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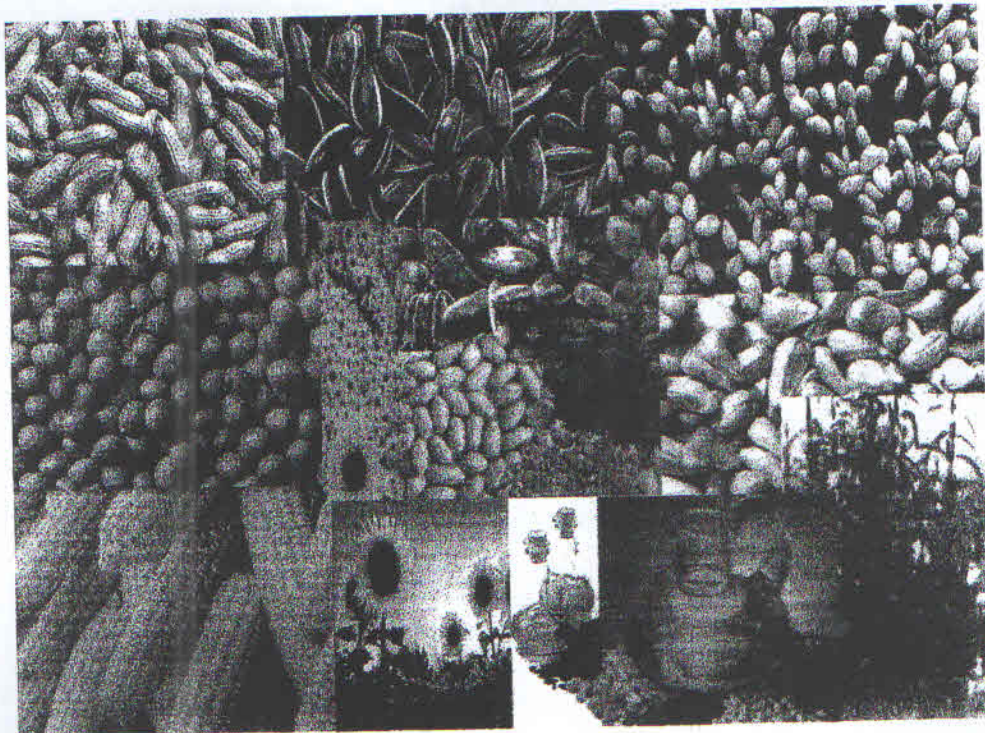
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Karnataka Evaluation Authority



University of Agricultural Sciences G.K.V.K Bangalore

**University of Agricultural Science, Bengaluru**  
**Third Party Evaluation**  
**of**  
**Integrated Scheme on Oilseeds, Pulses, Oil palm and Maize**  
**(ISOPOM)**



**DRAFT REPORT**

Submitted to:

Chief Evaluation Officer  
Karnataka Evaluation Authority  
Govt. of Karnataka

**&**

The Director  
Department of Agriculture  
Sheshadri Road, Bengaluru – 560 001  
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## Executive Summary

### Introduction

ISOPOM stands for integrated Scheme on Oilseeds, Pulses, Oilpalm and Maize. It is a centrally sponsored scheme being implemented in the country including Karnataka State to enhance area, production and productivity of oilseeds, Pulses, oilpalm and maize for overall sustainable development of agriculture in the country. The overall goal of the programme is to increase the area, production and productivity of oilseeds and maize.

The ISOPOM is being implemented in the country since 2004-05. The scheme was modified in 2007 to provide greater flexibility to the states and to increase the assistance for certain components with following main objectives.

- To develop oilseeds, pulses, oilpalm and maize by increasing area, production and productivity of these crops.
- To improve the yield of oilseeds by 30% by adopting improved technology practices and through training farmers by scientists / specialists.
- To improve the economic status of the farmers through technical and input support to get higher productivity.
- To attain sustainability in agriculture development.

At present, ISOPOM at GOI level supports only three crops viz., oilseeds, oil palm and maize. The Karnataka State Department of Agriculture (KSDA) is the implementing agency for oilseeds and Maize. The scheme is being implemented in all the 30 districts of the state with 75% of central and 25% of state share for the scheme budget.

