

EXECUTIVE SUMMARY

01 Introduction

The State Government in Planning and Co-ordination Department have assigned Director, State Labour Institute, Kharavelanagar, Unit-III, Bhubaneswar-751001 to conduct an evaluation study on Diversification of Agricultural Crops, Value Addition and Marketing including opening of Additional seed sale centers, Ragi Exchange Programme, Supply of Power Tillers to SC / ST farmers & Establishment of Agro-Service Centers under RLTA in Rayagada and Koraput districts in the ambit of KBK region. Accordingly, the Evaluation study was conducted during the period July to December 2006. But there were hurdles in completing the study. There was frequent disruptions in rail and road communications for both the Rayagada & Koraput district due to a slew of depressions in the Bay of Bengal covering the period July to September 2006. The investigators came across illiterate respondents / beneficiaries and hence collection of data became a herculean task. Besides, these districts have poor transport and communication facilities to access interior places.

Pilot study & Method of enquiry

Initially, a pilot study was conducted in both the districts of Rayagada and Koraput on the basis of pre-tested schedule-cum-questionnaire. The pilot study acted as a guide to finalise the samples & schedule-cum-questionnaire for collection of primary and secondary data and training of Investigators. As regards to method of enquiry, an eloquent fusion of observation, interview and PRA methods were adopted to evoke prolific results and enhance the trustworthiness of information & data.

Sampling design and coverage

Multipurpose random sampling was adopted from State level to the grassroot level. Under the sample selection 4 agricultural districts, 11 Blocks of Rayagada & Koraput revenue districts with 73 villages 730 respondents were covered. Besides, secondary data was collected from DA & FP, APICOL, Orissa State Seeds Corporation, Deputy Director, Agriculture, Koraput, DAO, Rayagada, Gunupur, Koraput & Jeypore.

Selection and Training of Investigations

Experienced Investigators in fieldwork with good academic background were selected for the two revenue districts. They were imparted with necessary training and feed back from time to time. They were constantly supervised by the members of study team.

Study Team

The study team for the evaluation study was headed by Sri. Jagannath Sahani, former Director, A&FP. The other members of the team include DR. P.C.Das, Director, State Labour Institute, former Joint Director (Statistics), Directorate of Labour, Orissa and Sri. Venkateswar Patnaik, former Assistant Director (Evaluation), Planning & Co-ordination Department. All of them were associated from the beginning till the end of the study covering all functions & aspects including vigorous supervision of the field study.

02 Background Characteristics of Households & Beneficiaries

Social Group

The percentage of ST category of social groups were found to be above the State Average of 22.13 percent in all the Blocks varying upto 57 percent except Borigumma Block of Koraput district in which it was 18 percent. As regards to SC group, all the Blocks surveyed were below the state average of 16.53 percent. Moreover, the reserved category of all the Blocks are limited to 52 percent while that of general group was 48 percent.

Size of land holdings

About 5 to 15 percent beneficiaries in Koraput district were covered under the schemes in the study as against a higher range of 29 to 38 percent in Rayagada district with land size of less than 2.5 hectare. While ascending to the higher land size of 2.5 to 5 hectare, the percentage of beneficiaries surged upto 30 to 61 percent in Koraput district as against 37 to 63 percent in Rayagada district.

Irrigation

While 86.20 percent of the land of the beneficiaries covered in the sample in Jeypore Block of Koraput district were irrigated in Kharif season, a meager percentage of 0.33 percent of land in Semiliguda Block in the same district was irrigated. There was no coverage of irrigation facilities in Gunupur & Ramanaguda Blocks of Rayagada district and Bandhugaon, Boipariguda Blocks in Koraput district. Switching the analysis to Rabi season, the position becomes still bad when one-fourth of lands were irrigated in Sadar Block of Rayagada district and Boipariguda and Kundra Block of Koraput district. Besides, 3 Blocks of Rayagada district & 4 Blocks of Koraput district were deprived of irrigation facilities. Further, Padampur of Rayagada district was the only Block in which the sample lands received irrigation facilities to the tune of 77.67 percent in Rabi season. Hence, there is intra-district disparity in providing irrigation facilities in both the districts which needs more attention.

Income range

The beneficiaries were evenly distributed in different groups of income range. The lower income group (less than Rs. 20,000) was predominant in Ramanaguda & Padampur Blocks of Rayagada district & Boipariguda of Koraput district. Middle-income group (Rs. 20,000 to Rs. 50,000) were significant in Semiliguda & Kundra Blocks and higher income group (above Rs. 50,000) were mostly represented in Borigumma & Bandhugaon Blocks in Koraput district.

3. Diversification of Agriculture crops.

Diversification of Agricultural crops is one among 58 schemes under RLTP as an integral part of increasing production and productivity and to alleviate poverty. It is pertinent to point out that, out of Rs 8890.28 lakh allocated for Agricultural programmes, only 3.06 percent (Rs 272.76) was meant for the scheme on Diversification of Agricultural Crops.

Although RLTA programme was implemented in the year 1998-99, the schemes relating to diversification of crops in the form of paddy demonstrations was launched from 2001-02. About 92 percent of the target for paddy demonstrations was achieved in the year 2001-02 for the KBK region as a whole as against full achievement in Koraput district and 73.41 percent in Rayagada district. In 2002-03 demonstrations were conducted for the crops Niger, Ragi, Mung, which was a shift from the demonstration of paddy in 2001-02. There was full achievement of 4600 crop demonstrations in KBK region as against the target fixed in the same year including Rayagada and Koraput districts.

A sum of Rs 84.72 Lakhs was spent on account of demonstrations, training and supply of implement sets in KBK districts. The share of Rayagada district was 10.26 lakhs (12.11 percent) and for Koraput district, it was 11.45 lakhs (13.52 percent).

About 40 percent of beneficiaries in Rayagada district and 64 percent in Koraput district were aware of diversification of crops. Besides 4 out of 5 Blocks (80 percent) in Rayagada district and 2 out of 6 blocks (33.33 percent) in Koraput district. The beneficiaries with knowledge of diversification of crops was less than 50 percent.

All the beneficiaries having knowledge on benefits of diversification of crops both in Rayagada and Koraput districts have adopted high yielding varieties of different crops in place of local varieties. Besides, more than 90 percent of the average area was proposed to be diversified in Rayagada and Koraput districts.

The yield before and after diversification of crops and supply of power tillers were studied from the field and found that the yield of paddy, green gram, ground nut crops in respect of both Rayagada and Koraput is doubled after the introduction of diversification of crops and power tillers as compared to its preceding period. The yield of all other crops, like Black gram, til, mustard and potato in case of both Rayagada and Koraput districts, is less than 50 percent. Hence, the implementation of diversification of crops and power tillers heaved up the yield rate of crops to a new excess height.

As regards to the income of the farmer before and after diversification of the crops and supply of power tillers, the farmer in both the districts of Rayagada and Koraput earned on an average of Rs.30,000 to Rs.33,000 which is 4 to 5 times more than the returns before the diversification of crops and use of power tillers. While the earnings of cultivators in Gunupur Block.

4. Opening of Additional Seeds sale centres.

The proposal for opening of 10 additional seeds sale centres in the districts of Rayagada and Koraput to meet the requirement of farmers in its interior pockets could not be implemented on the plea that, there was shortage of staff at grass root level. It appears that the Directorate of Agricultural and Food Production remained silent over the matter even though the scheme was implemented in 4 other districts in the KBK region.

5. Ragi Exchange Programme

Ragi is one of the major items of staple food in the southern part of the State especially with tribal population. The objective of the Ragi Exchange Programme is to enable

the tribal farmers to use Higher Yielding varieties of Ragi seeds in lieu of the local variety used by the farmers to bring high yield.

Although the RLTP was implemented in 1998-99, Ragi Exchange Programme was executed only for two years i.e. 2003-04 and 2004-05 and the reason for such delay in formulation of plan and its execution could not be explained. The target set up for the year 2004-05 under Ragi Seed Exchange Programme for the districts Rayagada and Koraput achieved in full. The respective percentage for the preceding year was 93.33 and 30.42 respectively. Around one-third of the target meant for Koraput district was achieved in the year 2003 – 04. There was also heavy demand for Ragi Seed Exchange in all the Blocks as there was the justification in hiking the target fixed in 2004-05. When the scheme had the bright success and was found fruitful in two years of its implementation and there was also full financial achievement in the second year of implementation (2004-05), the scheme would have been continued in subsequent years.

The District Agricultural offices confirmed that the entire quantity of local ragi seeds were exchanged with high yielding ragi seeds leaving with no balance. While the percentage increase of ragi exchange in Rayagada district was more than double the quantity in 2004-05 as compared to 2003-04, it was thrice in case of Koraput district. It further corroborated the fact that the scheme was widely accepted by the cultivators.

The focus group discussions in PRA conducted in different villages revealed that, local variety of Ragi seeds were not acceptable by the cultivators since high yielding variety crops fetch thrice the volume of production than local variety. The villagers, opined that only half of the local variety Ragi cultivators were covered under the Ragi Exchange Programms and the balance half including the interior parts are yet to be covered under the scheme. The time span required for its coverage said to have been 5 years period after which the entire Rayagada and Koraput districts would have been covered with High yielding ragi crops to generate more income. Opening of Additional Seed Sale Centers in interior pockets of these districts would be of great help in procuring seeds in adjacent places & the cultivators need not have to trek miles to fetch the seeds. Further, the cultivators learnt about High yielding Ragi cultivation from the demonstrations conducted for the said crop. Hence, more demonstrations, as the cultivators urged, should be conducted in interior areas.

6. Supply of Power Tillers to SC and ST Farmers:

Supply of Power Tillers to SC and ST farmers is an epoch-making instrument to increase agricultural production and productivity in the tribal and backward areas of the KBK region. This scheme aims at timely land preparation, qualitative agricultural operation, reduced labour cost, time saving and diminishing drudgery. Besides, the farmers gain economically by hiring the power tiller and help the neighbouring farmers through custom hiring to accomplish higher production by firm mechanization.

The supply of Power tillers to SC/ST farmers has been fully achieved in Koraput and Rayagada districts in 2003-04. In 2004-05, its implementation swelled to 15 Nos in Koraput district and 20 Nos in Rayagada district meeting with full targeted expenditure of Rs 4.12 lakh and Rs 5.50 lakh respectively.

In regard to supply of power tillers, the share of Koraput and Rayagada Districts in 2003-04 was 11.11 percent as against 22.22 percent for Kalahandi and Sonapur districts.

Although, there was hike in the supply of power tillers to the tune of 50 percent for Koraput district and 100 percent for Rayagada district in 2004-05 as compared to 2003-04, other KBK districts like Kalahandi and Sonepur got more weightage. Their shares were 19.78 (Kalahandi) 32.97 percent (Sonepur) respectively as against 8.24% and 10.99% for Rayagada and Koraput district respectively.

The scheme was popular both among SC/ST farmers and non SC/ST farmers since all the cultivators are having knowledge about the scheme and availed benefits. The beneficiaries in PRA also revealed that it was cost effective.

The beneficiaries under the scheme received a subsidy component of 50 percent which encouraged to adopt the scheme. The power tillers of the beneficiary was used for 375 hours in kharif season in Kolnara Block of Rayagada district as against 450 hours in Boipariguda Block of Koraput district. The corresponding use in Rabi Season was nil and 300 hours respectively.

The scheme had covered all the income groups ranging from less than Rs 20,000 to more than Rs 50,000. All the beneficiaries in Padmapur Block, 50 percent beneficiaries in Kolnara Block of Rayagada district and 50 percent beneficiaries of Semiliguda Block in Koraput district came in the income range of below Rs 20,000. However, the beneficiaries of Boipariguda Block of Koraput district, belonged to the income group of above Rs 50,000.

APICOL is the authority to release the subsidy for the scheme. The Organisation had taken about 2 months to release the subsidy in case of 5 beneficiaries of Rayagada and Koraput districts as against 10 months to a beneficiary in Nawarangapur district and 6 to 7 months in Sonepur and Nuapada Districts. The fault lies with the sponsoring organisation by not submitting the required documents along with the application. It appears therefore that the DAOs Koraput and Rayagada had popularly processed the papers.

7. Establishment of Agro-service centres:

Establishment of Agro service centres as an apostle of agrarian reforms was installed to accelerate farm mechanisation with a view to increase agricultural productivity in KBK region. The use of machineries provided under the scheme spur the timely operation, reduced the cost of cultivation and increased the yield and income. The cost of farm implements and machinery being very high, it was not affordable for individual farmers having small size of land holdings. The unemployed private entrepreneurs had a scope under the scheme to avail subsidy upto Rs.2 lakhs. The subsidy is released by APICOL to the Financial Institution / entrepreneur after completion of the Project.

Two numbers each of Agro Service Centers were established in Koraput and Rayagada districts against 4 numbers in Rayagada and 3 numbers in Koraput district targeted during 2003-04, with an actual expenditure of Rs. 4.00 lakh in the shape of subsidy as against a target of Rs. 6.00 lakhs. The subsidy to the tune of Rs.4 lakhs was only released as against the target of Rs.6.00 lakh. However, Sonepur and Kalahandi districts outstripped 6 other districts (having 66.67 percent to 100 percent of achievement) in the number of Agro Service Centres scoring a percentage of 200 percent and 166.67 percent. In the subsequent year, 2004-05, 2 such Agro Service Centres were installed in Koraput district and 1 in Rayagada district with an actual expenditure of Rs.4.00 lakh and Rs.2.00 lakh respectively in the shape of subsidy with full achievement both from the physical and financial point of view.

All selected farmers were aware of the installation of Agro Service Centers. But, the benefit was confined to few beneficiaries as it was capital intensive and the provision of subsidy was limited to 40% of the total cost (limited to Rs. 2 lakhs).

The sample beneficiaries belonged only to the general category. None of the SC/ST farmers could avail the scheme. The average cost of installation per agro center varied from Rs.5.50 lakh to Rs.6.18 lakh. The machinery under the scheme in Kharif season was used for 150 to 240 hours in Rayagada district whereas it was 100 to 200 hours in Koraput district as against 150 to 540 hours and 50 to 200 hours in Rabi season in the respective districts.

In the ambit of Rayagada and Koraput revenue districts, 25 to 38 percent of the sample beneficiaries came under the income group to less than Rs.20,000, 50 to 70 percent of the beneficiaries came under the range of Rs.20,000 to Rs.50,000 and 10-30 percent came under the income group above Rs.50,000.

The percentage increase in the average cost of cultivation per hectare after adoption of the scheme was 1.66 percent as against 10.72 percent increase in yield in Kharif season in respect of Rayagada Block. The respective figures in Gunpur Block in the same district was 14.55 percent and 26.26 percent. Similar was the trend in Koraput district except in Kundra Block.

Four out of seven beneficiaries (57 percent) in Rayagada & Koraput districts availed the full benefit of the scheme only after 1 year 6 months followed by one beneficiary after 2 ½ years and the balance 2 beneficiaries after 9 to 10 months. This dilatory time period was attributed to procedural delay. The variation in time lag between the date of receiving application and forwarding the same to Bank varied between 28 days to 1 year. Banking Institution took a period between 2 to 9 months to sanction the scheme and loan component. At the level of APICOL, the subsidy of 7 beneficiaries in Rayagada and Koraput district was released within 2 months as against 1 to 6 months in case of other districts.

8. **Value Addition & Marketing** :

Although value addition to agricultural products fetch more income, a few cultivators (less than 12%) were aware of this process. Hence, development of awareness among the cultivators is necessary to adopt value addition process to increase the effective demand for their goods. Even if RMCs and its sub-centers do operate in these districts, the farmers did not visit these centers either due to lack of awareness or due to little marketable surplus. Hence, they fall pray to the mercy of exploitative middlemen and traders.

CHAPTER 1

INTRODUCTION AND METHODOLOGY

1.1 Introduction

Agriculture continues to be the backbone of Orissa's economy despite its continuous efforts to make the State industrially developed. But, agriculture in Orissa is characterised by low productivity mostly due to traditional cultivation practices and more so in KBK districts. To remove such backwardness and regional disparity in the State, the State Government launched the Revised Long Term Action Plan (RLTAP) in consultation and financial support of the Central Government. The basic objectives of the RLTAP are (i) drought and distress proofing (ii) poverty alleviation and development saturation and (iii) improved quality life for the local people.

To achieve the aforesaid objectives, developed strategies like (a) building rural productivity infrastructure and conservation of natural resources (b) developing programmes for income generation on sustainable basis and (c) restructuring and emergising social security system have been formulated. Since, agriculture is the main source of livelihood for the people of KBK districts, added emphasis was attached to this sector through diversification of agricultural crops, value addition and marketing etc. to promote income generation on sustainable basis.

To help in diversification of agricultural crops, value addition and marketing following programmes are being implemented in KBK districts since 1998-99, under the RLTAP namely:

- (1) Opening of Additional Sale Centers.
- (2) Seed Exchange.
- (3) Supply of Power Tillers to ST / SC farmers.
- (4) Establishment of Agro Service Centers.

The Planning Commission, National Human Rights Commission and State Level Committee for KBK districts have now desired that an evaluation study of these programmes be taken up through independent agencies to (i) assess the impact of the schemes / programmes (ii) to help implementing agencies realise better outcome / goals on the basis of the findings (iii) to bench mark the status of the programme implementing actions under various development sectors. Hence, the State Government in Planning and Co-ordination Department have decided to engage Director, State Labour Institute, Kharvelanagar, Unit - III, Bhubaneswar – 751001 to evaluate diversification of Agricultural crops, value addition and marketing-opening of Additional Sale Centers, Seed Exchange, Supply of Power Tillers to SC / ST farmers, Establishment of Agro Service Centers under the RLTAP for two KBK districts namely Rayagada and Koraput vide their letter No. 6916 / P dated the 17th May 2006 and LTAP-22/03 (P&C) the contract was signed for the purpose between the parties on 24th May 2006.

The geographical area of Rayagada district is 7073 sq. Kms comprising of two subdivisions, namely Rayagada and Gunupur presently. It is also functioning as agricultural districts. Besides, there are 4 Tahasils, 11 C.D Blocks, and 2467 inhabited revenue villages. Normal Annual rainfall of the district is 1527.0 M.M. Land utilisation pattern of Rayagada district indicates that out of total geographical are 75800 hect., 1,49,000 hectares is the net area sown and the cropping intensity is roughly 13% in 2003-04 (Orissa Agricultural Statistics 2003-04). The fertiliser consumption in the district per hecter was 30 Kg as against 39 Kg per hecter (2003-04) in the state. (**Orissa Agriculture Statistics, 2003-04**)

Similarly, the other KBK district namely Koraput has a geographical area of 880sq.kms, comprising of 2 subdivisions, namely Koraput & Jeypore, 7 Tahaslis, 14 C.D. Blocks and 1915 inhabited revenue villages. Normal rainfall in the district is 1521.8 M.M. Koraput comprises of two agricultural districts namely Koraput & Jeypore. Cropping intensity was 130% in 2003 – 04. Gross cropped area of the district was 364.40 thousand hectares. The fertilizer consumption in the district per hectare was 19 kg as against 39 kg per hecter in the State.

