorded at Rs 87,024 and the net income per farm stood at Rs 48,743.
- As a whole, total 29 farmers received extension services on farm machine etc, 40 beneficiary farmers received extension services on dairy, poultry etc, 10 beneficiary farmers received extension services on apiary, sericulture etc and 67 beneficiary farmers received extension services on others including production trend etc.
- The total hiring charges of tractor were worked out at Rs 4,100 per farm.
- The beneficiary farmers received inputs on payment basis from the ventures, which was worked out at Rs 61, 550 per farm of which Rs 15,684 was attributed to seed, Rs 2,212 to fertilizer and the remaining Rs 43,654 was attributed to other inputs like fodder, poultry chicks and fingerlings.

- Out of 100 sample beneficiary farmers from all the categories, 83 farmers received informal training from ventures. All the beneficiary farmers reported that the training was useful.
- Almost all the beneficiary farmers had reported that the inputs were made available by the agri. ventures located in their areas. Out of 100 sample beneficiary farmers, 73 farmers had reported that they had received supports from the ventures on marketing of outputs and 29 beneficiary farmers had received other supports from the agri. ventures.
- Out of 100 beneficiary farmers, 77 beneficiary farmers received support on farm technology, 50 beneficiary farmers received support on cropping practices, 26 beneficiary farmers received support on protection from pests and diseases, 40 beneficiary farmers received support on prices of crop outputs and 35 beneficiary farmers received support on animal health services.
- Out of 100 beneficiary farmers, 56 sample farmers reported that the production of cereals had increased. Also, 38 sample farmers had told that the production of other horticultural crops had increased satisfactorily. Out of the total sample farmers, 28 farmers had reported that the production of milch animals had increased, 15 sample farmers reported that the production of poultry, fish and fingerlings also increased substantially after the establishment of agri. ventures in their areas.
- Overall cost of farm inputs stood at Rs 61,550 per farm.
- Out of 50 non-beneficiaries, 26 farmers had heard about agri-clinics. There were farmers who had heard about the agri-clinics, but did not avail their services. The reasons for not availing the services were: 1) Timely support of VLEW was available, 2) Felt not necessary, 3) Small size of holding, 4) not interested, 5) felt not beneficial, 6) high rate and 7) benefits availing from other programmes. Similarly, majority of the non-beneficiary farmers i.e. 40 out of 50 had reported that they had heard about agri-business centres but they were not purchasing inputs from the agri-business centres. The reason for not purchasing inputs from the agri-business centres were 1) Seeds and other inputs were locally available, 2) Small scale cultivation, 3) Same rate in market and in business centre, 4) Not available in proper time, 5) Quality of inputs were not so good, 6) Not much profitable, as they have to sale their product to the business centre only and 7) the contract was not favorable for the farmers.
- All the non- beneficiary farmers of ACABC scheme area procured inputs from their own sources.

- It is seen from the table that all the 50 non-beneficiary farmers were satisfied with the availability of inputs. As regards the satisfaction about outputs, 34 non-beneficiary farmers were satisfied with the outputs of crops and the remaining 16 non-beneficiary farmers were not satisfied with the output of crops. The reason for not satisfying with the output of crops were, 1) Inadequate irrigation facility, 2) poor quality seed, 3) lack of knowledge, 4) inadequate extension service, 5) high rate of inputs, 6) partial use of required inputs and 7) Insufficient measures of disease control.
- The net cultivated area on the farms of beneficiaries was estimated at 1.04 hectares per farm and on the farms of non-beneficiaries it was estimated at 0.75 hectare per farm. The total net irrigated area on the farms of beneficiaries was estimated at 0.50 hectare per farm and on the farms of non-beneficiaries it was estimated at 0.10 hectare per farm. While, the gross irrigated area on the sample beneficiary farms was recorded at 0.98 hectare as against 0.16 hectare per farm on the sample non-beneficiary farms. The irrigation intensity on the sample beneficiary farms was estimated at 1.98 per cent and 1.79 per cent on the farms of non-beneficiary farmers.
- The gross cropped area for beneficiary and non-beneficiary farmers stood at 1.69 hectare and 1.16 hectares respectively. As a whole cropping intensity was found to be higher i.e. 163 per cent for beneficiary farmers, 154 per cent for non-beneficiary farmers.
- The overall average total inputs per farm in case of beneficiaries was estimated at Rs 3,14,894 and Rs 2,10,285 per farm in case of non-beneficiary farmers. Thus, inputs incurred on the farms of beneficiaries were higher than that of the non-beneficiaries. Accordingly, the gross outputs per farm was also higher i.e. Rs 5,10,597 in case of beneficiaries as compared to non-beneficiaries (Rs.3,25,074). The net income per farm was estimated at Rs 1, 95,703 in case of beneficiary farmers and Rs.1,14,789 per farm in case of non-beneficiaries. Thus, the overall average input output ratio was worked out at 1:1.62 in case of beneficiaries and 1:1.55 in case of non-beneficiary farmers. Category-wise input output ratio was also found higher in case of beneficiaries in all the three categories.
- From the input-output ratios, it may be said that ACABC scheme had a positive impact on different activities of all the three categories of services *viz.* proper agriculture, allied agriculture and other services.