The main objective of the study is to assess and evaluate the utility, feasibility and viability to achieve the purpose of the ISOPOM (Oilseeds and Maize). As the scheme is sponsored by GOI, the guidelines of implementation of the scheme are prescribed as per the norms of GOI. Hence, the critical objective of the present study was to evaluate whether the guidelines of the scheme were followed by the implementing agency, which of the components of the Scheme are more effective, which of the oilseeds crop responds better for scheme support and to ultimately suggests some measures for improvement of the scheme to achieve the purpose and effective implementation.

### Terms of reference

The Terms of Reference in evaluating the implementation of ISOPOM in 25 selected districts of Karnataka state as agreed with Department of Agriculture and approved by Karnataka Evaluation Authority are as follows.

- To analyze the effectiveness of ISOPOM on the productivity of major oilseed and major crops in Karnataka since last five years (including the current year).
- To assess the impact of the scheme on the participating households.
- To assess which of the oilseed crops are responding better and need to be expanded further.
- To assess which of the components of the scheme are more effective.
- To assess whether the scheme meets the needs and expectations of the farmers.
- To ascertain what factors contributed for achieving/not achieving the intended outcome.

### Data collection and Analysis

To meet the requirements of Terms of Reference as indicated above, both primary and secondary data were collected, consultations/meetings with senior officials of Agriculture Dept., were held. The secondary data on operational guidelines, Annual Reports, progress reports, etc. to appreciate the detailed process, roles, physical and financial progress, roles and responsibilities and implementation aspects of scheme. The field data from the beneficiary farmers were collected in 25 districts for the years 2010-11, 2011-12 & 2012-13. The taluk-wise list of farmer beneficiaries was provided by KSDA, sample farmers were selected by following the random number table. Due to time constraint, it was given to select more farmers on random basis from a cluster of villages so as to cover the stipulated number of beneficiaries at the time of field visit. Apart from sample farmers, data regarding program implementation, targets and achievements, etc. at the aggregated State level and district levels were collected from the 25 districts chosen for evaluation. The data collected from various categories of stakeholders are detailed below.

**Table 1: Details of Sample size (Respondents) interviewed for collection of primary data**

Level	Number of officers in the State	Number of sampled officers/farmers	Selection method
District level (JDA)	25	10	Random
Taluk level (ADA)	179	20	Random
RSKs (AO)	653	40	Random
Farmers	-	2995	Random

Data collected from the sample farmers were post stratified based on the following criteria:

- Crop wise categorization to assess the impact of the programme on different crops.
- Categorization of sample farmers into marginal (less than 2.5 acres), small farmers (2.5 to 5.0 acres) and other farmers (>5 acres) to assess the impact of the programme on different categories of farmers.
- Categorization of sample farmer into farmers in the selected districts (beneficiaries and non beneficiaries) to assess the difference in impact of the programme in conjunction with ISOPOM activities.
- Categorization of farmers based on number of years of participation in the programme i.e. one or two or three years to assess the extent of adoption of technology depending upon number of years of participation and consequent differences in impact.

For assessing the impact of the programme on adoption of technology and on costs and returns, comparison was made between the beneficiaries and non-beneficiaries, different components of the programme, different oilseed crops etc. Comparison was made in respect of relevant parameters between beneficiary farmers with that of non beneficiary farmers.

#### Physical and financial achievements

The physical and financial achievements were analyzed with respect of seed components, non-seed components and transfer of technology.

The complete details on budget allotted under ISOPOM for different seed, Transfer of technology and non seed components and achieved progress in terms of physical and financial during



2010-13 are furnished. Further, the percentage of financial achievements made with regard to sub components are categorized into five groups ranging from  $\geq 100$  to  $\leq 40\%$ .

During 2010-11, the highest percentage of achievement made was in respect of production of certified seeds with 231.37% followed by distribution of PP chemicals (100%). The progress achievement was poor for publicity (12.50%), micronutrient distribution (15.00%) and production of foundation seed (30%). During 2011-12, the components which showed highest percentage achievement was purchase of breeder seed (194.81%) followed by production of certified seeds and Rhizobium / PSB distribution (119.09%), while the component which showed least progress was publicity (11.50%), officers training (10.00%), farmers training (20.00%), PVC pipes (20.00%), production of foundation seed (30.70%), distribution of certified seeds (31.76) and distribution of gypsum / pirate (38.23%).

During 2012-13, the purchase of breeder seed showed highest percentage of achievement with 385.10% followed by PVC pipes (188.70%), distribution of PP equipments (126.74%). The component IPM demonstration showed least progress with 13.06%.