1.2 **Objectives of different programmes** :

1.2.1 **Diversification of Agricultural Crop** :

The scheme entailing Diversification of Agricultural Crops has been included as an integral part of increasing production and productivity of the crops grown by the cultivators. The fundamental objective of the scheme as a whole is to eradicate poverty by adopting crops with accelerated demand reaping rich harvests to achieve commercial reality.

1.2.2 **Opening of Additional Seed Sales Center** :

The salient aspects of the programme were that 10 sale centers were to be opened in each district and their sale centers were to operate for minimum four months (two months June – July in Kharif and two months in November – December in Rabi crop season). The concerned District Agriculture Officer had to locate the inaccessible pockets for opening of additional sale centers depending upon the potentiality. The GP / SCS / LAMPS or any other Government building were to be preferred for opening of additional sale centers. The DDAs / DAOs were authorised to implement the scheme. Supply of booklets on package of practice of different crops was to be made available to the farmers by DA & FP (O).

1.2.3 **Ragi Exchange Programme** :

The objectives of the Programme were to enable the tribal farmers to use high yielding varieties of Ragi seeds in lieu of the local Variety used by them, which has very low yielding capability. Certified ragi seeds were to be supplied to farmers belonging to BPL category in exchange of local varieties of ragi seeds. Local varieties of ragi collected from farmers in exchange of certified seeds should be auctioned and the sale proceeds would be deposited in appropriate Government receipt head. Each farmer would be provided with a maximum of 8 Kg seeds. With the certified ragi seeds, the yield per hectare was expected to go up from 12 Quintals per hectare to 18 Quintals per hectare.

1.2.4 **Supply of Power Tillers to S.C. & S.T. farmers** :

The objective of the programme is to popularize power tiller in KBK districts amongst S.C./S.T. farmers for increasing the production and productivity by timely land preparation, quality agricultural operation and reduction of drudgery. Beside, they can also gain economically by hiring the power tiller and help the neighbouring farmers through custom hiring. Under the scheme, in addition to the existing subsidy to 50%, an additional input of 25% subsidy from RLTA Fund has been provided.

1.2.5 Establishment of Agro Service Centres :

The objective of the programme is to assist farm mechanization in KBK region through custom hiring for improved productivity in agriculture. This is a special drive for self employment for unemployed youths. Under the scheme, the beneficiary is to be eligible to get the financial assistance @ 40% of the capital investment limited to Rs.2 lakhs.

1.2.6 Value Addition & Marketing :

Adding value to the raw produce fetch higher price in the market than the raw produce sold directly at Farm gate or store. A small amount spent for processing of agricultural goods would bring higher returns. The APICOL has been encouraging agri-enterprises for this purpose. As regard to marketing, Cooperative Department mainly the RMCs plays a vital role for marketing of agricultural products

1.3 Scope of the study and its objectives

1.3.1 **Scope** – The scope of the evaluation study, as stated earlier, is limited to two KBK districts namely Rayagada and Koraput districts. The evaluation study covers utilisation of funds, quality of projects / schemes, programmes and their impact on drought proofing, poverty alleviation and improved quality of life to the people of KBK region. The study intends to point out not only the deficiencies and shortcomings in the implementation but also provides suggestions for reforms and corrective measures to improve design and strategies of the programme.

1.3.2 Objectives

The main objectives of the evaluation study are.

- (a) To evaluate the extent to which the objectives of the programmes / schemes have been achieved.
- (b) To identify constraints faced by the implementing agencies and the extent to which the achievements were affected by the constraints;
- (c) To identify constraints faced by the beneficiaries and the extent to which the constraints affected benefits;
- (d) To ascertain special efforts if any made by the implementing agencies to avoid shortfall or accelerated achievement;
- (e) To identify the Best Practices if any in the KBK districts.
- (f) To recommend specific measure to improve outcomes / achievements of the programmes schemes.

1.4 Methodology

1.4.1 Time frame

The duration of the study has been limited to six months commencing from July to December 2006 and the time frame was designed as follows.

- | | |
|---|---------|
| (a) Pilot Study, Preparation of schedules, questionnaires & pre-testing & Training. | 15 days |
|---|---------|

(b) Collection of secondary data from State, districts and panchayat level.	01 Month
(c) Field study , survey	01 Month
(d) Editing and decoding	15 days
(e) Tabulation of programme for both primary and secondary data	15 days
(f) Documentation including mechanical tabulation and Analysis of Tables.	01 Month
(g) Preparation of Draft Report	01 Months
(h) Final Report	<u>15 Days.</u>
Total	<u>06 Months</u>

1.4.2 **Pilot Study**

Initially, a pilot study was conducted in the districts of Rayagada and Koraput on the basis of which the schedules cum questionnaires were prepared after pretesting in July 2006. This pilot study also helped to decide the strategies to frame sample design for the field study and collection of primary and secondary data from the grass root level to the State level to achieve the objectives of the study.

1.4.3 **Method of Enquiry**

Interviews of the respondents / beneficiaries were conducted through the pre-tested scheduled –cum questionnaires for both primary and secondary data. Observation method was also used to provide realistic and reliable information. Participatory rural / rapid appraisal method was adopted to reflect the views and opinion of the respondents and beneficiaries. A set of schedules prepared for collection of primary data and secondary data are given at Annexure ‘A’ and ‘B’ respectively.

1.4.4 **Sample Design**

Multistage purposive random sampling has been adopted for the study. As per this sampling procedure, the first stage was the State level follows by the district level, Block level selection of villages and finally the households at the village level at random selection in that order. To make the sample representative, following five Blocks have been selected for field study in Rayagada & Gunupur agricultural districts.

Rayagada Agricultural District

1. Rayagada
2. Kolnara

Gunupur Agricultural District

1. Gunupur
2. Ramanaguda
3. Padampur

Similarly, in Koraput revenue district the following six Blocks have been selected for sample study in Koraput & Jeypore agricultural districts.

Koraput Agricultural District

1. Similiguda
2. Bandhugaon

Jeypore Agricultural District

1. Jeypore
2. Boipariguda
3. Boriguma
4. Kundra

Scheme wise sample size has been elaborated below.

Scheme No I

Table No. – 1.1 Opening of Additional Sale Centers.

Name of the Agricultural Districts	Name of the Block	No. of villages selected	No. of respondents from each village
Rayagada	Kolnara	5 villages	10 x 5 = 50
Gunupur	Padampur	5 villages	10 x 5 = 50
	Ramanaguda	5 villages	10 x 5 = 50
Koraput	Semiliguda	5 villages	10 x 5 = 50
Jeypore	Boipariguda	5 villages	10 x 5 = 50
	Boriguma	5 villages	10 x 5 = 50

Total 30 villages

300 respondents

Scheme No II

Table No. – 1.2 Ragi Exchange Programme

Name of the Agriculture District	Name of the Block	Name of the Villages Selected	No. of beneficiaries
1	2	3	4
Rayagada	Kolnara	Theruvalli	10
		Sikarpali	10
		Halua	10
Gunpur	Padampur	Perrupanga	10
	Ramanaguda	Ramanaguda	10
Koraput	Semiliguda	Semiliguda	10
		Ghataguda	10
		Tentuliguda	10
Jeypore	Boipariguda	Boipariguda	10
		Anlabhatta	10
		Podapadar	10
	Jeypore	Pangiaguda	10
		Kalasaandi	10
		Bamaniput	10

No. of Villages 14

Respondents – 140

Scheme No. III**Table no. – 1.3 Supply of power tillers to ST/SC farmers**

Name of the Agriculture District	Name of the Block	Name of the Villages selected	No. of Beneficiaries
1	2	3	4
Rayagada	Kalnara	Durduli	10
	Rayagada	Rebatiguda	10
		Tumbiguda	10
		Penta	10
		Halua	10
Gunupur	Padampur	Purupanga	10
Koraput	Semiliguda	Majhikundli	10
Jeypore	Boipariguda	Bhattiguda	10
	Jeypore	Khairamunda	10

Total Villages – 9 Beneficiaries - 90

Scheme No. IV**Table No. – 1.4 Agro Service Centers**

Name of the Agriculture District	Name of the Block	Number of Villages selected	No. of Beneficiaries
1	2	3	4
Rayagada	Rayagada	Jingiribadi under Penta G.P – 5	50
Gunupur	Gunupur	Bhimapurguda under Titiniri G.P – 5	50
Koraput	Bandhugaon	Nilabadi G.P – 5	50
Jeypore	Kundra	Kundra G.P – 5	50

Total Villages – 20
 Total G.Ps – 4
 No. of beneficiaries – 200

Thus, under the sample survey, 11 Blocks of the Koraput & Jeypore revenue districts spreading over, 73 villages and 730 respondents were covered for collection of primary data. While selecting the beneficiaries due care has been taken to select 10 households from each village according to the size of land holdings using random number from the prepared circular systematically. Besides PRA was conducted in each selected village. Hence, an eloquent fusion of observation, interview and PRA methods were adopted to evoke prolific results and enhance trust worthiness of information & data. Blockwise sample sizes of all the schemes are depicted in Table 1.5 below.

Total sample sizes of all the schemes - Table 1.5

Revenue District	Agricultural District	Block	No. of Villages	Respondents selected in the sample	Total beneficiaries		
					Male	Female	Total
Rayagada	Rayagada	Rayagada	9	90	232	233	465
		Kolnara	9	90	253	257	510
	Gunupur	Gunupur	5	50	129	127	256
		Padampur	7	70	189	176	365
		Ramanaguda	6	60	158	154	312
Sub – Total		5	36	360	961	947	1908
Koraput	Koraput	Semiliguda	9	90	337	225	562
		Bandhugaon	5	50	287	293	513
	Jeypore	Jeypore	4	40	147	97	244
		Boipariguda	9	90	262	271	533
		Boriguma	5	50	198	112	310
		Kundra	5	50	194	119	313
Sub – Total		6	37	370	1395	1047	2475
Total	4	11	73	730	2356	1994	4383

1.4.5. Selection of Survey Investigators.

Survey Investigators with good academic background and expertise were selected for the survey and they were imparted with necessary training and feed back on the methodology from time to time. To facilitate proper survey, they were associated in the pilot study to acquaint themselves with the survey methods & concepts, besides being constantly supervised by the members of study team.

1.4.6 Collection of Secondary data.

Secondary data have been collected from the following sources during July – October, 2006.

1. Directorate of Agriculture and Food Production, Orissa, Bhubaneswar
2. The Agriculture Promotion and Investment Corporation of Orissa Ltd, Baramunda, Bhubaneswar.
3. Orissa State Seeds Corporation Ltd, Santarapur, Bhubaneswar.
4. Deputy Director Agriculture, Koraput
5. District Agriculture Office, Rayagada
6. District Agriculture Office, Gunpur
7. District Agriculture Office, Koraput
8. District Agriculture Office, Jeypore

1.4.7. The Study Team

The evaluation study was conducted by a team of experts headed by Sri Jagannath Sahani former Director, Agriculture and Food Production, Orissa. The other members of the team include Dr Prafulla Chandra Das, Director, State Labour Institute and former Joint Director (Statistics), Labour Directorate Orissa, Sri Venketeswar Patnaik, former Assistant Director (Evaluation), Planning and Co- ordination Department, Orissa.

1.5 Chapterisation

The evaluation study comprises of following nine chapters.

1. Introduction and methodology.
2. Back ground characteristics of surveyed beneficiaries.
3. Diversification of Agricultural Crops.
4. Opening of Additional Seeds Sale Centers.
5. Ragi Exchange Programme.
6. Supply of Power Tillers to ST / SC farmers.
7. Establishment of Agro Service Centers.
8. Value addition and marketing.
9. Findings and recommendation.

1.6 Limitations

The evaluation study encountered certain limitations, affecting the survey, as elucidated below;

1. **Time Frame** – Though the time frame provided for the evaluation study is considered reasonable, i.e. from July to December, the extended monsoon and frequent depression during that period has adversely affected timely collection of both primary as well as secondary data.
2. **Status of respondents** – The respondents and beneficiaries of Rayagada and Koraput district are mostly illiterate. Besides, they were not available for the survey volunteers during daytime. Hence, collection of primary data became a herculean task.
3. **Sample size** – Initially it was decided that the coverage of blocks will be limited to three blocks from each revenue districts as per the terms of evaluation. But, after the pilot study it was ascertained that with this limited coverage of Blocks all the schemes under the present evaluation cannot be covered. Hence, the sample was extended to 5 Blocks in Rayagada district and 6 Blocks in Koraput district and thus extra cost component was involved in the study along with time constraint.
4. **Communication** – The rural road network and transport system in Rayagada and Koraput districts in some pockets is dismal. Hence, difficulties were experienced both at the time of pilot study and field survey.

CHAPTER – 2

BACKGROUND CHARACTERISTICS OF SURVEYED BENEFICIARIES

Before evaluating the implementation of the RLTA schemes, certain distinguished valuable information on socio – economic profile of the surveyed households and beneficiaries in the study are discussed in this chapter. Their relevant and significant features on income, social groups, size of land holdings & percentage of area irrigated, are depicted in different sections of the chapter.

2.1 Social Groups

The social status of responding beneficiaries covered in the sample are classified into ST, SC, OBC & General categories as depicted in Table – 2.1. It is considered necessary, as both the districts are predominantly inhabited by tribals and the schemes under evaluation are mainly related to SC & ST categories of the population.

Table No. 2.1 – Percentage distribution of households according to social groups

Revenue District	Agricultural District	Block	Social groups				
			SC	ST	OBC	General	Total
Rayagada	Rayagada	Rayagada	5.56	57.40	18.52	18.52	100
		Kolnara	5.19	50.21	25.25	19.35	100
	Gunupur	Gunupur	6.45	25.92	19.26	48.37	100
		Padampur	6.25	23.48	18.29	51.98	100
		Ramanaguda	7.15	26.39	20.78	45.68	100
Sub-Total	2	5	6.12	36.68	20.42	36.78	100
Koraput	Koraput	Semiliguda	3.40	36.36	34.09	26.15	100
		Bandhugaon	3.92	40.21	36.52	19.35	100
	Jeypore	Jeypore	7.41	27.78	9.26	55.55	100
		Boipariguda	12.88	21.65	29.35	29.22	100
		Boriguma	9.58	17.53	27.62	45.27	100
		Kundra	5.50	22.56	25.68	46.26	100
Sub-Total	2	6	7.12	27.68	27.09	36.97	100
Grand Total	4	11	6.66	31.77	24.06	36.88	100

Source : - Field Study of State Labour Institute, Bhubaneswar

The ST category as depicted in the above Table reveals its percentage above the State average of 22.13 percent in all the Blocks of the two districts varying from 22 percent to 57 percent except Borigumma Block of Koraput district in which it is 18 percent being 4 percent less than State average. As regards to SC category, none of the Blocks of both the districts are at par with the State census 2001 figure of 16.53 percent but all of them are below this level. However, Boipariguda in Koraput district having 12.88 percent is closer to it. Moreover, the reserved category of all the Blocks are limited to 52 percent while that of general group is 48 percent.

2.2 Educational Status :

The percentage distribution according to the educational attainment of surveyed respondents in Koraput and Rayagada districts reveals that most of the respondents were educated. The educational status of the respondents are given below.

Table No.2.2
Educational status of respondents

Level of literacy	
Illiterate	10%
Class I to VII	20%
Class VIII to X	20%
Above Class X	20%

2.3 Family size

Family size plays a vital role in determining per capita income of the members of a family. The average family size in this study varied from 8 members in Rayagada to 9 members in Koraput. Large family size was found to be the distinguished phenomenon in these surveyed areas of both the districts.

2.4 Occupational Status

Mention may be made about the occupational status of the surveyed respondents since the schemes evaluated pertain to agricultural activities. About 80 percent of the respondents of Koraput and Rayagada districts were cultivators and 20 percent of them were though basically cultivators but had some sort of their business as secondary occupation.

2.5 Size of land holdings

While selecting the beneficiaries, care has been taken to touch all types of beneficiaries viz – marginal farmers, small farmers, middle level farmers and big landlords. The table below indicates the size of land holdings of the beneficiaries covered.

Table – 2.5 Percentage distributions of beneficiaries according to their size of land holding.

Revenue District	Agricultural District	Block	Size of land holdings (in Hectare)							
			Less than 2.5	2.5 - 5	5-10	10-15	15-20	20-25	25-30	Above 30
Rayagada	Rayagada	Rayagada	36.36	36.36	27.28	-	-	-	-	-
		Kolnara	31.20	37.50	32.20	-	-	-	-	-
		Gunupur	-	60	33.33	6.67	-	-	-	-
		Padampur	28.57	41.27	26.98	3.18	-	-	-	-
		Ramanaguda	37.50	62.50	-	-	-	-	-	-
Sub-Total	2	5	26.73	47.53	23.96	1.97	0.00	0.00	0.00	0.00
Koraput	Koraput	Semiliguda	-	33.33	43.34	10	3.33	6.37	3.33	-
		Bandhugaon	20.50	30.00	30.50	19.0	-	-	-	-
		Jeypore	15.15	60.60	21.21	3.04	-	-	-	-
		Boipariguda	8.99	55.06	26.98	4.49	1.12	1.12	1.12	1.12
		Boriguma	4.65	44.19	37.21	6.98	-	2.33	4.65	-
		Kundra	12.0	30.0	32.0	20.0	4	-	2	-
Sub-Total	2	6	10.22	42.20	31.87	10.59	1.41	1.64	1.85	0.19
Grand Total			17.73	44.62	28.27	6.67	0.71	0.89	1.01	0.10

Source : - Field Study of State Labour Institute, Bhubaneswar

The Table stated above classified the beneficiaries covered in the sample Block wise according to the size of land holdings they own. More than 90% of the beneficiaries own less than 10 hectares of land. The marginal cultivators owning 2-5 to 4 hectares of land are also more visible in the sample (44.62%) and they are more prominent in Gunupur and Ramanaguda Blocks of Rayagada district and Jeypore and Boipariguda in Koraput district. Number of landlords in the range of 15 to 30 hectares of land is also dismal.