Based on the field level observations, the pressing problems as perceived by the sample farmers can be enumerated as follows:

1. The farmers in the remote areas were not fully aware of the ACABC scheme,
2. Lack of proper extension net-work to educate the farmers on different components *i.e* dairy/poultry/fishery enterprise,
3. Lack of own money to start business,
4. Fear of business failure,
5. No adequate mechanism to ascertain the exact needs of the farmers in the field,
6. The Primary Agricultural Credit society (PACs) hesitate to issue 'No Objection Certificate' to the agripreneurs for obtaining license for fertilizer sale,
7. Unwillingness of the banks to extend credit facility,
8. The recurring expenditure in some activities, *viz*, poultry, agri-business and dairy were quite high and were considered as limiting factors in managing day to day activities of the business units
9. The profit margins were low and vulnerable to fluctuations in prices.

#### **Suggestion and policy implications**

Based on the findings of the study and field observations, the following suggestions can be put forwarded for improvement of ACABC scheme in the state of Assam.

1. To ensure long-term viability and sustainability of the agri-enterprises, the banks may engage Business Facilitators and provide technical/advisory services for identification of potential enterprises and prospective borrowers.
2. Comprehensive livestock development policy should be adopted to encourage the farmers to go for livestock enterprises including dairies.
3. Training programs should be conducted by the agripreneurs to educate and assist the farmers to avail the benefits of ACABC *viz*. advisory services, input support & custom hiring services etc.
4. Farmers should have easy access to credit at an affordable rate of interest, whenever necessary.
5. The agripreneurs may be given preference over other applicants for issuance of dealership license for fertilizers, pesticides, insecticides *etc*.

6. May be because of resource limitations, a large majority of the farmers remained untouched under ACABC scheme and therefore, adequate promotional measures should be taken to drive away the elements of dissatisfaction /disinterest, if any from among the non-participating farmers.
7. There is urgent necessity of developing road communication and infrastructural facilities in the remote areas so that the agripreneurs can build up their ventures for the interest of the farmers.
8. Also, the entire marketing system is required to be revamped so that each and every farmer can be an active player in the market for getting remunerative price for their produces.

### **Conclusion**

Although the ACABC scheme has become popular in many parts of the country, it is yet to make any significant headway in the state of Assam. As compared to the absolute number of agri-graduate trainees, the number of ventures established is far from satisfactory and as such, horizontal expansion of the scheme is very limited. And whatever ventures have come up in recent years, they are located at distant places, away from the farmers' habitat. In spite of all odds, it has been observed from the field investigation that the scheme has positive impact on various agriculture and allied activities like dairy, poultry, fisheries *etc.* Given a boost in terms of aggressive campaign, input and output support, the ACABC scheme in Assam can go in long way in bringing some perceptible changes in the minds of the farmers, which thereby can contribute handsomely for the betterment of the state agriculture.

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**Action taken report on comments from University of Allahabad on the draft report “Impact Study on Agricultural Extension Services to Farmers by Agri-Clinic & Agri-business Centres (ACABC Scheme) –A Study in Assam submitted by AERC, Jorhat**

Date of Dispatch of Draft report from Assam 25<sup>th</sup> March, 2017

Date of Receipt at Allahabad 27<sup>th</sup> March, 2017

Date of Dispatch of Comments 30<sup>th</sup> March, 2017

Chapter-wise Valuable Comments from Coordinating AERC, Allahabad, Uttar Pradesh prepared by Peer Coordinator

Chapter –I:- (1) On page 14 under point 1.3 instead of growth under ACABC Scheme in Assam during 2002-2016, the growth in India is detailed in a descriptive manner. Nothing about Assam is mentioned. Therefore include growth under ACABCs in Assam district-wise or region-wise during 2002-2016 in Assam.

**Action:** Done as per suggestion

(2) On pages 21-22 under point 1.8 organization of report is written in a para. Therefore, please detail it chapter-wise and point-wise details therein.

**Action:** Incorporated as per suggestion.

Chapter-II:- No Comments needed.

Chapter-III:- (1) Unit/project-wise progress in Assam and percentages share in India (2002-2016) to be included.

**Action:** Taken action accordingly.

(2) Nodal training Institute (NTI)-wise no. of venture (2002-2016) to be included in the last of Chapter-III.

**Action:** Done as per suggestion.

Chapter-IV:- (1) On page 52 under item IV-2 ( c) the selection of ultimate sample beneficiaries and non-beneficiaries district and venture-wise in Assam under Table-IV-1 and holding size group and agri-services-wise beneficiaries and non-beneficiaries in Assam under separate Table IV-2 have to be detailed. It is not detailed. Therefore, please detail it in two tables. You have given sampling design of all India in Table IV-1 not of Assam in detail which is a must for combined report.

**Action:** Done as per suggestion.

Chapter-V:- (1) On page -54 in Table 5.1 the units are not given on the top of the Table as a result in one column total area is given and in other % and in same column actual no. is given.