The above observations indicate that there is variation in terms of progress achieved over the years. The reasons for this may be many. However, there is very good progress with regard to component aspects in all the years. The important component like training and publicity needs more focus as they have shown less achievement. The other components were medium to better with respect to their percentage achievement. The feedback obtained from the sampled farmers also indicates that publicity given for the scheme is very poor and centrally sponsored scheme which is designed to achieve a definite purpose needs more publicity with the stake holders and more particularly with those who are beneficiaries of the scheme. With regard to maize, the percentage financial achievements for different components of the ISOPOM were categorized into  $\geq 100\%$  to  $\leq 40\%$ .

It is observed that during all the three years, there is good progress in respect of almost all components. However, the components which showed comparatively moderate progress were publicity and farmers training. Though, there is variation among the components for their percentage achievements, the overall progress for most of the components was good. The training component needs still more focus and attention for better achievement.



**Implementation processes followed at field level**

The success of any programme depends upon the processes adopted in implementing the same.

The main activities undertaken under ISOPOM are farmers identification as beneficiaries, registration of identified farmers with details, trainings, creating awareness about the programmes through wall writings, posters display, broadcast through radio, telecast through TV, night meetings, farmers field meetings etc. stocking of inputs from reputed sources, distribution of inputs as per the subsidy norms of the scheme. follow up with farmers to see that inputs are rightly used and purpose of the scheme is met. These activities were carried out in all the villages where the project was implemented.

The information collected regarding some of the aspects of processes during the field study are discussed below:-

**Table 2: Adoption of various processes under ISOPOM**

Particulars	No. of farmers given positive feed back	Percentage
Satisfaction about ISOPOM	1813	67.82
Awareness of ISOPOM	1446	54.88
Awareness through extension staff	1084	36.19
Awareness through wall writings	533	17.79
Timely availability of inputs	2383	89.15
Quality of inputs (Good)	2733	92.48

**Implementation processes followed at operational level**

Apart from the above routine processes adopted by DOA to implement the scheme, the following processes were also followed at the operational level to obtain the desired results.

**Input supply and support services provided under ISOPOM for oilseeds and maize**

Based on the constraints in production, strategy proposes, potential for increasing production and productivity, the input supply and support services to farmers and development / extension activities provided under ISOPOM for oilseed and maize crops in Karnataka are grouped into three components viz., Seed component, Non seed components and Transfer of Technology. The input supply is through providing subsidy on the cost of the above inputs provided.



### **Input supply and Monitoring**

The officers identified as nodal officers / project directors for the implementation monitoring of all the programmes and activities covered under ISOPOM are directly responsible for the submission of field level report, monitoring and monthly appraisal etc to the in-charge officer, Directorate of Agriculture at State level. The nodal officers/project directors are responsible to formulate monitoring team having a representative from crops development departments assigned to the state for periodic field visits for monitoring of component implementations. At the Head Office, the input /agencies/suppliers are called for a meeting regularly to review the progress and address issues regarding supply of required inputs at field level to update the effective and timely supply of inputs for effective implementation of the scheme. In *Kharif* season, these meetings are conducted on a weekly basis at the Head Office to speed up the process for effective implementation of the programme.

### **Field Visits & Field days**

The field visits and field days were organized by the DOA which were aimed at convincing of the farmers about the benefits of new technologies and their contribution in enhancing agricultural production. In ISOPOM, field days on different oil seed crops and maize were conducted at village level to show the utility and gain achieved through adopting improved technologies on respective crops covered under the scheme. These field days have not only created awareness about the scheme with the farmers but also helped to educate and encourage the farmers including beneficiary farmers.

### **Seed requirement**

The need to increase production and to reduce the demand supply gap & imports in vegetable oils, potential and possibilities that exist in the country for increasing their production, the production of nine oilseeds and pulses has to be stepped up further. Increasing production of maize is also the order of the hour for nutritional requirements to meet the rising demand for animal feeds and for industrial usage, possibilities of development of large number of diversified value added products which in turn help in better value realization from the crop and much needed diversification of cropping systems. Seed requirement is assessed at field level and district wise requirements are compiled at state level. The estimates are based on seed replacement ratio (SRR), barring hybrid seed at field level. SRR is fixed by GOI. Seed demand is calculated based on changes in cropping pattern at field level.



### **Project Management System**

The project is being implemented and coordinated at different levels starting from Hobli level in each taluk, linking up with Taluk Level Coordination Committees (TLCS). TLCS are linked up with district level coordination committees (DCCs) and State Level Sanctioning Committees (SLSC).