2.6 Irrigation

Inadequate irrigation facility is the major constraint for cultivation of land. Incidentally, Rayagada and Koraput districts though have abundant resources of water for irrigation; the same were not successfully tapped fully so far. Hence, most of the lands under cultivation are rain fed. The irrigation facility for Rabi crops in these districts hardly meets the demand for second crop. The Table below provides the percentage distribution of land under irrigation both in Kharif and Rabi seasons in respect of the respondents / beneficiaries covered under the study.

Table No. – 2.6 Percentage distribution of land according to area under irrigation.

Revenue District	Agricultural District	Block	Percentage distribution of land according to irrigation in different seasons.					
			Kharif			Rabi		
			Irrigated	Un-irrigated	Total	Irrigated	Un-irrigated	Total
Rayagada	Rayagada	Rayagada	42.55	57.45	100	26.43	73.45	100
		Kolnara	44.43	55.57	100	-	100	-
	Gunupur	Gunupur	-	100	100	-	100	100
		Padampur	60.15	39.85	100	77.67	22.33	100
		Ramanaguda	-	100	100	-	100	100
Sub-Total	2	5	29.43	70.57	100	20.82	79.16	100
Koraput	Koraput	Semiliguda	0.33	99.67	100	-	100	100
		Bandhugaon	73.72	26.28	100	-	100	100
	Jeypore	Jeypore	86.20	13.80	100	26.61	73.39	100
		Boipariguda	-	100	100	24.68	75.32	100
		Boriguma	17.09	82.91	100	-	100	100
Sub-Total	2	6	30.49	69.51	100	13.00	53.67	100
Grand Total			30.01	69.99	100	16.56	83.44	100

Source : - Field Study of State Labour Institute, Bhubaneswar

The above Table transpires that, while 86.20 percent of lands of the beneficiaries covered in the sample in Jeypore Block of Koraput district were irrigated in Kharif season, a meager percentage of lands (0.33 percent) in Semiliguda Block in the same district were irrigated. The existing irrigation facilities have not covered the beneficiaries in Gunupur, Ramanaguda Blocks in Rayagada district and Bandhugaon, Boipariguda Blocks in Koraput districts. Switching the analysis to Rabi season, the position becomes still feeble when one-fourth of the sample land were irrigated in sadar Block of Rayagada district and Boipariguda, Kundra Blocks of Koraput district. Besides, the landlords taken in the sample, 3 Blocks of Rayagada district and 4 Blocks of Koraput district were deprived of irrigation facilities. Further, Padampur of Rayagada district was the only Block in which the lands covered in the

sample received irrigation facilities to the tune of 77.67 percent in Rabi season. It is therefore observed that there is intra-district disparity in irrigation of land holdings in both the districts.

2.7 Income Range

Household income is an essential ingredient of household characteristics, which emerges out of the agricultural and non-agricultural sources. Table 2.4 below exerts the percentage distribution of households according to the income range.

Table – 2.7 Percentage distributions of sample households according to their source of annual income.

Agricultural District	Block	Percentage distribution of annual income according to sources.			
		Cultivation	Trade & Business	Service	Total
Rayagada	Rayagada	74.47	1.94	23.59	100
	Kolnara	92.74	4.56	2.70	100
Gunupur	Gunupur	88.0	12.00	-	100
	Ramanaguda	60.87	3.53	35.60	100
	Padampur	72.01	1.82	26.17	100
Rayagada R-D Total		77.62	4.77	17.61	100
Koraput	Semiliguda	42.87	54.78	2.35	100
	Bandhugaon	33.49	53.93	12.58	100
Jeypore	Jeypore	70.40	15.25	14.35	100
	Boipariguda	95.20	4.66	0.14	100
	Boriguma	85.41	10.31	4328	100
	Kundra	84.37	7.02	8.61	100
Koraput R-D Total		68.62	24.33	13.55	100
Total Koraput		72.71	15.44	11.85	100

Source : - Field Study of State Labour Institute, Bhubaneswar

The households covered in the sample' mostly earn their annual income from agriculture (72.71%) excepting in Semiliguda Block (42.87%) and Bandhugaon (33.49%) both coming under Koraput Agricultural District. The respondents of these two blocks mostly earn their livelihood from trade and business, 54.78% and 53.93% respectively.

The income range of beneficiaries covered in the sample is indicated in the following table.

Table – 2.7(1) – Income range of beneficiaries surveyed.

Revenue District	Agricultural District	Block	Percentage distribution of beneficiaries according to their annual income.			
			Less than Rs.20,000	Rs. 20,000 to Rs.50, 000	Above Rs.50, 000	Total
Rayagada	Rayagada	Rayagada	41.94	48.39	9.67	100
		Kolnara	37.29	40.68	22.03	100
	Gunupur	Gunupur	43.33	40.00	16.67	100
		Padampur	78.33	16.67	5.00	100
		Ramanguda	100	0	0	100
Rayagada RD – Total			60.18	29.15	10.67	100

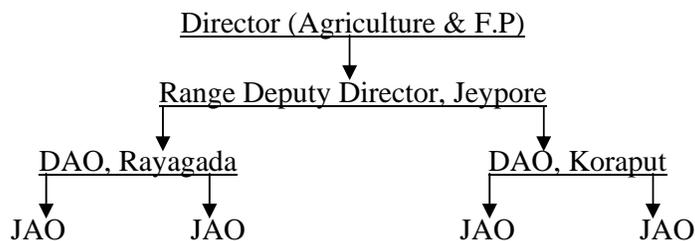
Koraput	Koraput	Semiliguda	3.23	87.09	9.67	100
		Bandhugaon	0	44.68	55.32	100
	Jeypore	Jeypore	30.30	27.28	42.42	100
		Boipariguda	48.32	41.57	10.11	100
		Bariguma	0	14.29	85.71	100
		Kundra	29.17	58.33	12.50	100
Koraput RD – Total			18.50	45.54	35.96	100
Grand Total			37.46	38.08	24.46	100

Source : - Field Study of State Labour Institute, Bhubaneswar

The Table indicates that the total beneficiaries covered in the sample are almost evenly distributed in different income groups excepting Ramanaguda and Padampur Blocks of Gunupur agricultural district; Semiliguda & Bandhugaon Blocks coming under Koraput Agricultural district; Boipariguda, Boriguma and Kundra Blocks of Jeypore agricultural district. The lower income group (Less than Rs.20, 000) is predominant in Ramanaguda, Padampur and Boipariguda Blocks. Middle-income group (Rs.20,000 to Rs.50,000) beneficiaries are more visible in Semiliguda and Kundra Blocks. Higher income group beneficiaries are most represented in Boriguma and Bandhugaon Blocks.

2.8 Implementation & Monitoring of the Programmes :

The prevailing implementation and monitoring system for both the districts of Rayagada and Koraput was no doubt sound and secured but the progress was plagued by problems like shortage of manpower limitations of unfavourable and fierce weather, weak communication facilities and budgetary constraints for POL. The organization chart pertaining to the implementation of programs and the monitoring system is briefly evinced below.



Field visits were made by the officers to assess the progress of the implemented schemes. They also created awareness explaining the prospects of the schemes through group meetings and field demonstrations with participation of cultivators. Arrangements were also made to submit progress reports from grassroot level to macro level of the Directorate of Agriculture and Food Production as per the chart indicated above. Regular review has also been made to evaluate the target and achievement.

CHAPTER – 3

DIVERSIFICATION OF AGRICULTURAL CROPS

3.1 **Introduction** : Regional disparity is unabated even though concerted and sustained efforts were made in the last six decades after independence. Spurred by the consideration to remove regional imbalances, “ Revised Long Term Action Plan” was launched from 1998-99 in KBK region to accelerate socio-economic development and extinguish mounting poverty. There are 58 schemes under RLTA covering 22 Administrative Departments. Diversification of Agricultural Crops, one of such programmes, is evaluated in this report. A genesis of Agricultural Programmes from 1998-99 to 2005-06 (8 Years) as a prelude to analysis is evinced in the form of a Table below.

Table – 3.1 – Agricultural programmes in Orissa

(Rs in Lakhs)

Department	Directorate	Programme / Scheme	ACA / SCA allocated	Reported Expenditure
Agriculture	Agriculture & FP	Diversification of Agricultural Crops	272.26	272.26
	Horticulture	Diversification of Horticulture Crops & Development of Kitchen Gardens to ensure food security.	685.72	685.61
	Soil Conservation	Watershed Development Project / Coffee Project	7932.30	7796.60
		Total Agriculture	8890.28	8754.47
		Total RLTA	119395.00	115900.30

Source: **Planning & Coordination Department.**

The amount allocated under RLTA from 1998-99 to 2005-06 for Agriculture development over a period of 8 years was around 8 percent of the total allocation under RLTA (Rs 8890.28 lakh out of 119395.00 lakh). Incidentally Rs 8890.28 allocated for Agricultural programme out of which only 3.06 percent was meant for Diversification of Agricultural Crops. This is a meager amount and needs to be augmented in future years.

Agriculture Department was interested with specific farmers oriented programmes through RLTA. The Directorate of Agriculture & Food Production took up the following programmes with a view of increasing the socio-economic status of the farmers in KBK districts.

1. Diversification of Agricultural Crops.
2. Opening of Additional Sales Centers.
3. Ragi Exchange Programme.
4. Supply of Power Tillers to SC / ST farmers.
5. Establishment of Agro – Service Centers.
6. Value addition & Marketing of agricultural products.

An attempt has been made to evaluate the benefit accrued through the above programmes in the following paragraphs.

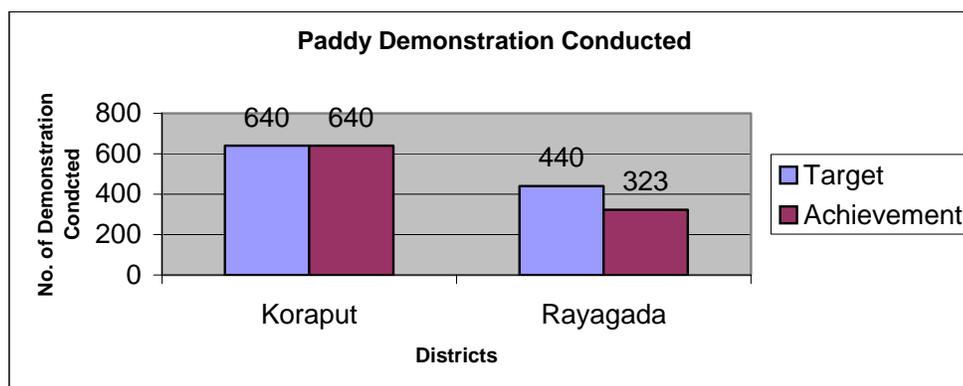
In this chapter, an attempt has been made to discuss Diversification of Agricultural Crops. The augmentation of income generation of the farmers mainly depend in increasing the area under high yielding varieties and commercial crops. Hence, diversification of paddy to non-paddy commercial crops is felt necessary to face fierce competition to maximise income from the agricultural sector since agriculture is the backbone of the State, removal of regional imbalances in cropping pattern are absolutely essential. Keeping this dictum in view, the KBK region comprising of 8 districts needed special attention. Paddy is the staple crop dominated the KBK districts covering around 60 percent of the cultivated area. Lesser importance is being given to commercial crops, either due to ignorance or very little access to inputs in traditional way of cultivation. Therefore, there is imperative need to study the constraints pertaining to the diversification of cropping to commercial and remunerative or demand-based crops.

3.2. **Demonstration before launching the scheme** : Although RLTA Programme meant for KBK districts was implemented in the year 1998-99, schemes relating to Diversification of Agricultural crops was taken up at a later date i.e. during 2001-2003. To begin with, demonstration on high yielding paddy cultivation were conducted during the year 2001-02 to wear away the farmers from traditional cropping the performance of which is evinced below in Table 3.2.

Table 3.2 - Physical target & Achievement of the Paddy Demonstrations conducted during the year 2001-02

Sl.No	District	No. of Paddy demonstrations conducted		
		Target	Achievement	Percentage of Achievement
1	2	3	4	5
1	Rayagada	440	323	73.41
2	Koraput	640	640	100.00
3	Malkangiri	200	194	97.00
4	Nawarangpur	400	400	100.00
5	Kalahandi	480	480	100.00
6	Nuapada	240	240	100.00
7	Bolangir	440	409	92.95
8	Sonepur	360	259	71.94
Total		3200	2945	92.03

Source: Directorate of Agriculture & Food Production, Orissa (DA&FP)



The above Table elicits, that against the target, approximately 92 percent of the paddy demonstrations were conducted in the year 2001-02. The achievement in case of Rayagada & Sonapur districts however, was less, when cent percent achievement was achieved in Koraput, Nawarangpur, Kalahandi & Nuapada. It is suggested their other high yielding crops like maize, kharif groundnut etc. could have also been included in the programme.

Rs.18.64 lakh was spent in the year 2001-02 for conducting 2945 nos of paddy demonstrations under RLTA, which works out to Rs.633 per demonstration. The financial aspects of paddy demonstrations conducted in the year are delineated below in Table 3.3

Table 3.3 - Financial aspects of the paddy demonstrations conducted in the year 2001-02

Sl.No	District	Expenditure incurred on paddy demonstrations (Rs in lakh)	Percentage to total
1	2	3	4
1	Rayagada	2.05	11.00
2	Koraput	4.04	21.67
3	Malkangiri	1.24	6.65
4	Nawarangpur	2.53	13.57
5	Kalahandi	3.04	16.31
6	Nuapada	1.52	8.16
7	Bolangir	2.60	13.95
8	Sonapur	1.62	8.69
Total		18.64	100.00

Source: DA & FP, Orissa.

The Table above transpires that an amount of Rs. 2.05 lakh was spent for paddy demonstrations in Rayagada district in the year 2001-02 as against its almost double the amount (Rs.4.04) lakh for Koraput district. The percentage of expenditure for Rayagada district was 11 percent to total expenditure in the KBK region under the programme where as Koraput district accounted for 21.67 percent. The basis for fixing targets could not be ascertained. Besides, an unspent balance of Rs. 1.36 lakh (Rs. 18.64 lakh spent against the sanctioned amount of Rs. 20.00 lakh) was revealed, which adversely reduced the number of such demonstrations to the tune of 117 Nos. in Rayagada district alone and 138 Nos. in other 3 districts of the region. (Table 3.2)

In 2001-02, demonstrations were conducted for other crops like Niger & Ragi. In the year 2002-03 demonstrations were conducted on mung. Besides, training programmes were taken up for awareness of the cultivators and improvement of the crops and their yield. The physical progress of the demonstrations conducted under different crops in the year 2002-03 is presented in Table 3.4

Demonstrations conducted with their financial accomplishments in 2001-02 pertaining to Paddy Crop is depicted in Table 3.3A

Table 3.3 A Physical & Financial Achievement for Paddy Crop demonstrations covered under RLTA during 2001-02.

Table 3.3 A

SL. No.	District	Paddy demonstration						Average cost per demonstration (in Rs)
		Physical (in Qtles)			Financial (in Lakh rupees)			
		Target	Achievement	Percentage of Achievement	Target	Achievement	Percentage of achievement	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Rayagada	440	323	73.41	District wise target not fixed	2.05	-	635
2	Koraput	640	640	100.00		4.01	-	626
3	Kalahandi	480	480	100.00		3.04	-	633
4	Nuapada	240	240	100.00		1.52	-	633
5	Bolangir	440	409	92.95		2.60	-	635
6	Sonepur	360	259	71.94		1.62	-	626
7	Malkangiri	200	194	97.00		1.24	-	639
8	Nawarangpur	400	400	100.00		2.53	-	633
	Total	3200	2945	92.03	20.00	18.61	93.05	632

The Table above elicits full achievement in 4 out of 8 KBK districts in respect of paddy crop demonstrations. While the achievement in Koraput district in the study area was cent percent it was 73.41 percent in Rayagada district with a shortfall of 26.59 percent. All other districts were above its accomplishment except Sonepur district. The financial achievement for KBK districts under RLTPAP with regard to paddy demonstrations was 93.05 percent. The amount has been spent as per requirement and the paddy demonstrations were conducted as per need. No specific district wise financial target was fixed for conducting paddy demonstrations.

Table -3.4 - No. of demonstrations allotted, conducted & implements supplied in the year 2002-03

Sl. No	Block	No. of demonstrations allotted					No. of demonstrations conducted				
		Niger			Ragi	Mung	Niger			Ragi	Mung
		Breeder	Foundat ion	Cert	Cert	Cert	Breeder	Foundat ion	Cert	Cert	Cert
1	2	3	4	5	6	7	8	9	10	11	12
1	Rayagada	-	-	300	-	370	-	-	300	-	370
2	Koraput	-	300	-	150	150	-	300	-	150	150
3	Malkangiri	75	-	-	200	75	75	-	-	200	75
4	Nawarangpur	-	-	75	200	100	-	-	75	200	100
5	Kalahandi	-	80	120	200	805	-	80	120	200	805
6	Nuapada	-	50	-	-	350	-	50	-	-	350
7	Bolangir	-	-	-	-	750	-	-	-	-	750
8	Sonepur	-	-	-	-	250	-	-	-	-	250
	Total	75	430	495	750	2850	75	430	495	750	2850

Source: DA & FP, Orissa

The above Table reveals that all the 4,600 crop demonstrations were conducted in the KBK region as per the target fixed in the year 2002-03. This accomplishment is praiseworthy. The target for all the districts were achieved in full but Rayagada district was deprived of

Ragi seed demonstrations in the same year although 300 Nos. of certified niger seed demonstrations and 370 Nos. of certified mung seed demonstrations were conducted whose percentages of the total demonstrations of the said crops in the region was 60.61 and 12.98 respectively.

Another important segment in demonstration for diversification of crops is to impart training to farmers in improved cultivated practices and to make them aware of improved agricultural implements, besides supplying selected agricultural implement sets. Keeping this in view, training programmes were conducted to educate the farmers about the use of implements. Implements sets were also supplied to the farmers to help them in taking up scientific cultivation for better yield and income. Table – 3.5 below asserts about the numbers of Training Programmes conducted and implement sets supplied in the year 2002-03.

Table – 3.5 - **No. of training programmes conducted and implement sets supplied in the year 2002-03**

Sl.No	Block	No. of training programmes conducted	Percentage to total	No. of implements sets supplied	Percentage to total
1	2	3	4	5	6
1	Rayagada	15	11.54	20	13.51
2	Koraput	20	15.38	20	13.51
3	Malkangiri	15	11.54	20	13.51
4	Nawarangpur	15	11.54	20	13.51
5	Kalahandi	27	20.77	30	20.28
6	Nuapada	10	7.69	10	6.76
7	Bolangir	20	15.38	20	13.51
8	Sonepur	8	6.16	8	5.31
Total		130	100.00	148	100.00

Source: DA & FP, Orissa

The above Table reveals that 148 implement sets were supplied and 130 training programmes conducted in the field. While the basis of selection of beneficiaries in supply of agricultural implements could not be explained properly by the officers concerned, it is hoped that the training in stage time & use of implements in cultivation process is well accepted by the trainees.