**Action:** Done as per suggestion.

(2) On page 55 the narration of Table 5.1 does not include any result. Simple distribution is narrated No. results are mentioned. This happened because of wrong analysis without proper units- which were clearly mentioned on the top of each analytical table by coordinating ARECs. Please check and correct so that results may be seen and may be comparable in preparing combined report.

**Action:** checked and corrected as per suggestion.

(3) On page 56 in Table 5.2 also units are not mentioned on the top of table as per analytical table given by coordinator and as a result the data analyzed in table as well as results in narration are not mentioned. Please check and correct accordingly so that it may be of any use in preparing combined report.

**Action:** checked and corrected as per suggestion.

(4) On page 57 in Table 5.3 again in unit (area in hect.) is mentioned but per beneficiary is left and hence only total area in each category is mentioned instead of per beneficiary area and as such the result could have not been drawn in narration. So please correct and show results accordingly.

**Action:** Corrected as per suggestion.

(5) Like-wise Table 5.4 to 5.6 and narration their of be corrected to make it useful.

**Action:** Done as per suggestion.

(6) Also Table 5. 7 to table 5-14 have been prepared wrongly giving total input and output with no results. Therefore please correct it by calculating per beneficiary for the results required to be used in combined report.

**Action:** Done as per suggestion.

(7) On pages 71-72 the narration of table 5.15 does not include any results. Only distribution of beneficiaries is mentioned but what does it show is not mentioned. So please mention the conclusion/ results to be used in combined report.

**Action:** Done as per suggestion.

(8) On page 72 in table 5.16 the charges are given as total and not per beneficiary. So please calculate per beneficiary to get any results.

**Action:** Done as per suggestion.

(9) Table 5.17 is missed and in table 5-18 again the input cost per beneficiary is not calculated and only total is given with no result. If hiring was not there the table - 5.17 must be there indicating hiring was nil in the columns.

**Action:** incorporated as per suggestion.

(10) On page 75 Table 5-19 is correct, but percentages are not necessary as only number of beneficiaries is sufficient with results in narration.

**Action:** Done as per suggestion.

(11) On page 76 Table 5-20 is correct but it's narration does not include any result. So please mention. What does it indicate? On page 77 in Table-5.21 the same problem is there. So please correct it.

**Action:** corrected as per suggestion.

(12) On page 78-79 in table 5-22 also give the no. of beneficiaries along with crops grown and animals reared to prepare combined report indicating results.

**Action:** incorporated accordingly.

(13) On page 79 in Table 5-23 calculate per beneficiary and in the narration indicate the results mere distribution does not show any result.

**Action:** Done as per suggestion.

(14) On page 80 in Table 5-24 give units on the top of Table as Area in ha/N.B. and No. of N.B. Also indicate the results. The total figures as given do not give required result.

**Action:** corrected as per suggestion

(15) On page 82 in Table 5-25 give units on top of Table as (No. of N.B.) Also give the No. of N.B. making. Column in social groups, castes and educational status and show its results in narration.

**Action:** Done as per suggestion.

(16) In Tables 5-36 to 5-37 too calculate the figures per N.B. making per N,B. on the top of the Table. Accordingly indicate in results.

**Action:** Done as per suggestion.

(17) In Table 5-38 also give units on the top of table as (in numbers) and in columns of reason give no. of N.B. making 3 columns of reasons as 1,2,3 above in the columns. Indicate with no. of N.B. in results.

**Action:** Done as per suggestion.

(18) On page 98 Table 5-39 has been worked-out correctly but no result is indicated. Please mention results.

**Action:** analysed as per suggestion.

(19) In Table 5-40 in the columns received from whom give no. of N.B.s putting star (\*) as their source and in foot- note below the table mention the name of source against the star (\*). Also indicate results. In table 5-41 too please give numbers of N.Bs putting reasons as 1,2, 3 in the columns and indicate results.

**Action:** Done as per suggestion.

(20) In Table 5-42 please check net cultivated and irrigated area per farm of beneficiary as well as non-beneficiary. And correct. Also calculate irrigation intensity correctly. Accordingly correct the narration including results.

**Action:** calculated and corrected as per suggestion.

(21) In table 5-43 too calculate net cultivated and gross cropped area per farm and then calculate cropping intensity correctly.

**Action:** Done as per suggestion.

(22) In Table 5-44 also the figures seem to be total not per farm. Please check the same and correct. Also please write input-output ratio completely and indicate in the results.

**Action:** Done as per suggestion.

Chapter-VI:- Please write only main finding and policy prescriptions in this chapter and delete the status, A.E.S provided, trend of growth and contribution of ACABC. Please see latest office memorandum vide F.No. 10-6/2014-AER-ES dated 19.01.2017.

**Action:** Done as per suggestion.

Executive Summary:- Just after the chapter VI please give executive summary as per the letter F.No. 10-6/2014-AER-ES dated 19-01-2017 already written to you AERC.

**Action:** Done as per suggestion.

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