### **Review Meetings**

The programmes are reviewed in special meetings in its initial stage. These review meetings are mainly to rectify field problems, taking policy decision to implement the concept in positive mode. The review mechanism also helped in building relationship between all consortium partners. Review meeting were conducted on fortnightly basis initially, later on, based on the need, the meetings are held along with nodal officers meeting on Tuesday and video conferences held on Wednesday.

### **Awareness about ISOPOM**

From the information collected through the structured interview schedules from the farmers, out of 2995 sampled farmers, 1446 (54.83%) farmers were aware of the programme which accounts to 54.83 % which is relatively low. This indicates the need to create more awareness about the ISOPOM programme and activities.

### **Awareness of the ISOPOM Scheme through different modes**

The awareness about of ISOPOM programme activities and the transfer of technology / information to the farmers were undertaken through a combination of extension methods. Of the different extension methods used, personal campaign by extension workers topped with 36.19% (1084 out of 2995 farmers) got awareness through extension workers followed by wall writing (17.79%), posters (13.78%) handouts (6.14%), television (4.77%), newspaper (4.37%), radio (2.00%) and others (14.92%). On the whole, there is a need to focus to create still more awareness about ISOPOM as many of the farmers including beneficiary farmers were not having clear idea or objective or purpose of ISOPOM. Rather majority of the farmers as they expressed were only after getting the subsidized inputs and taking the monitory benefits of the Scheme. In this regard, it is suggested to give more publicity about the Scheme and farmers should understand the purpose of this national programme.



### **Distribution of Inputs**

Based on the constraints in production, strategy proposed, potential for increasing production and productivity following input supply and support services of farmers and development / extension agencies are approved under ISOPOM for oilseed, pulse and maize crops. The task of input distribution is handled by the Raitha Samparka Kendras (RSK) set up at Hobli level. These RSKs are under technical and administrative supervision of Agricultural Officer (AO). The RSKs have storage godowns to store all the agricultural inputs. These RSKs act as input distribution centers at Hobli level and service all the Schemes for distribution of inputs as well as technical guidance to the farmers.

### **Impact Assessment of ISOPOM**

Government of Karnataka has supported a mission mode programme ISOPOM to improve the livelihoods of small farm holders by increasing agricultural productivity. The data collected on different crops were analyzed to measure the impact of the steps taken to increase the productivity of the oil seeds and maize crops and the income generation to the farmer in the state. The impact was studied in respect of change in cropping pattern, change in crop productivity in selected oil seed and maize crops in selected 25 districts and income levels of the farmers were computed which are discussed here under.

#### **Change in cropping pattern**

Not much change in cropping pattern was observed. The analysis indicated that there was not much change in cropping pattern with regard to all the selected oilseed crops. However, with regard to maize there is increase by 0.6% followed by Soybean (0.16%).

#### **Impact Analysis**

While we have seen the crop wise production per ha for the state for all the important crops, comparative yields at the district level contributing to the average production of the crops at the district level after introduction of the ISOPOM Scheme, an analysis has been made to show what extension measures adopted under the scheme have contributed to the increase in the yield level of the crops.

The scheme had envisaged an increase in the yield level of the crops in the three years of the ISOPOM scheme. The percentage increase in yield levels during post ISOPOM as compared to pre ISOPOM was more than 10% in respect of all the crops viz., maize, groundnut, sunflower, sesamum, safflower and soybean have recorded greater than 10% increase in yield levels.



### Impact on farmers Income

Income level of farmers has gone up in post ISOPOM with increase in yield levels by use of high yielding varieties, micronutrients, biofertilizers and such measures and has resulted in profitability of farming. Oil seed crops and maize seem to be quite profitable with introduction of high yielding variety and use of pest control measures. Cultivation of soybean and sunflower crops fetched maximum net income and needs to be spread to southern parts of Karnataka. Though, groundnut is found to be high income generating crop, the cost of cultivation is also high as it is a highly labour intensive crop. Maize crop is fetching good returns and is becoming a preferred crop by the farmers because of low cost of production with better income returns. Very small and marginal farmers are cultivating this crop and it is also a preferred crop in areas where there is problem of wild animals.