The financial accomplishments of the demonstrations & training conducted together with the implements supplied are reflected in Table – 3.6 below.

Demonstrations on different crops implements supplied under RLTA with financial achievements is elicited in Table 3.5A.

Table 3.5A Demonstrations conducted for different crops and implements supplied under RLTA in KBK districts in the year 2002-03 with financial achievements.

Table No. 3.5 A

Sl. No	District	No. of demonstrations									
		Niger (Breeder)		Niger (Foundation)		Niger (Qnt)		Ragi (Qnt)		Mung (Qnt)	
		Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
01	02	03	04	05	06	07	08	09	10	11	12
1	Rayagada	-	-	-	-	300	300	-	-	370	370
2	Koraput	-	-	300	300	-	-	150	150	300	300
3	Kalahandi	-	-	80	80	120	120	200	200	805	805
4	Nuapada	-	-	50	50	-	-	-	-	350	350
5	Bolangir	-	-	-	-	-	-	-	-	750	750
6	Sonepur	-	-	-	-	-	-	-	-	250	250
7	Malkangiri	75	75	-	-	-	-	200	200	75	75
8	Nawarangpur	-	-	-	-	75	75	200	200	100	100
	Total	75	75	430	430	495	495	750	750	3000	3000

Sl. No.	District	Financial Achievement (Rs)	Implement Sets (Nos)		Financial Achievement		Total expenditure
			Distributed	Training conducted	Implement sets	Trg conducted	
01	02	13	14	15	16	17	18
1	Rayagada	48,375	20	15	9,69,851	7,500	10,25,726
2	Koraput	1,64,110	20	20	9,71,126	10,000	11,45,236
3	Kalahandi	3,17,095	30	27	14,67,750	13,500	17,98,345
4	Nuapada	1,21,250	10	10	4,87,436	5,000	6,13,686
5	Bolangir	2,42,250	20	10	9,77,453	10,000	12,29,703
6	Sonepur	80,750	8	8	3,78,967	4,000	4,63,717
7	Malkangiri	62,125	20	15	9,78,500	7,500	10,48,125
8	Nawarangpur	1,65,410	20	15	9,74,552	7,500	11,47,462
	Total	12,01,365	148	130	72,05,635	65,000	84,72,000

The above Table transpires that demonstrations on Niger Crop was covered in 6 districts including Rayagada and Koraput districts and Ragi in 4 districts including only Koraput district covered in study, while the demonstrations on Mung Crop was covered all the districts. The demonstrations were conducted as per the requirement and effective demand from the field. Further, whatever amount received from Government was spent in total on the demonstrations of different Crops.

Table – 3.6 - No. of demonstrations and training conducted, implement sets supplied along with expenditure accomplished in the year 2002-03.

Sl. No	Block	Demonstrations conducted			Training conducted			Implement sets supplied			Total Expenditure (Rs)
		Total (Nos)	Exp incurred	Exp per demon (Rs)	Total (Nos)	Exp incurred (Rs)	Exp per Trg (Rs)	Total (Nos)	Exp incurred (Rs)	Exp on implements set (Rs)	
1	2	3	4	5	6	7	8	9	10	11	12
1	Rayagada	670	48,375	72.20	15	7,500	500	20	9,69,851	48,493	10,25,726
2	Koraput	750	1,64,110	218.81	20	10,000	500	20	9,71,126	48,556	11,45,236
3	Malkangiri	350	62,125	177.50	15	7,500	500	20	9,78,500	48,925	10,48,125
4	Nawarangpur	375	1,65,410	441.09	15	7,500	500	20	9,74,552	48,728	11,47,462
5	Kalahandi	1205	3,17,095	263.15	27	13,500	500	30	14,67,750	48,925	17,98,345
6	Nuapada	400	1,21,250	303.13	10	5,000	500	10	4,87,436	48,744	6,13,686
7	Bolangir	750	2,42,250	323.00	20	10,000	500	20	9,77,453	48,873	12,29,703
8	Sonepur	250	80,750	323.00	8	4,000	500	8	3,78,967	47,371	4,63,717
Total		4750	12,01,365	252.92	130	65,000	500	148	72,05,635	548,687	84,72,000

Source: DA & FP, Orissa

The above Table depicts that a sum of Rs. 84.72 lakh was spent on account of demonstrations, training and implement sets supplied in the KBK districts. The share of Rayagada district was 10.26 lakh and of Koraput district was Rs. 11.45 lakh.

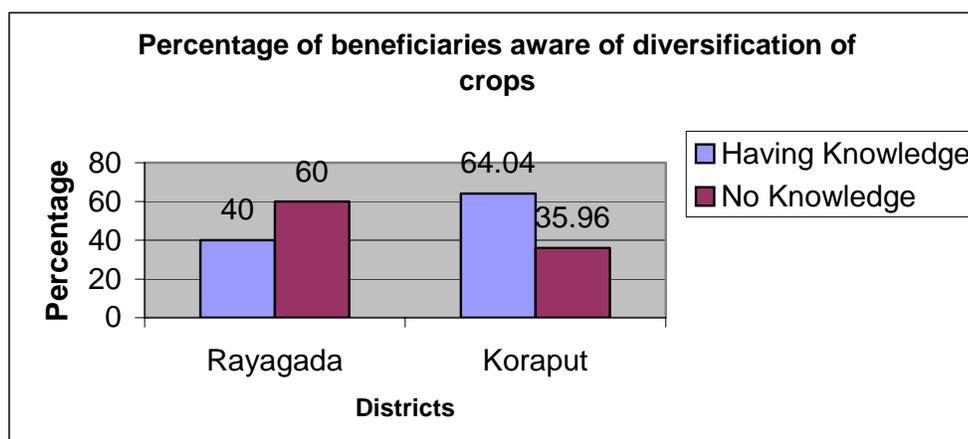
Analysis of different components, relating to demonstration, training and supply of implements revealed the following picture. The total expenditure for supply of implement sets was Rs. 72.06 lakh out of which the allotment for Rayagada and Koraput districts were Rs. 9.70 lakh and Rs. 9.71 lakh, respectively, which accounted for 13.46 percent and 13.47 percent respectively, but less than Kalahandi district. It was followed by Rs.12.01 lakh pertaining to the component of demonstration. Only Rs.48, 375 was spent for Rayagada district scoring the lowest position among all the 8 districts of KBK region. So, far as the training component was concerned, the total expenditure for the year was Rs.65,000/- out of which Rs.7,500/- was spent for Rayagada district, which was dismal.

3.3 Awareness on Diversification of Crops : The reports and views of beneficiaries were recorded on diversification of crops. Table 3.7 below unveils the percentage of beneficiaries having knowledge on diversification of crops.

Table – 3.7 – Percentage of beneficiaries aware of diversification of crops

Revenue District	Agriculture District	Block	Percentage of beneficiaries		Total
			Having Knowledge	No Knowledge	
Rayagada		Rayagada	34.29	65.71	100
		Kolnara	55.56	44.44	100
		Gunpur	40.00	60.00	100
		Ramanaguda	27.27	72.73	100
		Padampur	42.86	57.14	100
Rayagada		5 Blocks	40.00	60.00	100
	Koraput	Semiliguda	84.00	16.00	100
		Bandhugaon	97.82	2.18	100
	Jeypore	Jeypore	30.30	69.70	100
		Kundra	84.00	16.00	100
		Boriguma	11.90	88.10	100
		Baipariguda	76.23	23.77	100
Koraput		6 Blocks	64.04	35.96	100
	G. Total	11 Blocks	53.11	46.89	100

Source : - Field Study of State Labour Institute, Bhubaneswar



The Table spelt out that about 40 percent of beneficiaries in Rayagada district and 64.00 percent in Koraput district were aware of diversification of crops. While making intra-district comparisons, it was found that 55.56 percent of the beneficiaries in Kolnara Block of Rayagada district and 97.82 percent of beneficiaries in Bandhugaon Block of Koraput district acquired knowledge on diversification of crops. A low percentage of 27.27 percent of beneficiaries in Ramanaguda Block and 11.90 percent in Borigumma Block acquired knowledge on diversification of crops. Besides, 4 out of 5 Blocks (80 Percent) in Rayagada district and 2 out of 6 Blocks (33.33 percent) in Koraput district had beneficiaries with knowledge of diversification of crops.

3.4 **Diversification of Crops** : Information was collected from those beneficiaries who had already diversified their crops. It was 40 percent in Rayagada district and 64 percent in Koraput district, out of the total number of selected beneficiaries contacted. Table 3.8 elicits the average area already diversified out of the average land holdings of the beneficiaries.

Table 3.8 Average land holdings of the beneficiaries under diversified Crops

Revenue District	Agriculture District	Block	Crop	Variety	Total average Land holdings (Hector)	Total average area to be diversified (Hector)	Percentage under diversification
Rayagada	Rayagada	Rayagada	Local Paddy to paddy	High yielding	.8	.8	100
			Ragi to Arhar	High yielding	.8	.8	100
		Kolnara	Local Paddy to cotton	High yielding	2.14	1.24	579
			Cotton to Arhar	High yielding	1	.8	80
			Arhar to cotton	High yielding	1.49	.48	32.4
		Gunpur	Arhar to cotton	High yielding	2.1	1.2	-
		Ramanaguda	Paddy to sunflower	High yielding	1.2	1.2	100
			Paddy to cotton	High yielding	1.6	1.6	100
			Cotton to paddy	High yielding	2.08	2.08	100
		Padampur	Til to sunflower	High yielding	1.44	1.44	100
Rayagada		5 Blocks			1.47	1.16	82.74
Koraput	Koraput	Semiliguda	Paddy to Alasi	High yielding	2.51	1.75	69.5
			Paddy to sugarcane	High yielding	1.84	1.81	100
			Ragi to sugarcane	High yielding	1.07	1.07	100
			Paddy to vegetable	High yielding	1.2	1.2	100
			Paddy to Mustard	High yielding	2.9	2.1	72.4
		Bandhugaon	Paddy to paddy	High Yielding	1.41	1.41	100
			Cotton to paddy	High Yielding	1.2	1.2	100
			Bajara to paddy	High Yielding	.62	.62	100
	Jeypore	Jeypore	Sugarcane to paddy	High Yielding	.53	.53	100
		Kundra	Paddy to wheat	High yielding	1.2	1.2	100
			Paddy to vegetable	High yielding	1.68	.56	33.33
			Paddy to green gram	High yielding	1.4	1.4	100
			Paddy to ragi	High yielding	2.4	2.4	100
		Boriguma	Sugarcane to sugarcane	High yielding	72	72	100
			Paddy to sugarcane	High yielding	0.4	0.4	100
		Baipariguda	Ragi to paddy	High yielding	0.41	0.39	95
			Nizer to paddy	High yielding	0.5	0.5	100
			Vegetable to paddy	High yielding	.4	.4	100
			Nizer to paddy	High yielding	.6	.6	100
			Paddy to paddy	High yielding	1.2	1.2	100
			Ragi to Arhar	High yielding	.32	.32	100
			Ragi to Cotton	High yielding	.8	.8	100
Koraput		6 Blocks			1.49	1.36	93.82
Grand Total					1.48	1.30	90.25

Source : - Field Study of State Labour Institute, Bhubaneswar

Table – 3.8 depicts that all the beneficiaries having knowledge on the benefits for diversification of crops both in Rayagada and Koraput districts have adopted high yielding varieties of different crops in place of local varieties. So far as Rayagada district is

concerned, all the land holdings in Rayagada, Kolnara and Ramanaguda Blocks of Rayagada district was reported to have switched over from local variety to high yielding varieties. Similarly, the concerned beneficiaries in the same district, have diverted all of their land holdings in the pattern of Ragi to Arhar (Kandul), paddy to sunflower, cotton to high yielding paddy and til to sunflower. Beneficiaries of Kolnara & Gunupur Blocks of Rayagada district have largely diverted for local to high yielding variety of paddy and that of the Padampur Block have switched over from til to sunflower, Rayagada Sadar Block concentrated on 5 different combinations followed by Ramanaguda with 3 such pattern of combinations.

In Koraput district, the emphasis was on local paddy to high yielding variety in Bandhugaon & Boipariguda Blocks. Beneficiaries of Semiliguda & Kundra Blocks have switched over from paddy to 4 non-paddy combinations for diversification of crops. The beneficiaries in Rayagada district have taken up seven different combinations of diversification of crops, where as, in Koraput district the beneficiaries have adopted 18 numbers of diversified cropping combinations. Finally more than 70 percent of the land holdings of the beneficiaries in Koraput district was diverted from local variety to cash / demand prone crops except 33.33 percent in Kundra Block from paddy to vegetable combination.

Table 3.9 below delineates the average area proposed by the beneficiaries to be diversified for High Yielding / Cash / demand prone crops.

Table 3.9 **Average area of beneficiaries proposed to be diversified for high yielding / cash crops.**

Revenue District	Agriculture District	Block	Crop	Variety	Total average land holdings (Hectare)	Total average area proposed to be diversified	Percentage of proposed diversification
	Rayagada	Rayagada	Cotton to ragi	High yielding	1.81	1.25	69.06
			Ragi to Kandul	High yielding	3.4	3.4	100
			Groundnut to ragi	High yielding	1.4	1.4	100
		Kolnara	Cotton to gram	High yielding	.8	.6	75
			Ragi to paddy	High yielding	.8	.8	100
			Vegetable to paddy	High yielding	.4	.4	100
			Groundnut to paddy	High yielding	.8	.8	100
		Gunpur	Cotton to gram	High yielding	3.4	3.4	100
		Ramnaguda	Ragi to paddy	High yielding	.4	.4	100
		Padmapur	Vegetable to paddy	High yielding	1.37	1.37	100
	Rayagada	5 Blocks			1.46	1.38	94.41
	Koraput	Semiliguda	Paddy to Paddy	High yielding	1.2	1.2	100
		Bandhugaon	Paddy to paddy	High yielding	1.37	1.37	100
			Paddy to cotton	High yielding	1.8	1.24	57.7
			Paddy to Bajara	High yielding	.85	.55	100
	Jeypore	Jeypore	Sugarcane	High yielding	.8	.8	100
			Paddy to Sugarcane	High yielding	2.32	1.84	79.3
		Kundra	Paddy to Sugarcane	High yielding	1.98	1.78	90
			Paddy to Vegetable	High yielding	.95	.95	100
			Paddy to pulses	High yielding	3.6	3.6	100
			Paddy to wheat	High yielding	.6	.6	100
		Boriguma	Sugarcane	High yielding	.4	.4	100

	Boipariguda	Paddy to Sugarcane	High yielding	1.82	1.77	97
		Paddy to Groundnut	High yielding	.2	.2	100
		Cotton to Ragi	High yielding	.4	.4	100
		Ragi to paddy	High yielding	.8	.8	.8
Koraput	6 Blocks			1.33	1.23	92.48

Source : - Field Study of State Labour Institute, Bhubaneswar

The Table 3.9 exhibits the proposed diversification of crops from the existing ones. More than 90 percent of the average area was proposed to be diversified in both Rayagada & Koraput districts. All the beneficiaries of 11 Blocks proposed to adopt high yielding varieties of crops for diversification. Besides, the beneficiaries in 3 out of 5 Blocks (60 percent) of Rayagada district and 2 out of 6 Blocks (33.33 percent) in Koraput district have preferred to diversify from local to high yielding paddy crop. The beneficiaries in 4 out of 6 (66.66 percent) Blocks of Koraput district have opined to switch over from local paddy to non-paddy high yielding crops. It is further revealed that the highest average size of land holding of 3.6 hectares was proposed to be diversified from paddy to pulses in Kundra Block under Koraput district. In Rayagada district, some beneficiaries of Rayagada Sadar Block proposed to divert from ragi to high yielding arhar.

Yield before and after diversification of crops

The diversification of crops together with farm mechanisation including the supply of power tillers surged up the yield of different crops after its introduction which was far above the yield before its introduction. Its remarkable changes was found to be sustainable and rewarding. A comparative Table indicating the changes of yield before and after diversification of crops and supply of power tillers is elicited in the Table below.

Table No. 3.10 A comparison of different crops grown before and after diversification of crops and supply of power tillers.

Sl. No.	Name of the crop	Yield of crops in Qtls./ha					
		Rayagada District			Koraput District		
		Yield before diversification	Yield after diversification	Percentage increase	Yield before diversification	Yield after diversification	Percentage increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
01	Paddy	21	44	109.52	18	36	100.00
02	Green Gram	140	300	114.29	100	250	150.00
03	Black Gram	200	250	25.00	180	230	27.78
04	Til	200	280	40.00	150	200	33.33
05	Ground Nut	800	1600	100.00	600	1200	100.00
06	Mustard	150	200	33.33	100	150	50.00
07	Patato	95	120	26.32	75	110	46.67

Source : Field Study of State Labour Institute, Bhubaneswar

The above table depicts that the yield of paddy, green gram, ground nut crops in respect of both Rayagada and Koraput is doubled after the introduction of diversification of crops and power tillers as compared to its preceding period. The yield of all other crops, like Black gram, til, mustard and potato in case of both Rayagada and Koraput districts, is less than 50

percent. Hence, the implementation of diversification of crops and power tillers heaved up the yield rate of crops to a new excess height.

Income generation before and after diversification of crops :

As per the data collected from grass root level in both the districts of Rayagada and Koraput districts, there was exorbitant rise in income generation after diversification of crops as compared to its preceding period. The farmers in whopping numbers gained economically by hiring the power tillers. A table containing the details of income generated by the farmers before and after implementation of diversification of crops and supply of power tillers is depicted in the form of table below .

Table No. 3.11 A comparative table indicating the generation of annual income of the farmers before and after the diversification of income and use of power tillers.

Sl. No.	Revenue District	Agricultural district	Block	Average income per beneficiary before diversification of crops and use of power tillers (in Rs.)	Average income per beneficiary after diversification of crops & use of power tillers (in Rs.)
01	Rayagada	Rayagada	Rayagada	5,820	29,100
		Gunupur	Gunupur	6,112	30,560
02	Koraput	Koraput	Bandhugan	7,215	28,860
		Jeypore	Kundra	8,420	33,680

The above table transpires that the farmer in both the districts of Rayagada and Koraput earned on an average of Rs.30,000 to Rs.33,000 which is 4 to 5 times more than the returns before the diversification of crops and use of power tillers. While the earnings of cultivators in Gunupur Block.

CHAPTER - 4

OPENING OF ADDITIONAL SEEDS SALE CENTERS

4.1 **Introduction:** Seeds sale centers play a conspicuous role to supply Qualitative Certified Seeds to the farmers to facilitate them to increase the yield and income with this vital input. These sale centers are mainly located in Blocks from which the nearby farmers procure seeds. These centers however does not cover the inaccessible areas and far away places. Therefore, arrangements were made to open additional seed sales centers in inaccessible pockets of the KBK districts enabling the farmers to use Qualitative Certified Seeds to improve the yield of crops and generate more income. They need not trek miles together to fetch these seeds if it is available at their doorsteps. There was also a proposal to open such seed sales centers at Grampanchayat level.

The salient aspects of the programme were that 10 sale centers were to be opened in each district and their sale centers were to operate for minimum four months (two months June – July in Kharif and two months in November – December in Rabi crop season). The concerned District Agriculture Officer had to locate the inaccessible pockets for opening of additional sale centers depending upon the potentiality. The GP / SCS / LAMPS or any other Government building were to be preferred for opening of additional sale centers. The DDAs / DAOs were authorised to implement the scheme. Supply of booklets on package of practice of different crops was to be made available to the farmers by DA & FP (O).

4.2 **Achievement under the scheme :** It is astonishing to note that, in spite of spruced planning, the scheme was implemented in 4 out of 8 KBK districts only in the year 2003 – 04. It could not be implemented in other 4 districts, viz., Rayagada, Koraput, Malkangiri & Nawarangpur. Although, target was fixed for the scheme in the subsequent year 2004 – 05, the additional seed sale centers were not opened in the above-mentioned districts of Rayagada, Koraput, Malkangiri and Nawarangpur. The reasons for not opening additional seed sales center as reported by Director, Agriculture & Food Production, Orissa was shortage of staff at grass root level. This was intimated by Deputy Director of Agriculture, Koraput Range, and Jeypore. The whole picture of opening Additional Seed Sales Centers for two years 2003 – 04 & 2004 – 05 is depicted below in Table – 4.1

Table – 4.1 – **Target & Achievements under the Programme – opening of Additional Seed Sales Centers.**

Sl. No	District	2003 – 04				2004 – 05			
		Physical (Nos)		Financial (Rs Lakh)		Physical (Nos)		Financial (Rs Lakh)	
		Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
1	2	3	4	5	6	7	8	9	10
1	Rayagada	-	-	-	-	10	-	1.00	-
2	Koraput	-	-	-	-	10	-	1.00	-
3	Malkangiri	-	-	-	-	10	-	1.00	-
4	Nawarangpur	-	-	-	-	10	-	1.00	-
5	Kalahandi	6	6	0.60	0.60	10	10	1.00	1.00
6	Nuapada	6	6	0.60	0.60	10	10	1.00	1.00
7	Bolangir	4	4	0.40	0.40	10	10	1.00	1.00
8	Sonepur	2	2	0.20	0.20	10	10	1.00	1.00
Total		18	18	1.80	1.80	80	40	8.00	4.00

Source : Directorate of Agriculture & Food Production, Orissa

The Table above exhibits that opening of Additional Seed Sales Centers was possible in Kalahandi, Nuapada, Bolangir & Sonepur districts, but it could not be implemented in Rayagada, Koraput, Malkangiri & Nawarangpur districts for shortage of staff. The physical and financial achievements as envisaged from the Table witnessed 50 percent fulfillment of the target in the year 2004 – 05 simply because there was no expenditure in four districts for not opening the additional seed sale centers.

While plans are afoot to open Seed Centres at Gram Panchayat level, the Deputy Director, Agriculture, Koraput range has taken a superficial view and avoided to implement the scheme due to shortage of staff. While accepting the proposal, the Director, Agriculture and Food Production, Orissa would have asked the Deputy Director, Koraput range that when the scheme was successfully implemented in other KBK districts without any additional staff, why this was not feasible in his region. When the other four district of KBK region achieved the target and spent the amount for both the years of 2003-04 & 2004-05 the other four districts were deprived of the facility by not opening additional seed sale centers in interior pockets. The cultivators of these districts could not reap the benefits designed for the scheme, as they could not see its light. It thus created an intra-regional disparity among the KBK districts which should not be encouraged in future. The clarification of Director Agriculture and Food Production is given at Annexure 'C'.

CHAPTER – 5
RAGI EXCHANGE PROGRAMME

5.1 Introduction :

Ragi plays a very important part in the food habits of tribals as well as non-tribals in some pockets of the Southern part of the State. It is quite popular among rural people especially with tribal population. But the farmers in the KBK region use only locally available ragi seeds for cultivation, which results in very low yield. Hence, to keep up the prevalent food habits and simultaneously to boost production in drought prone areas, Ragi Exchange Programme was introduced under the RLAP scheme.

The objectives of the Programme were to enable the tribal farmers to use high yielding varieties of Ragi seeds in lieu of the local Variety used by them, which has very low yielding capability. Certified ragi seeds were to be supplied to farmers belonging to BPL category in exchange of local varieties of ragi seeds. Local varieties of ragi collected from farmers in exchange of certified seeds should be auctioned and the sale proceeds would be deposited in appropriate Government receipt head. Each farmer would be provided with a maximum of 8 Kg seeds. With the certified ragi seeds, the yield per hectare was expected to go up from 12 Quintals per hectare to 18 Quintals per hectare.

Selection of farmers for exchange of local variety of Ragi with HYV of Ragi was to be done by the DAOs. After exchange of variety, suitable package of practices for the variety to be provided to the farmers. The Programme was to be monitored by the Deputy Directors of Agriculture concerned. The Deputy Director of Agriculture, Koraput region was to monitor the programme in both Rayagada & Koraput districts. The funds would be provided to the DDA / DAOs after getting the seed subsidy bills and beneficiary list.

5.2 Implementation of Ragi Seed Exchange Programme.

Although the RLAP was implemented in 1998 – 99 Ragi Exchange Programme was executed only for two years namely 2003–04 and 2004–05 and the reason for non-implementation of the scheme in earlier years was not available. The physical target and achievement of the scheme during the period 2003–05 is given in Table 5.1.

Table 5.1 – Physical target & achievement on Ragi Exchange Programme in KBK region for the period 2003 – 05

Sl. No	District	2003 – 04			2004 – 05		
		Target (in Qtls)	Achievement (in Qtls)	Percentage of achievement	Target (in Qtls)	Achievement (in Qtls)	Percentage of achievement
1	2	3	4	5	6	7	8
1	Rayagada	50	46.47	93.33	110	110	100.00
2	Koraput	200	60.84	30.42	210	210	100.00
3	Malkangiri	40	38.33	95.83	70	70	100.00
4	Nawarangpur	40	38.67	79.17	92.50	92.50	100.00
5	Kalahandi	105	100.83	96.03	150.00	150.00	100.00
6	Nuapada	-	-	-	60.00	60.00	100.00
7	Bolangir	-	-	-	60.00	60.00	100.00
8	Sonepur	-	-	-	60.00	60.00	100.00
Total		435	278.31	63.98	812.50	812.50	100.00

Source : Directorate of Agriculture & Food Production, Orissa

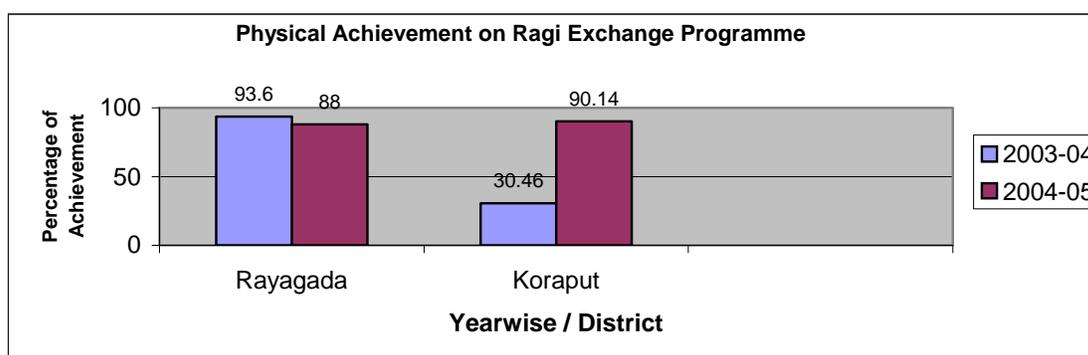
The above table reveals that the target for the year 2004-05 under Ragi Seed Exchange Programme for the districts Rayagada and Koraput achieved in full. The respective percentage for the preceding year was 93.33 and 30.42 respectively. Around one-third of the target meant for Koraput district was achieved in the year 2003 – 04. The Table also reveals about increased demand for Ragi seed exchange in all the Blocks as is reflected from the achievements in all the Blocks in the year 2004-2005, as compared to its preceding year.

Considering the achievements, it is suggested that the programme be continued in districts like Rayagada, Koraput, Malkangiri and Nawarangpur having more than 50 percent ST population who can be benefited from this programme by exchanging local seeds with high yielding Ragi seeds keeping in view their food habits. Hence, there has imperative need to continue this Ragi seed exchange programme. It is strange to note, there was no provision for this scheme from 2005 – 06 onwards. The Table 5.2 below reveals the financial aspect.

Table – 5.2 Financial Target and Achievement for Ragi Exchange Programme for the period 2003–05.

SL No.	District	2003 – 04			2004 – 05		
		Target (Rs.Lakh)	Amount Spent (Rs.Lakh)	Percentage of Achievement	Target (Rs.Lakh)	Amount Spent (Rs.Lakh)	Percentage of Achievement
01	02	03	04	05	06	07	08
1	Rayagada	0.60	0.56	93.33	1.32	1.32	100.00
2	Koraput	2.40	0.73	30.42	2.52	2.52	100.00
3	Malkangiri	0.48	0.46	95.83	0.84	0.84	100.00
4	Nawarangpur	0.48	0.38	79.17	1.11	1.11	100.00
5	Kalahandi	1.26	1.21	96.03	1.80	1.80	100.00
6	Nuapada	-	-	-	0.72	0.72	100.00
7	Bolangir	-	-	-	0.72	0.72	100.00
8	Sonepur	-	-	-	0.72	0.72	100.00
Total		5.22	3.34	63.98	9.75	9.75	100.00

Source : Directorate of Agriculture & Food Production



The financial achievement in the year 2003 – 04 as depicted in the above Table gives a similar trend like that of physical progress. Further, there was full financial achievement in the year 2004 – 05 indicating the scope for continece of the programme.

5.3 Seed Exchange Programme at the District level.

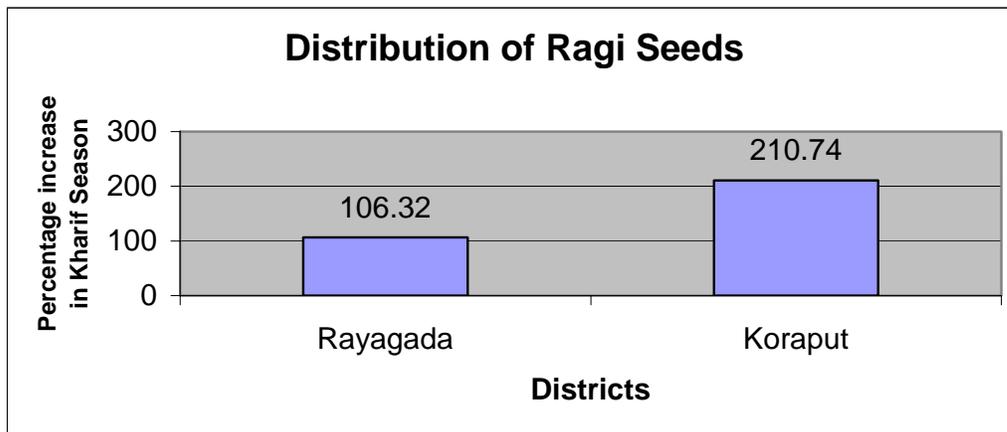
Orissa State Seeds Corporation supplies certified seeds to the Deputy Directors of Agriculture Ranges, as per the indent placed by the Director, Agriculture and Food Production, Orissa. Deputy Directors of Agriculture arrange to distribute the seeds through the seed centers in the districts under his jurisdiction.

The Table below depicts the distribution of seeds for increasing productivity in ragi in KBK districts, the information of which was collected from the respective District Agricultural Offices.

Table – 5.3 Distribution of Ragi seeds under Seed Exchange Programme.

Revenue Village	District Agriculture Office	Block	Quantity of Ragi Seeds Distribution (in Qtl)					
			Kharif			Rabi		
			2003-04	2004-05	Percentage increase	2003-04	2004-05	Percentage increase
1	2	3	4	5	6	7	8	9
Rayagada	Rayagada DAO	Rayagada	4.40	6.32	43.64	-	-	-
		Kolnara	3.60	6.00	66.67	-	-	-
		K.Singhpur	3.20	6.00	87.50	-	-	-
		Kashipur	4.80	6.00	25.00	-	-	-
		Sub-Total	16.00	24.32	52.00	-	-	-
	Gunupur DAO	Gunupur	4.40	10.28	133.64	-	-	-
		Padampur	4.40	10.28	133.64	-	-	-
		Ramanaguda	4.40	10.28	133.64	-	-	-
		Gudari	4.40	10.28	133.64	-	-	-
		B.Cuttack	4.40	10.32	134.55	-	-	-
		Muniguda	4.40	10.32	134.55	-	-	-
		Chandrapur	4.40	10.48	138.18	-	-	-
		Sub-Total	30.80	72.24	134.55	-	-	-
Total Rayagada District			46.80	96.56	106.32	-	-	-
Koraput	Koraput DAO	Koraput	6.40	15.48	141.88	-	-	-
		Semiliguda	7.00	15.60	122.86	-	-	-
		Dasmantpur	5.20	12.40	138.46	-	-	-
		Nandapur	5.00	14.00	180.00	-	-	-
		Lamptapur	5.88	13.70	132.99	-	-	-
		Pottangi	5.00	14.00	180.00	-	-	-
		Narayanapatna	5.12	7.40	44.53	-	-	-
		Laxmipur	5.20	14.80	184.62	-	-	-
		Bandhugaon	4.68	7.20	53.85	-	-	-
		Sub-Total	49.48	114.58	131.57	-	-	-
	Jeypore DAO	Jeypore	2.00	12.00	500.00	-	-	-
		Boriguma	3.20	14.00	337.50	-	-	-
		Kotpad	4.00	15.40	285.00	-	-	-
		Boipariguda	0.80	18.40	2200.00	-	-	-
		Kundra	1.44	14.92	936.11	-	-	-
		Sub-Total	11.44	74.72	553.15	-	-	-
Total Koraput District			60.92	189.30	210.74			

Source : District Agriculture Officers, Rayagada & Koraput



As ascertained from the concerned District Agricultural offices, the entire quantity of local ragi seeds were exchanged with High Yielding ragi seeds in Kharif season leaving no balance.

The beneficiaries under the scheme, when personally contacted opined for continuance of the programme.

The focus group discussions in four groups in PRA conducted in different villages revealed that local variety of Ragi seeds were not acceptable to the cultivators since seeds of High yielding variety yield thrice the production than that of local variety. It was strongly opined for the continuance of the Ragi exchange programme. The villagers further expressed that only half of the Ragi cultivators have been covered under the Ragi exchange programme and the balance half in the interior parts of the district were not covered under the scheme. Opening of Additional seed sale centers in interior pockets of these districts would be of great help in making available quality seeds in adjacent places and the cultivators need not trek miles to fetch the seeds. Further the cultivator learnt about HYV ragi cultivation through demonstrations conducted for HYV ragi crops and such demonstrations should be multiplied in interior areas, farmer urged.

CHAPTER – 6
SUPPLY OF POWER TILLERS TO SC AND ST FARMERS

6.1 **Introduction** : The Supply of Power Tillers to SC / ST Farmers through RLTA is aimed at increasing agricultural productivity in the tribal and backward areas of the KBK region. The use of Power Tillers is essentially for better and timely land preparation, intensification of other agricultural operations, which, besides being very effective, help in reducing the labour cost & save considerable time. Also, the beneficiaries get additional income through custom hiring. The scheme has been successfully accepted by the farmers of KBK districts.

6.2 **Implementation of the scheme in KBK region** : In this context, it is relevant here that through RLTA was launched in 1998-99, this scheme was actually implemented during the years 2003-04 and 2004-05. The physical achievements with financial implications are given in table below;

Table 6.1 – Physical & Financial aspects pertaining to the supply of Power Tillers to SC and ST Farmers

SL. No	District	2003 – 04				2004 – 05			
		Physical (Nos)		Financial (Rs. Lakh)		Physical (Nos)		Financial (Rs. Lakh)	
		Target	Achievement	Provision	Amount spent	Target	Achievement	Provision	Amount spent
1	2	3	4	5	6	7	8	9	10
1	Rayagada	10	10	2.65	2.65	20	20	5.50	5.50
2	Koraput	10	10	2.65	2.65	15	15	4.12	4.12
3	Malkangiri	10	10	2.65	2.65	10	10	2.75	2.75
4	Nawarangpur	9	9	2.39	2.39	21	21	5.77	5.77
5	Kalahandi	12	20	3.18	5.30	36	36	9.90	9.90
6	Nuapada	13	4	3.45	1.06	10	10	2.75	2.75
7	Bolangir	6	7	1.59	1.86	10	10	2.75	2.75
8	Sonepur	20	20	5.30	5.30	60	60	16.50	16.50
Total		90	90	23.86	23.86	182	182	50.04	50.04

Source : Directorate of Agriculture & Food Production

The above Table elicits that the target for supply of Power Tillers to SC / ST farmers, has been fully achieved in Koraput and Rayagada districts in 2003-04. It is also revealed that in the following year i.e. 2004-05, a higher target was also achieved, which amply exhibit the popular acceptance of this programme among SC / ST farmers.

Unfortunately, Koraput and Rayagada districts are given less weightage in supply of power tillers to SC / ST farmers as compared to Kalahandi and Sonepur districts. Infact in distribution of power tillers; the share of Koraput and Rayagada districts in 2003-04 was 11.11 percent as against 22.22 percent both for Kalahandi and Sonepur districts. Similarly, in 2004-05, though there was a hike in the supply of power tillers to the tune of 50 percent for Koraput and 100 percent for Rayagada as compared to 2003-04, the share in intra-KBK region of these districts was 8.24 percent and 10.99 percent respectively as against 19.78 percent for Kalahandi and 32.97 percent for Sonepur districts. This aspect needs to be looked into in future years to ensure uniform availability of Government assistance to SC / ST farmer in KBK district.

6.3 Implementation of the scheme at the District & Block level

Micro level analysis of the data relating to the sample Blocks, provides the ground level realities relating to the performance of the scheme.

Table – 6.2 Revenue district / Agricultural district and Block wise physical and financial achievement in supply of Power tillers to SC / ST farmers in Rayagada and Koraput districts.

Revenue District	Agricultural District	Year	Block	Physical						Financial				
				Target (Nos)			Achievement			Provision (Rs. Lakh)	Expenditure (Rs. Lakh)	Total subsidy 50% (Rs. lakh)		
				SC	ST	Total	SC	ST	Total					
Rayagada	Rayagada	2003-04	Rayagada				1	1	2					
			K.singhpur				0	6	6					
		Sub-Total					8	1	7	8	2.120	2.107 (Fraction)	4.214	
		2004-05	Rayagada				0	3	3					
			Kolnara				1	0	1					
		Sub-Total					9	1	3	4	2.4750	1.1000 (44.44) percent	2.2000	
	2005-06	Kolnara				0	1	1						
		K.singhpur				1	4	5						
	Sub-Total					6	1	5	6	1.650	1.650	3.300		
	Gunupur	2004-05	Gunupur				1	6	7					
			Padampur				0	1	1					
			B.Cuttack				1	0	1					
2005-06			Padampur				0	1	1					
Sub-Total					10	2	8	10	2.69393	2.69393	5.38786			
Total Rayagada Revenue District						33	5	23	28	8.93893	7.55093	15.10186		
Koraput	Koraput	2003-04	Koraput	0	1	1	0	1	1	0.2745	0.2745	0.549		
			Semiliguda	0	4	4	0	4	4	1.098	1.098	2.196		
			Lamptapur	0	1	1	0	1	1	0.2745	0.2745	0.549		
			Pottangi								0.2745	0.2745	0.549	
			Narayanapatna								0.2745	0.2745	0.549	
			Laxmipur								0.2745	0.2745	0.549	
	Sub-Total			2	7	9	2	7	9	2.4705	2.4705	4.941		
	Jeypore	2005-06	Laxmipur	0	1	1	0	1	1	0.26877	0.26877	0.53254		
		2003-04	Kotpad	0	1	1	0	1	1	0.27450	0.27450	0.54900		
			Kotpad	0	1	1	0	1	1	0.27450	0.27450	0.54900		
		2005-06	Jeypore	1	1	2	1	1	2	0.54500	0.54500	1.09000		
			Boipariguda	0	1	1	0	1	1	0.26877	0.26877	0.53754		
Sub-Total			1	2	3	1	2	3	0.81377	0.81377	1.62754			
Total Koraput Revenue District						4	21	25	4	21	25	6.85204	6.81204	13.61908

Source : District Agriculture Officers, Rayagada & Koraput

The Table – 6.2 reveals that out of the total 28 beneficiaries covered during the period of implementation of the scheme (2003-05) in Rayagada district, 4 Nos of power tillers were allotted to SC group another 4 Nos were distributed to the SC / ST group in Koraput district. The balance 24 and 21 numbers of power tillers were allotted to ST social group in the respective districts. This allotment has been done scientifically considering the concentration of SC / ST farmers in these districts as depicted in the following table.

Table No. 6.3
Percentage of SC / ST Population in Rayagada and Koraput districts

District	SC	ST
Rayagada	13.92	55.76
Koraput	13.03	49.62

Source : Census, Orissa, 2001

In Rayagada 3 out of 4 blocks and in Gunupur 3 out of 7 blocks were covered under this programme. In total 6 out of 11 blocks (55 percent) were covered in Rayagada revenue district. Similarly in Koraput 8 out of 9 blocks in Jeypore 3 out of 5 blocks were covered the total being 11 out of 14 blocks (79 percent) in Koraput revenue district. Further, Koraput DAO covered 8 out of 9 blocks (89 percent) during the period of implementation of the scheme 2003-05. It further spilled over to 2005-06 both in target and ended in grand success both in target fixation and achievement.

6.4 Micro level analysis

Since supply of power tillers to the SC / ST farmers is considered essential to increase agricultural production & productivity through SC / ST farmers, a fundamental question was asked to the cultivators covered in the sample about their knowledge on the scheme involving incentives of subsidy and hiring of power tillers. This has been depicted in the Table 6.4 below.

Table 6.4
Awareness of the schemes on supply of power tillers to SC / ST farmers by the cultivators

Revenue District	Agricultural District	Block	Total respondents	Having knowledge (%)	No knowledge (%)
Rayagada	Rayagada	Rayagada	90	100	-
-		Kolnara	90	61.1	38.9
-		Padampur	70	100	-
-	Rayagada	3 Blocks	250	87	13
Koraput	Koraput	Semiliguda	90	100	-
-	Jeypore	Jeypore	40	100	-
-		Baipariguda	90	100	-
-	Koraput	3 Blocks	220	100	-
Grand Total		6 Blocks	470	93.51	6.49

Source : - Field Study of State Labour Institute, Bhubaneswar

The Table 6.4 reflects about the awareness of farmers in respect of this important scheme. Almost all the cultivators were aware about power tillers & its utility excepting 39 percent of the cultivators in Kolnara Block of Rayagada district. It reflects the popularity of the scheme amongst the farmers in the district. The scheme is also quite popular amongst the non SC / ST farmers who hire power tillers from the beneficiaries covered under the RLTAAP scheme. Thus this performance made a landmark achievement in the KBK region and is considered as a success story. While collecting primary data, we had come across successful stories of five farmers details of which are given at Annexure – ‘D’. All these successful

farmers come under Jeypore Agricultural District. After use of Power tillers both their land and custom hiring, they gained net profit ranging from Rs.55,000/- to Rs.81,250/- per annum.

Table 6.5
Purchase of power tillers by SC / ST beneficiaries with subsidy.

Revenue District	Agricultural District	Block	Average cost of Power Tiller	Subsidy component
Rayagada	Rayagada	Rayagada	1,15,000.00	50%
-	-	Kolnara	1,15,568.50	50%
-	Gunupur	Padampur	1,08,000.00	50%
Koraput	Koraput	Semiliguda	1,08,000.00	50%
-	Jeypore	Jeypore	1,09,000	50%
-		Boipariguda	1,07,000	50%

Source : - Field Study of State Labour Institute, Bhubaneswar

Table 6.5 indicates variation in the average cost from Rs. 1.07 lakh in Boipariguda Block of Koraput district to Rs. 1.15 lakh in Rayagada & Kolnara Blocks of Rayagada district. The beneficiaries under the scheme received a subsidy component of 50%. The scheme has good demonstration impact also.

The avowed objective of the scheme to popularise Power Tillers is to increase the agricultural production & productivity in the region. Table 6.6 reveals the season wise use of the power tillers by the beneficiaries as well as the cultivators, who have hired the power tillers for their use in agricultural production.

Table 6.6
Use of Power Tillers by owners in different seasons.

Revenue District	Agricultural District	Block	Average hours of use of power tillers in different seasons		Average hours given on hire to others in different seasons	
			Kharif	Rabi	Kharif	Rabi
Rayagada	Rayagada	Rayagada	155	100	100	-
		Kolnara	375	-	200	-
		Padmapur	100	100	200	80
Koraput	Koraput	Semiliguda	100	100	100	100
		Jeypore	300	300	200	60
		Boipariguda	450	300	160	90

Source : - Field Study of State Labour Institute, Bhubaneswar

Table 6.6 reveals that the owners of power tillers have used the tiller more than the period offered on hire. This may be due to concurrent operation in agricultural production.

Table 6.7
Hiring of power tillers by beneficiaries in different seasons

Revenue District	Agricultural District	Block	Average Hiring charges P.H. (in Rs. per hour)	
			Kharif	Rabi
Rayagada	Rayagada	Rayagada	275	-
		Kolnara	225	-
		Padmapur	200	200
Koraput	Koraput	Semiliguda	200	200
		Jeypore	200	200
		Boipariguda	160	160

Source : - Field Study of State Labour Institute, Bhubaneswar

Table 6.7 indicates the hiring charges for hiring of power tillers was the same irrespective of cropping seasons; preferably due to cost of fuel & transportation etc.

An attempt has been made to study the impact of the scheme on different income-groups. It has been reflected in the Table 6.8.

Table 6.8
Use of power tillers by different income groups

Revenue District	Agricultural District	Block	Percentage distribution of beneficiaries purchasing Power Tiller with subsidy according to different income groups				Percentage distribution of beneficiaries used Power Tillers on hire according to different income groups			
			Income range in (Rs. 000)	0-20	20-50	50+	Total	0-20	20-50	50+
Rayagada	Rayagada	Rayagada	-	50	50	100	55.56	44.44	0	100
		Kolnara	50	-	50	100	-	56.25	43.75	100
		Gunupur	100	-	-	100	38.46	61.54	-	100
Koraput	Koraput	Semiliguda	50	50	-	100	40	60	-	100
		Jeypore	-	100	-	100	-	77.78	22.22	100
		Boipariguda	-	-	100	100	11.11	77.78	11.11	100

Source : - Field Study of State Labour Institute, Bhubaneswar

Beneficiaries with income ranging from Rs. 20,000 to more than Rs. 50,000 have availed the scheme as in such for Table 6.8. The beneficiaries with income below Rs. 50,000 have availed better than income group above Rs. 50,000, both in respect of possessing and using. In Boipariguda, however all the beneficiaries belong to the higher income group. This may also be due to very few farmers bring in higher income group in other blocks taken for study.

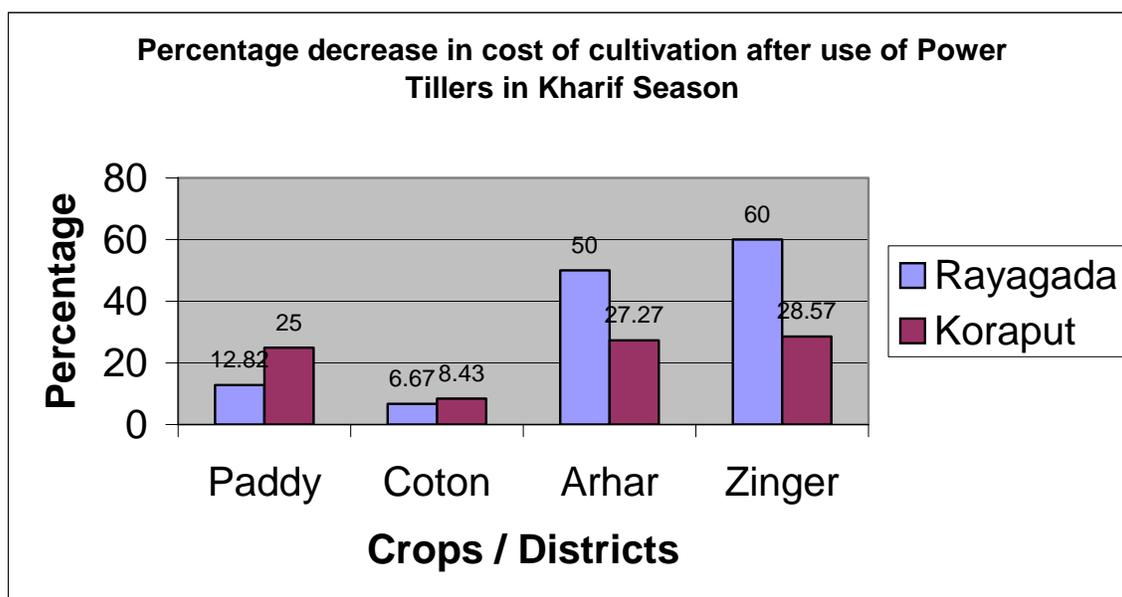
Average Cost of Cultivation before & after use of Power tillers.

Cost effectiveness before and after use of power tillers would indicate an impact on the cost of production.

Table 6.9 elicits a vivid picture in this context.

Table 6.9

Name of the Crop with season	Per acre average cost of cultivation of crops grown before and after use of the power tillers.					
	Rayagada District			Koraput District		
	Average Cost of cultivation before using Power Tillers (in Rs.)	Average Cost of cultivation after using power tiller (in Rs.)	Percentage decrease in average cost	Average Cost of cultivation before using Power Tillers (in Rs.)	Average Cost of cultivation after using power tiller (in Rs.)	Percentage decrease in average cost
<u>Kharif</u>						
(a) HYV Paddy	5500	4875	12.82	5000	4000	25.00
(b) HYV Cotton	10000	9375	6.67	9000	8300	8.43
(c) HYV Kandula (Arhar)	3000	2000	50.00	2800	2200	27.27
(d) Zinger	8000	5000	60.00	9000	7000	28.57
<u>Rabi</u>						
HYV Paddy	5500	4500	22.22	5500	5000	10.00



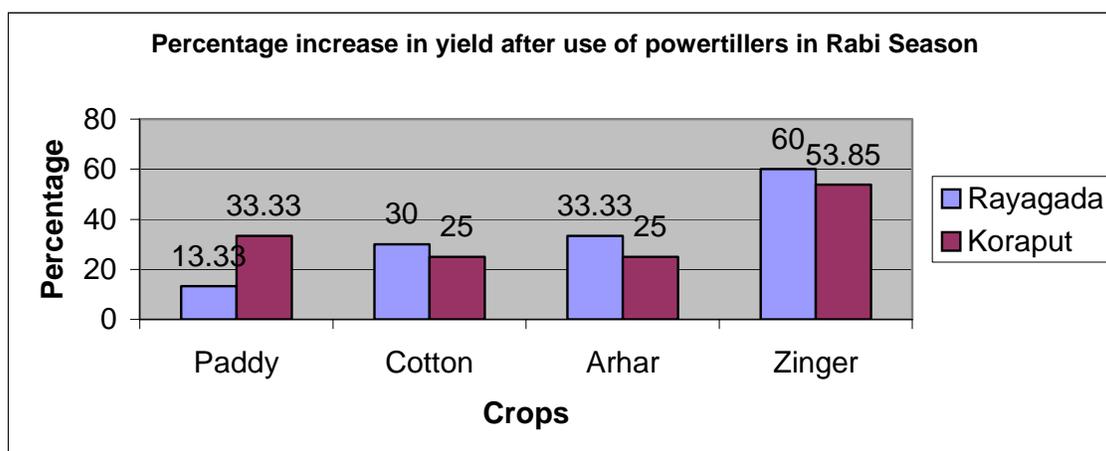
The above table depicts that a number of crops have been raised with the help of power tillers in Kharif season; but in Rabi Season, it is found to have concentrated on limited crops like paddy. The reason reported was that lack of irrigation facilities in Rabi season. The table further elicits that, there is reduction in the cost of cultivation due to the use of power tillers in respect of all crops in both the seasons. The reduction in cost of cultivation of HYV Paddy in Koraput district was about 25.00 percent, whereas in Rayagada district it was 12.82 percent. It was reverse in case of Kandula (Arhar), Zinger and Rabi paddy.

Average yield of different crops before and after use of power tillers :

Improvements in the quantum of yield after the use of power tillers as compared to its preceding period elevated the income of the cultivators. The incremental quantity of yield before and after use of the power tiller is evinced in Table 6.10 below.

Table 6.10

Name of the Crop with season	Per acre average yield of crops grown before and after use of the power tillers.					
	Rayagada District			Koraput District		
	Total yield before using Power Tillers (in Qtls.)	Total yield after using power tiller (in Qtls.)	Percentage increase in yield	Total yield before using Power Tillers (in Qtls.)	Total yield after using power tiller (in Qtls.)	Percentage increase in yield
Kharif						
(a) HYV Paddy	30	34	13.33	15	20	33.33
(b) HYV Cotton	20	26	30.00	16	20	25.00
(c) HYV Kandula (Arhar)	3	4	33.33	4	5	25.00
(d) Zinger	10	16	60.00	13	20	53.85
Rabi						
HYV Paddy	22	27	22.73	25	30	20.00



Besides acceptance of the scheme by the farmers for its accelerated increase in income, the Table visualizes an incremental benefit of yield for each crop grown after using power tillers as compared to its preceding period. The prudent use of power tillers have been a boom to the cultivators due to its higher yield in Kharif and Rabi seasons in both the districts of Rayagada and Koraput.

The Table further exerts that, zinger crop in Kharif season fetched exorbitant rise in yield to the tune of 60 percent in Rayagada district as against 53.85 percent in Koraput district with a marginal variation of 6.15 percent. It is followed by the popular crop in the region Kandula (Arhar) and Cotton grown in Kharif season by Rayagada district to the extent of 33.33 percent and 30 percent respectively which slightly reduced to 25 percent for each of the respective crops in Koraput district. Cultivation during Rabi season in Rayagada district fetched an incremental yield by 22.73 percent surpassing the Kharif yield of 13.33 percent by 9.4 percent. Reverse was the case in respect of Koraput district. While incremental yield for Koraput district was 20 percent in Rabi season, surged up to 33.33 percent in Kharif season. In any case, the scheme depicts a success tale of positive and realistic optimal results and the farmers have unabated access to the scheme.

An attempt has been made to indicate the time taken by the APICOL in releasing subsidy which is evinced in Table 6.11.

Table 6.11–No. of beneficiaries and the time taken to release the subsidy on purchase of power tillers during the year 2004-2006.

Table 6.11

SL No	Revenue District	Agricultural District	No. of beneficiaries	Time period in releasing subsidy (in months)							
				9-10	6-7	Less than 1	1-2	2-3	3-4	4-5	5-6
1	Koraput	Koraput	2	-	-	-	1	1	-	-	-
		Jeypore	3	-	-	2	-	-	-	1	-
2	Rayagada	Gunupur	2	-	-	-	2	-	-	-	-
3	Bhawanipatna	Bhawanipatna	4	-	-	1	-	3	-	-	-
		Dharmagarh	6	-	-	-	-	3	-	-	3
4	Nawarangpur	Nawarangpur	15	1	-	2	3	8	1	-	-
5	Malkangiri	Malkangiri	3	-	-	-	3	-	-	-	-
6	Bolangir	-	-	-	-	-	-	-	-	-	-
7	Sonepur	Sonepur	48	-	1	1	12	28	4	-	2
8	Nuapada	Khariar	3	-	2	-	-	-	-	-	1

(Source: APICOL, Orissa)

It was ascertained from APICOL that the delay in release of subsidy was due to non-submission of required documents in time.

CHAPTER – 7
ESTABLISHMENT OF AGRO SERVICE CENTERS.

7.1 Introduction :

Establishment of Agro Service Centers was considered essential to accelerate farm mechanization with a view to increasing agricultural productivity in KBK region. The use of the machineries ensures timely operation, reduces the cost of cultivation and often guarantees better return. Individual farmers due to high cost of farm implements and machinery are unable to purchase & use. Also that is economically unviable for small size of land holdings. It was therefore thought necessary to establish Agro Service Centres through unemployed private entrepreneurs with 40 percent subsidy on capital investment limited to Rs. 2 lakh. The subsidy was to be released by APICOL to the Financial Institution / Entrepreneur after completion of the projects as recommended by KSK. As earlier pointed out in the preceding chapter, though the RLTA was implemented in 1998-99, establishment of Agro Service Centers, was executed only for a short span of two years, that is 2003-04 and 2004-05. It Table 7.1 below exhibits the district wise physical target and achievements on installation of Agro – Service Centers during 2003-04 and 2004-05.

Table 7.1 – Physical and financial target and achievements for the installation of Agro – Service Centers in KBK region

SL No	District	2003 – 04						2004 – 05					
		Physical (Nos)			Financial (Rs.Lakh)			Physical (Nos)			Financial (Rs.Lakh)		
		Target	Achievement	Percentage of achievement	Provision	Amount spent	Percentage of Expenses	Target	Achievement	Percentage of achievement	Provision	Amount spent	Percentage of Expenses
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Rayagada	4	2	50.00	6.00	4.00	66.67	1	1	100	2.00	2.00	100
2	Koraput	3	2	66.67	6.00	4.00	66.67	2	2	100	4.00	4.00	100
3	Malkangiri	3	2	66.67	6.00	4.00	66.67	2	2	100	4.00	4.00	100
4	Nawarangpur	3	2	66.67	6.00	4.00	66.67	2	2	100	4.00	4.00	100
5	Kalahandi	3	5	166.67	6.00	10.00	166.67	2	2	100	4.00	4.00	100
6	Nuapada	2	2	100.00	4.00	4.00	100.00	2	2	100	4.00	4.00	100
7	Bolangir	3	2	66.67	6.00	4.00	66.67	2	2	100	4.00	4.00	100
8	Sonepur	3	6	200.00	6.00	12.00	200.00	2	2	100	4.00	4.00	100
Total		24	23	95.83	46.00	46.00	100.00	15	15	100	30.00	30.00	100

Source : Directorate of Agriculture & Food Production

Table 7.1 asserts that 2 numbers each of Agro Service Centers were established in Koraput and Rayagada districts against 4 numbers in Rayagada and 3 numbers in Koraput district targeted during 2003-04, with an actual expenditure of Rs. 4.00 lakh in the shape of subsidy as against a target of Rs. 6.00 lakh. But as would be revealed from the table, Sonepur and Kalahandi districts achieved more than the targeted number in establishment of Agro Service Centres. During 2004-05, 2 Agro Service Centers were installed in Koraput district and 1 in Rayagada district with an expenditure of Rs. 4.00 lakh and Rs. 2.00 lakh, respectively, in the shape of subsidy with full achievement both from the physical and financial point of view.

7.2 Awareness of the farmers about the scheme :

Since the scheme for Agro Service Center besides increasing agricultural productivity and production encourages self employment for the unemployed, plays a conspicuous role in rural areas. The farmers were asked about their knowledge on the scheme to ascertain its popularity and the extent to which it has pierced through out the length and breadth of Rayagada and Koraput districts. Table 7.2 depicts the percentage distribution of the cultivators having knowledge on the scheme.

Table – 7.2 – Awareness of Govt. incentives about the scheme for Agro Service Centers.

Revenue District	Agricultural District	Block	Awareness of the scheme by beneficiaries (%)		
			Aware	Not aware	Total
Rayagada	Rayagada	Rayagada	100	-	100
	Gunupur	Gunupur	100	-	100
Koraput	Koraput	Bandhugaon	100	-	100
	Jeypore	Kundra	100	-	100

Source : - Field Study of State Labour Institute, Bhubaneswar

The Table 7.2 elicits that all the selected farmers were aware of the installation of Agro Service Centers and this has been an outstanding success in its implementation promoting higher yield and income. But, it has been confined to a few beneficiaries as it was capital intensive and budget provision for this scheme was limited. But the scheme was very much beneficial to the cultivators.

7.3 Implementation of the scheme :

It was felt to examine the scheme with its cost of installation having its subsidy component along with the category of social group of farmers which availed the facility. Table 7.3 asserts the average cost of installation to the level of about Rs. 6.00 lakhs with a subsidy portion of Rs. 2.00 lakhs. It may be pointed out that the sample beneficiaries belonged to General category only.

Table – 7.3 – Installation of Agro Service Centres with subsidy.

Revenue District	Agricultural District	Block	Average cost of installation of A.S.C (Rs)	Subsidy Component	Percentage of beneficiaries according to social group		
					ST	SC	General
Rayagada	Rayagada	Rayagada	6,29,290	40% (Rs. 2.00 lakh)	-	-	100%
	Gunupur	Gunupur	6,60,000	40% (Rs. 2.00 lakh)	-	-	100%
Koraput	Koraput	Bandhugaon	5,50,000	40% (Rs. 2.00 lakh)	-	-	100%
	Jeypore	Kundra	6,18,000	40% (Rs. 2.00 lakh)	-	-	100%

Source : - Field Study of State Labour Institute, Bhubaneswar

Utilization of machinery from agro services has been found to be an important tool in increasing yield and income of the farmers. Table 7.4 shows the use of Agro- machinery in different seasons by the owners as well as other farmers on hire.

Table No 7.4 Use of A. S. C. by owners and other farmers in different seasons

Revenue District	Agriculture District	Block	Average hours of use in different seasons			
			By owners		Others farmers on hire	
			Khariff	Rabi	Khariff	Rabi
Rayagada	Rayagada	Rayagada	240	540	250	300
	Gunupur	Gunupur	150	150	250	250
Koraput	Koraput	Bandhugaon	100	50	60	10
	Jeypore	Kundra	200	200	175	186

Source : - Field Study of State Labour Institute, Bhubaneswar

The Table 7.4 transpires that the machinery of Agro Service Centers were used both in Kharif and Rabi seasons. In case of Kharif season it was used for 150 to 240 hours in Rayagada district and 100 to 200 hours in Koraput district and 150 to 540 hours, and 50 to 200 hours in Rabi season in the respective districts.

While the owners of the Agro-Service Centres in Rayagada Block of Rayagada district exceeded the use of machinery by 125 percent in Rabi season (540 hours) as compared to Kharif season (240 hours), it was reduced to 50 percent in Bandhugaon Block of Koraput district in Rabi season (50 hours) as against Kharif season (100 hours). Similar was the trend in the said Blocks to the tune of 20 percent increase and diminished by 83 percent respectively in case of the farmers who brought the machinery on hire basis.

The Table 7.5 below depicts the percentage distribution of beneficiaries of different income groups in establishment of Agro Service Centre.

Table 7.5 Establishment of A.S.C by the beneficiaries according to income groups

Revenue District	Agriculture District	Block	Beneficiaries according to income group (Percentage)			
			Less than Rs 20,000	Rs 20,000 to 50,000	Above Rs 50,000	Total
Rayagada	Rayagada	Rayagada	33.33	50	16.67	100
	Gunupur	Gunupur	25	50	25	100
Koraput	Koraput	Bandhugaon	0	70.21	29.79	100
	Jeypore	Kundra	38	52	10	100

Source : - Field Study of State Labour Institute, Bhubaneswar

The Table 7.5 delineates 25 to 38 percent beneficiaries were in the income group less than Rs 20,000 and 10 to 30 percent in the income range above Rs 50,000. But 50 to 70 percent beneficiaries were in the range between Rs 20,000 to 50,000.

Since the avowed objective embodied in the scheme was cost effectiveness and increase in production and productivity, an attempt has been made in Table 7.6 to work out the average cost of cultivation and yield per hectare of the beneficiary before and after use of the machinery provided under the scheme.

Table – 7.6 – Average cost of cultivation of paddy and productivity per hectare before and after availing the facilities through Agro Service Centres.

Revenue district	Agricultural District	Block	Average cost of cultivation before use of A.S.C (Per hectare) (inRs)		Average cost of Cultivation after use of implement from A.S.C (Per hectare)				Total yield per hectare (Qtls)			
			Kharif	Rabi	Kharif	Percentage rise	<u>Rabi</u>	Percentage rise	Before use of implement from A.S.C		After use of implement from A.S.C	
									Kharif	Rabi	Kharif	<u>Rabi</u>
Rayagada	Rayagada	Rayagada	2213.33	-	2,250.00	1.66	-	-	9.23	-	10.72	16.14
	Gunupur	Gunupur	1,420	-	1,626.67	14.53	-	-	14.32	-	18.08	26.26
Koraput	Koraput	Bandhugan	3102.22	3446.15	6,066.67	-	5,487.71	59	7.31	4.07	10.91	5.60
	Jeypore	Kundra	2,281.63	-	2,113.47	-	-	-	9.31	-	10.66	-

Source : - Field Study of State Labour Institute, Bhubaneswar

As elucidated in the Table 7.6, the percentage increase in the average cost of cultivation per hectare after adoption of the scheme was 1.66 percent in Kharif season as against 10.72 percent hike in yield in the same period in Rayagada district. The respective figures in Gunupur Block in the same district was 14.55 percent and 26.26 percent. Similar was the trend in Koraput district except in Kundra Block. Hence, it is evident that the basic objective of the scheme to improve production and productivity has been achieved.

7.4 Time taken for processing :

Time taken in processing the projects is an important factor for this evaluation study. Table 7.7 below depicts the time taken in processing of the subsidy segment in establishment of Agro Service Centres at different levels.

Table 7.7 Time taken in processing of the Agro Service project reports at different stages at district level.

Revenue District	Agricultural District	Year	Block	Village	Name	Date of receiving application from the farmer.	Date of sponsoring to Bank	Time lag	Sanctioned date of bank	Rate of interest (in percent)	Rate of releasing subsidy by APICOL	Time leg between sanction of loan & release of subsidy by APICOL	Time taken from the date of receiving application till the date of releasing the subsidy		
													year	months	days
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Rayagada	Rayagada	2005-06	Rayagada	Jinjilbadi	M.Krishna Rao	2.3.05	30.3.05	28 days	14.5.05 (45days)	10.25	23.11.05	6 months 10 days	-	9	21
		2006-07	Rayagada	Gajigaon	Purna Chandra Chaudhury	23.9.04	25.11.04 to KPGB to SBI (ADB) on 20.12.05	2 months 27 days	20.12.05 to 25.2.06 (66 days) SBI (ADB)	10.25	18.8.06	2 months 6 days	1	10	25
			Kalnara	Kaliguda	S.Jadish Rao	15.10.05	SBI (ADB) 19.1.06	3 months 4 days	19.1.06 to 3.3.06 (43 days)	10.25	18.8.06	5 months 15 days	-	10	3
	Gunupur	2003-04	Gunupur	Bhimpur Guda	Kamakhi prasad Nemapuri	22.12.03	10.12.04	11 months 19 days	22.6.05	-	16.8.06	2 months 8 days	2	7	2
Koraput	Koraput	2003-04	Bandhugaon	Neelabadi	Janardhan Sahukar	10.2.04	13.7.04 (KPGP)	5 months 3 days	25.7.04	-	22.11.05	4 months 28 days	1	9	12
	Jeypore	2003-04	Kotpad	Ghumar	Laxminarayan Bisoi	1.9.04	17.3.05	5 months 27 days	26.12.05	-	2.5.2006	5 months 7 days	1	7	11
			Kundura	Kundura	Trinath Panda	4.10.04	7.3.05	6 months 13 days	26.12.05	-	2.5.2006	5 months 7 days	1	6	28

Source: DAOs, Rayagada & Koraput

The Table 7.7 asserts that 4 out of 7 beneficiaries (57 percent) in both Rayagada & Koraput districts availed the full benefit of the scheme only after 1 year 6 months followed by

one beneficiary after 2 ½ years and the balance 2 beneficiaries after 9 to 10 months. This delatory time period may be attributed to the procedural delay. The variation in time lag between the date of receiving application and forwarding the same to Bank varies between 28 days to 1 year. Bank takes a period between 2 to 9 months to sanction the scheme and loan component. A significant observation here is that 2 to 6 months time on an average has been taken from the date of sanction of the scheme by the bank till the release of subsidy by APICOL. This period of delay in release of subsidy results in unnecessary payment of interest @ 10.25% on the loan amount without fault of beneficiaries. A beneficiary receiving Rs 2.00 lakh of subsidy has to bear Rs 10,250 if it is delayed for a period of 6 months. In addition to this, APICOL charges a processing fees of Rs 2,000 for Rs 2.00 lakh (at the rate of 1 percent of subsidy amount). Hence this delay in processing the proposals imposed additional financial burden on the beneficiaries &, therefore, needs to be curtailed.

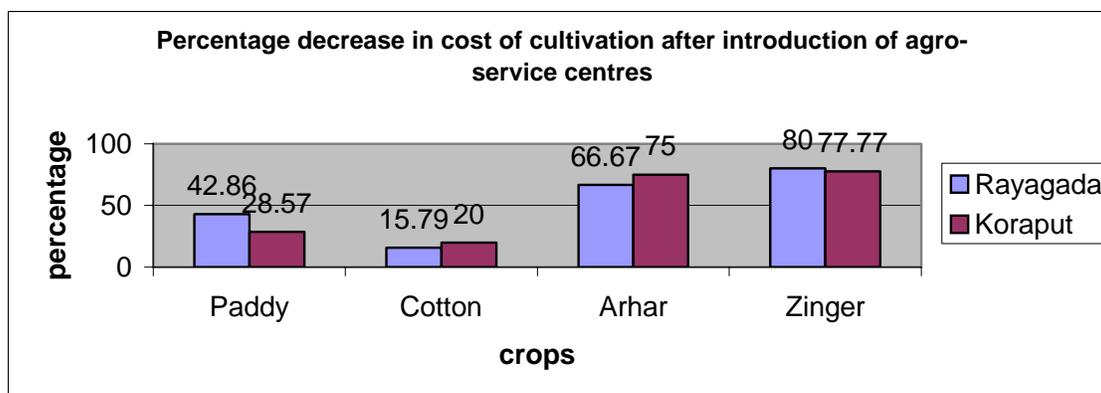
Average cost of cultivation before and after use of machinery and implements from Agro-Service centers :

Agro service centers also played a pivotal role in reducing the cost of cultivation. A comparative picture of cost of cultivation before and after the use of Agro Service Centres has been given in the following table.

Table 7.8 per acre average cost of cultivation before and after introduction of Agro Service Centres.

Table 7.8

Name of the Crop with season	Per acre average cost of cultivation before and after introduction of Agro Service Centres.					
	Rayagada District			Koraput District		
	Average Cost of cultivation before use of machinery and implements from Agro Service Centres (in Rs.)	Average Cost of cultivation after use of machinery and implements from Agro Service Centres (in Rs.)	Percentage decrease in average cost	Average Cost of cultivation before use of machinery and implements from Agro Service Centres (in Rs.)	Average Cost of cultivation after use of machinery and implements from Agro Service Centres (in Rs.)	Percentage decrease in average cost
<u>Kharif</u>						
(a) HYV Paddy	10000	7000	42.86	4500	3500	28.57
(b) HYV Cotton	11000	9500	15.79	12000	10000	20.00
(c) HYV Kandula (Arhar)	4000	2400	66.67	3500	2000	75.00
(d) Zinger	9000	5000	80.00	8000	4500	77.77
<u>Rabi</u>						
HYV Paddy	5500	4400	25.00	6000	5000	20.00



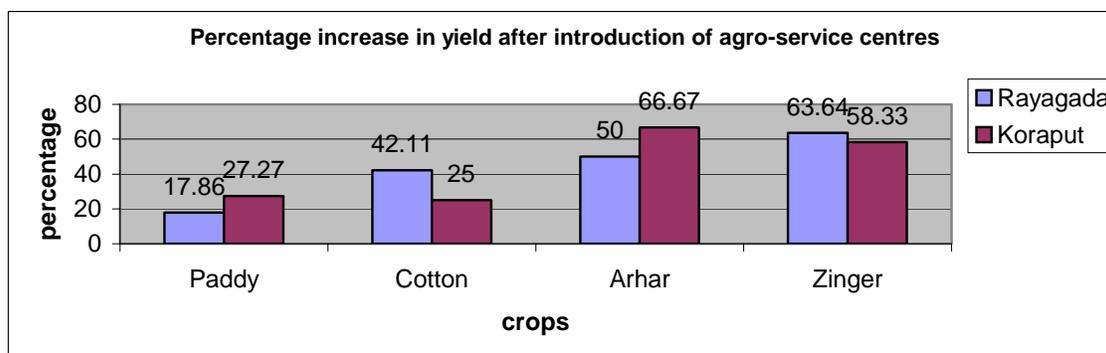
The table transpires that introduction of Agro-Service Centers boost up agricultural production like that of the use of power tillers. There is a reduction in the cost of cultivation in case of each crop grown by the cultivators during Kharif and Rabi seasons. This sort of accelerated achievement in cost reduction, prevailed both in Rayagada and Koraput districts under study. The response of mechanism due to Agro-Service Centres in respect of Zinger crop triggered to the extent of 80 percent in Rayagada and 77.77 percent in Koraput districts which is highest among other crops grown by the cultivators. Cultivation of Kandula (Arhar crop) accomplished 75 percent in Koraput district against 66.67 percent in Rayagada district. All other crops (HYV Paddy, HYV Cotton) cultivated in these districts had limited success. In Rayagada district, the reduction in the cost of cultivation was below 50 percent whereas it was below 30 percent in Koraput district.

Average yield of different crops before and after installation of Agro-Service Centres:

The introduction of agro-service centers besides offering self-employment, triggered the yield of crops and thereby increased the income of cultivators. In this section, an attempt has been made to find out per acre average yield of crops before and after use of machinery and implements from agro-service centers.

Table 7.9

Name of the Crop with season	Per acre average yield of crops grown before and after introduction of Agro-Service Centres.					
	Rayagada District			Koraput District		
	Total yield before installing Agro Service Centres (in Qtls.)	Total yield after installing Agro Service Centres (in Qtls.)	Percentage increase in yield	Total yield before installing Agro Service Centres (in Qtls.)	Total yield after installing Agro Service Centres (in Qtls.)	Percentage increase in yield
<u>Kharif</u>						
(a) HYV Paddy	28	33	17.86	22	28	27.27
(b) HYV Cotton	19	27	42.11	20	25	25.00
(c) HYV Kandula (Arhar)	4	6	50.00	3	5	66.67
(d) Zinger	11	18	63.64	12	19	58.33
<u>Rabi</u>						
HYV Paddy	23	29	26.09	26	33	26.92



Although the project cost in case of Agro-Service Centre is higher than the Power tillers, it is equally acceptable by the farmers, because it reduced the time lag for quality agricultural operations and reduced the cost of production and improved thereby productivity. The table above exhibits an explicit spurt in upward trend of yield for zinger crop grown in Rayagada district to the tune of 63.64 percent as against 58.33 percent in Koraput district. On the other hand, Kandula (Arhar) crop adopted in Koraput district witnessed the hike in yield to the extent of 66.67 percent exceeding Rayagada district (50 percent) by 16.67 percent. Other crops grown (HYV. Paddy, HYV Cotton in Kharif & HYV Paddy in Rabi season) in Rayagada and Koraput districts accounted for below 45 percent and below 30 percent success respectively.

An attempt has also been made in Table 7.10 to indicate the time taken by the APICOL to release subsidy.

Table 7.10 District wise No. of beneficiaries under Agro – Service Scheme & the period of releasing their subsidy during this years 2005 & 2006 (August)

Sl No.	Revenue District	Agriculture District	No. of Beneficiaries	Time period in releasing subsidy (in months)					
				Less than 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6
1	Koraput	Koraput	1	1	-	-	-	-	-
		Jeypore	2	2	-	-	-	-	-
2	Rayagada	Rayagada	3	-	3	-	-	-	-
		Gunupur	1	-	1	-	-	-	-
3	Bhawanipatna	Bhawanipatna	6	3	1	2	-	-	-
		Dharmagarh	11	3	4	4	-	-	-
4	Nawarangpur	Nawarangpur	10	2	5	-	2	1	-
5	Malkangiri	Malkangiri	1	-	1	-	-	-	-
6	Bolangir	Bolangir	3	1	-	2	-	-	-
		Titilagarh	2	1	1	-	-	-	-
7	Sonepur	Sonepur	20	8	2	5	1	3	1
8	Nuapada	-	-	-	-	-	-	-	-
			60	21	18	13	3	4	1

Source: APICOL, Orissa.

Table 7.10, indicates the time taken by APICOL to release the subsidy to 7 beneficiaries, in Rayagada & Koraput district. It was only less than 2 months as against 1 to 6

months in case of other districts. Whatever time is taken by APICOL for releasing subsidy, was only due to non-submission of requisite documents by the concerned organizations.

7.5 **Success Story** :

Establishment of Agro Service Centres was very much successful in Rayagada and Koraput district. In course of our field study we came across a success story of a farmer namely Trinath Panda of Kundra Block coming under DAO, Jeypore. His statement has been recorded and placed at Annexure-‘E’. His earnings emerged out of ASC was about Rs.48,750/- every year.

CHAPTER – 8

VALUE ADDITION AND MARKETING

8.1 Value Addition

An attempt has been made in this chapter to delineate value addition to the agricultural produce and marketing of agricultural products. Adding value to the agricultural produce fetch higher price in the market than the raw products sold at farm gate or store or in the market. A small amount spent for processing of agricultural produce would bring higher profits for the finished quality products. The farmers with little marketable surplus and lack of finance are unable to enter this field. A group of farmers can better do the job. But at present, the self-help groups are growing fast to undertake the job. APICOL in this context have to play a vital role in encouraging the entrepreneurs to take up value addition, which can prevent distress sale besides creation of employment opportunities and proper remuneration for produce to the farmers. They have set up Agri-Enterprises for the purpose, and in the process, 2 cashew-processing units and 1 solvent extraction plant are established in Koraput district and 1 dal mill in Rayagada district. (Source: APICOL, Bhubaneswar)

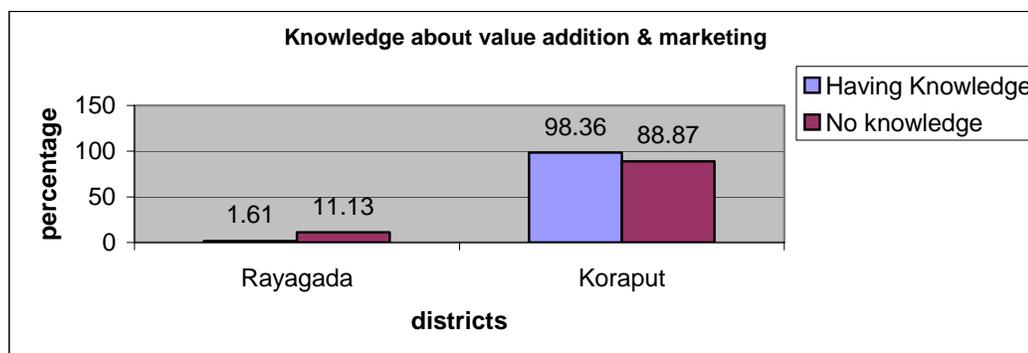
The sample beneficiaries to the tune of 730 covered under all the 4 schemes were taken up as the sample for the present analysis.

Table 8.1 below reflects about the knowledge of farmers on value addition.

Table – 8.1 – Knowledge about Value addition & Marketing

Revenue District	Agricultural District	Block	Having knowledge %	No knowledge %	Total	Percentage of reasons for not adopting value addition		
						Not interested	Lack of finance	Total
Rayagada	Rayagada	Rayagada	-	100	100	100	-	100
		Kolnara	-	100	100	100	-	100
	Gunupur	Gunupur	-	100	100	100	-	100
		Ramanguda	-	100	100	100	-	100
		Padampur	1.61	98.36	100	100	-	100
Koraput	Koraput	Semiliguda	-	100	100	50	50	100
		Bandhugaon	-	100	100	25	75	100
	Jeypore	Jeypore	-	100	100	100	-	100
		Kundra	-	100	100	100	-	100
		Boriguma	-	100	100	100	-	100
	Boipariguda	11.13	88.87	100	100	-	100	

Source : - Field Study of State Labour Institute, Bhubaneswar



It may be seen from the Table 8.1, that 1.61 percent of cultivators in Padampur Block of Rayagada district and 11.13 percent of farmers in Boipariguda Block of Koraput district have knowledge on value addition to the agricultural produce. None of the cultivators of other Blocks have idea about value addition to agricultural produce. Some farmers, who were willing to process their produce for value addition in Semiliguda and Bandhugaon blocks have cited financial deficiency as the reason for its non-adoption. Their percentage was 50 & 75 respectively.

Whenever none of the farmers contacted were adopting the value addition process, the alternative is to encourage private enterprises through APICOL and simultaneously the small farmers through self-help groups to adopt the agro-enterprises.

8.2 Marketing

Market is a place where buyers and sellers meet. The farmers with limited size of land and little marketable surplus are bound to be exploited by traders, middle-men unorganised markets. Remaining in the rural ambit, the farmers can prosper and augment their marketing activities only with the help of organised markets. They therefore need the support of regulated markets for fair price since they have weak bargaining power. The existing Regulated Markets as controlled by Orissa State Agricultural Marketing Board; Bhubaneswar is depicted in Table – 8.2

Table – 8.2 No. of RMCs and its sub-centers

District	Location of the RMC	Products dealt by the RMC	No. of Sub-centers
1	2	3	4
Rayagada	Rayagada	Major items cotton & paddy. Nizer, Arhar and other minor produce.	6
	Gunupur	Cotton, Paddy, Nizer, Til	6
Total – 12			
Koraput	Dumuriput (7 KM from Koraput)	Paddy, Nizer, cotton, Maize, Cashewnut	26
	Jeypore	Paddy, Nizer, Til, Ragi	23
Total - 49			

(Source: Orissa State Agricultural Marketing Board, Bhubaneswar)

There are at present 61 RMC in the State out of which 4 Nos of RMCs are located in Rayagada (2 Nos) and Koraput (2 Nos) district. Besides, there are 12 sub-centers in Rayagada district & 49 sub-centers in Koraput district. The RMCs are located mainly adjacent to the Revenue sub-divisions.

The information on marketing activities of the farmers as collected from the field is appraised in Table 8.3.

Table – 8.3 – Marketing of agricultural products

Revenue District	Agricultural District	Block	No. of respondents	Type of market availed for sale of the products (in percentages)				Average distance Regulated market (Mandi) in K.Ms.	Type of market which incurred loss (in percentages)			Type of market from which profit is expected (in percentages)		
				Local Market	Regulated market (Mandi)	Middleman (Trader) Mahajan	Total		Local market	Trader	Total	RMC	Trader	Total
Rayagada	Rayagada	Rayagada	90	39.13	-	60.87	100	6.05	-	100	100	100	-	100
		Kolnara	90	37.97	-	62.07	100	8.72	-	100	100	100	-	100
	Gunupur	Gunupur	50	87.5	-	12.5	100	32.5	-	100	100	100	-	100
		Ramanguda	80	87.5	-	12.5	100	1.4	-	100	100	-	-	-
		Padampur	60	35.38	-	64.62	100	5.54	-	100	100	92.31	7.69	100
Koraput	Semiliguda	Semiliguda	90	76.67	-	23.33	100	3.95	-	100	100	100	-	100
		Bandhugaon	50	3.70	-	96.30	100	40.00	-	100	100	92.60	7.40	100
	Jeypore	Jeypore	40	26.67	-	73.33	100	6.39	40	60	100	-	-	-
		Kundra	90	4.26	-	95.74	100	1.72	-	-	-	-	-	-
		Boriguma	50	4.76	-	95.24	100	7.2	92.5	7.5	100	30.00	70.0	100
Boipariguda	50	85.39	-	14.61	100	3.90	17.90	82.10	100	92.13	7.87	100		

Source : - Field Study of State Labour Institute, Bhubaneswar

The Table 8.3 envisages that more than 90 percent of the farmers in Bandhugaon, Kundra, & Borigumma Blocks in Koraput district and above 60 percent in Padampur, Kolnara and Rayagada Blocks of Rayagada district are dependent on middlemen / traders for sale of their marketing activities in local unorganised markets. Added to this 87.5 percent of the farmers in Gunupur & Ramanaguda Blocks in Rayagada district and 85.39 percent farmers in Boipariguda Block had their marketing business in local markets. It is strange to say that none of the cultivators contacted never dealt their marketing business in regulated markets. Further, all the farmers of Rayagada district & 2 Blocks of Koraput district have reported that they incurred losses in dealing with trader for marketing purpose and most of them preferred Regulated Markets.

While matching the data from Agricultural Marketing Board and that of the information and PRA of the cultivators, it was found that adequate awareness has not been developed among the farmers to avail the facilities of RMC. Besides, the small farmers do not take their produce to the RMCs, because the transportation cost would be prohibitional. As has been reported in the focus group discussions in PRA, the cultivators with a minimum of 4 hectares of land have sizable marketable surplus and avail the RMC to get a fair price for their farm produce.

CHAPTER – 9

FINDINGS AND RECOMMENDATIONS

9.1 Provision of Irrigation

The land holdings in the size below 4 hectares in both Rayagada and Koraput districts, constitute more than 70 percent of the total operational holdings. (Source; Economic Survey, Orissa, 2005-06). In the district of Rayagada, 27-66 percent of cultivable paddy land in kharif and 1.32 percent of land in Rabi were put to high yielding varieties in 2004-05. The corresponding figures in Koraput District, slightly flared up to 29.04 percent and 6.12 percent respectively. This sluggish coverage under High yielding paddy as well as with other high yielding crops may be attributed to the limitation of irrigation facilities to the extent of 28.73 percent of total cultivated area in Kharif and 12.20 percent in Rabi seasons in Rayagada district, as against 31.13 and 19.38 percent, respectively in Koraput district (Source : Orissa Agricultural Statistics, DA&FP 2004-05). The area under irrigation being inadequate and at times not adequate to meet the requirements of High yielding varieties and commercial crops, the cultivators are dependant on monsoons which often are erratic. This has adversely affected the cropping in the area and the production thereon. Hence, there were wide fluctuations in agricultural production.

Hence, it is necessary to bring more area under irrigation so that diversification in-cropping could be effective and profitable. Generally major and medium irrigation projects are capital intensive and time consuming. Hence, minor irrigation should be encouraged. Irrigation through bore-wells & lift irrigation be encouraged in K.B.K. region.

9.2 Diversification of Agricultural Crops:

The amount allotted for diversification of crops was 3.06 percent of the total agricultural schemes at the initial stage. It was a meager amount which needs to be augmented in future. Although RLTA programme was implemented in the year 1998-99, the schemes relating to diversification of crops in the form of demonstrations were launched in the year 2001-03. Similarly, other schemes like Ragi seed exchange, Supply of power tillers to SC & ST farmers and Establishment of Agro-Service Centres etc. were executed in 2003-04 and 2004-05. Moreover, in addition to paddy, demonstration of other high yielding area specific crops could have been introduced and all these programmes could have been simultaneously implemented for greater impact instead of piecemeal attempts.

Since 40 percent of beneficiaries in Rayagada district and 64 percent in Koraput district were aware of diversification of crops, widespread demonstration, extension and awareness programmes need to be launched.

9.3 Opening of Additional Seeds Sale Centres:

It was proposed to open 10 additional seeds sale centers in each district of KBK region to make available quality certified seeds to the farmers in inaccessible pockets. This programme was only implemented in 4 out of 8 KBK districts. It was not at all implemented in Rayagada, Koraput, Malkangiri and Nowrangpur districts. The reasons for not opening these centers was reported to be shortage of staff at grassroot level. While plans are afoot to open seed centers at Gram Panchayat Level, the Deputy Director of Agriculture, Koraput range has taken a very casual and superficial view in implementing the programmes citing the plea of shortage of staff. These shortcomings should be looked into and action may be

initiated to open additional seed sale centers in inaccessible interior pockets as quickly as possible.

9.4 **Ragi Exchange Programme:**

Under Ragi Seed Exchange programme, when compared with the target fixed, the achievement was 88% in Rayagada district and 90 percent in Koraput district during 2004-05. The respective achievement in preceding year 2003-04 was 93.60 & 30.46 respectively. As ascertained from the concerned District Agricultural Offices, the entire available high yielding ragi seeds were exchanged with local Ragi seeds brought by farmers leaving no balance. In the focus group discussions of PRA the farmers strongly insisted for the continuance of the scheme, but it is strange that there was no provision for the extension of the scheme beyond 2004-05. It is felt and suggested that such popular scheme should have continued further.

9.5 **Supply of Power Tillers to SC and ST Farmers:**

Unfortunately Koraput & Rayagada districts were given less weightage through this scheme to supply power tillers to SC/ST farmers, when compared to Kalahandi and Sonepur districts. While fixing the target for KBK districts, it was observed that the share of Koraput and Rayagada districts was fixed at 11.11 percent, as against 22.22 percent for Kalahandi & Sonepur districts in 2003-04. The share of Rayagada and Koraput district was 8.24 percent and 10.99 percent, respectively in 2004-05, as against 19.78 percent for Kalahandi and 32.97 percent for Sonepur district. This needs to be looked into for demand based allocation under the scheme.

This scheme was popular both among SC/ST farmers and non SC/ST farmers since, all the cultivators were aware of the utility of Power tiller. The beneficiaries in PRA also revealed that it was cost effective as well as its proper use in cultivators helped to increase the yield of crops. While considering the percentage of beneficiaries covered under different income groups, the observation was that the scheme was very much popular among farmers irrespective of the income groups.

Incidentally, APICOL has taken about 2 months to release the subsidy in case of 5 beneficiaries of Rayagada and Koraput districts, 10 months in case of a beneficiaries in Nawarangpur district & 6 to 7 months in case of beneficiaries Sonepur & Nuapada districts. Various reasons for delay were cited at different stages/ level. Whether the delay was caused at the district level or at the level of APICOL the fact remains that delay in releasing subsidy, resulted in avoidable financial burden to the beneficiary who had to pay the interest for the time gap in adjustment of subsidy and reducing the principal amount to that extent.

9.6 **Establishment of Agro-Service Centers**

The success in establishment of Agro Service Centers was overwhelming i.e. 200% in Sonepur district and 167% in Kalahandi district when compared with the target fixed for the year 2003-04. However, the target fixed for Koraput & Rayagada districts was not achieved in full leaving behind one in each district. Rayagada district was also lagged behind by one center in 2004-05.

It was revealed in course of evaluation that Agro Service Centres were of great help in their respective area of operation. Both in scheduled method and PRA it was observed that the increase in the yield of crops surpassed the rise in cost, when farm machineries were used in cultivation. Hence, the basic objective of the scheme to improve production & productivity is catching up.

On release of subsidy, it was observed that the time taken from the date of receiving application to sponsoring to Bank varied between 28 days to 11 months 19 days. Banks have taken 2 to 9 months to sanction the loan. From the date of sanction of loan to the release of subsidy, 2 months 8 days to 6 months 10 days were taken. At the APICOL level, the delay was less than 2 months for the sponsored cases of Rayagada & Koraput district and 1 to 6 months in respect of other KBK districts. All these delays were attributed to procedural complications and lack of seriousness. But the period of delay imposes avoidable interest @10.25% on the amount equivalent to subsidy, which was to be deducted from the principal after releasing the subsidy amount. For example, a beneficiary receiving Rs. 2.00 lakh as subsidy has to pay an avoidable sum of Rs. 10,250/-, if release of subsidy is delayed for a period of 6 months. As a matter of fact, it costs Rs. 56.15 for each day of delay. APICOL also charges a processing fee of Rs. 2,000/- for Rs. 2.00 lakh (at the rate of 1 percent) of subsidy amount which sum was deducted from the subsidy at source.

In the focus group discussions of PRA (Participatory Rapid Appraisal), it was revealed that mini tractors with comparatively little capital investment with subsidy may be introduced to encourage lower and middle income groups of cultivators to go for farm mechanism. Demonstration and training on use of farm machineries be regularly organised to attract and educate the farmers on modern methods of cultivation for higher returns.

It is suggested that a time frame for processing and release of subsidy be prepared and strictly adhered to save delay. Responsibility be fixed for unjustifiable delay at every stage. Further, APICOL may charge 0.25 percent as processing fee like Banks instead of 1 percent. These aspects be looked into for appropriate remedial measures.

Lastly, Financial Institutions may be advised to extend loan to small farmers in easy terms and without any hassle.

9.7 **Value Addition & Marketing** :

Value addition to the agricultural produce fetches more income But only 1.61 percent of cultivators in Padmapur Block of Rayagada district and 11.13 percent farmers in Boipariguda Block of Koraput district have knowledge on value addition to the agricultural produce. What is needed is to create awareness among the cultivators about this important aspect. APICOL, being the apex institution encouraging the entrepreneurs to adopt agro-based units, can impart training to the cultivators in this connection. Self-help groups should be encouraged to undertake the awareness programme in remote areas.

The agricultural economy is largely limited to the extent of markets. Although Regulated Markets with sub-centers exists in Rayagada & Koraput districts, only the big farmers benefit from RMCS. Whatever the case may be, organised markets may be created in each Panchayat to prevent exploitation of farmers by middlemen and traders.