It is important to know that the crop wise net income obtained by the farmer with increased yield levels, spread among the category of farmers and to what extent they have improved their income levels. Among all the crops studied in the evaluation, soybean crop has fetched the highest income for all categories of farmers as the yield levels have been found higher as compared to other oilseed crops and also fetching good price with assured market for the farmer. Sunflower and groundnut were the next two most remunerative crops in terms of their net income. Safflower is another crop in terms of area coverage falling fourth in the rank, never the less safflower is a healthy edible oil yielding crop and is getting good attention of farmers again. Small farmers have got the maximum net income in case of maize crop when compared to other farmers and marginal farmers. They might have put in more efforts in terms of adopting package of practices to maximize their yield levels and gain maximum net income.

### Role of Institutions

The mission mode project is being implemented by the Dept. of Agriculture in association with the following consortium partners.

All the consortium partners have discharged their responsibilities as laid down in the guidelines. However, based on field level feedback, it is felt that certain areas may need focused attention for achieving better results on the objectives of the programme.

Inadequate staff in the Dept. of Agriculture would hamper the effective implementation of the programmes. In fact, there is absence of full pledged staff in the Department exclusively attend to ISOPOM programmes. All staff looks after all the programmes of the Dept. of Agriculture are the basic



units to implement the programme who have direct contact with the farmers. At present, RSKs face a number of problems viz., lack of proper building, storage facilities, office equipments and lack of staff. RSKs are required to be strengthened and better equipped to serve the farmers and to get the results of any development schemes including ISOPOM. The services of the State Agricultural Universities may be taken to strengthen and augment the technology transfer to the farmers.

#### **Observations of the study**

The goal of ISOPOM is to make a difference in the lives of farmers in all the 30 districts of Karnataka state through increasing average productivity of selected oil seeds and maize crops.

This ambitious coverage of the area and number of farmers under the programme is not commensurate with the human resources available. As a result, few observations were made during the implementation of the programme of which the important ones are presented below:

#### **(i) Limited publicity given to the Scheme**

Wide publicity and creating awareness about any farmer oriented development scheme is very important. It was observed from the primary opinion data that awareness about ISOPOM with farmers was very poor. Only 54.09% of the sampled beneficiaries of the Scheme expressed their ignorance and were not aware of the objective and details of the Scheme.

#### **(ii) Insufficient training programme:**

Training programmes are very essential for updating the knowledge level of implementing officers and to improve the knowledge of the farmers to imbibe and adopt the new technologies incorporated in the scheme to achieve better production and productivity. The financial allocation made for training component is relatively lower than other components.

#### **(iii) Accessibility to RSKs**

As the RSKs are located in Hobli Head quarters, the villages which are located very far from the RSKs, farmers face problem to contact the officers to get the update information about the schemes.

#### **(iv) Limited infrastructure for post-harvest processing and value addition**

The commercial viability and profitability depends not only on total production of the commodity alone, but a community based or industry based processing units and Units for producing value added products which can boost the crop cultivation and production. In this direction, oil and maize based processing units are needed which are very limited at present.



#### (v) Suitable crop contingency plan

As the most of the oil seed and maize crops are grown under rainfed, whenever there are erratic climate changes, there should be a suitable crop contingency plan to the farmers to buffer the unwarranted situations.

#### Study Recommendations

From the evaluation study, the following are the few listed recommendations made for betterment of the scheme implementation

##### (i) The scheme needs wide publicity

There is a need to give wide and more publicity about the purpose and benefits of the scheme in advance through different extension tools which can reach the farmers timely and easily. Some of the ICT application like mobile, announcement through TV channels etc may be made use to give wide publicity about the scheme.

##### (ii) Need for more training programmes, exposure visits to the implementing officers and farmers

Though, there is a training component under ISOPOM, but still more training programmes and exposure visits to the implementing officers and farmers are needed. The trained farmers may be guided to train other farmers.

##### (iii) Involvement of scientists of the university in field day programmes

Field days are the better means to motivate the farmers to know about new technologies in practical. Though, Field days are organized under ISOPOM, there is a need to organize these field days in larger way. For this purpose, the services of crop specialists in the agricultural universities may be utilized more effectively.

##### (iv) Infrastructure development for post harvest processing and value addition

As the Post Harvest processing and value addition are more important to get more profit, the oil seed and maize crops based processing units need to be established in a PPP model for better results. The services of local SHGs may be taken to market the value added products. In addition, private companies may be encouraged to market the products manufactured in the processing units.



(v) **Empowerment of RSKs financially and administratively**

The main purpose of RSKs is to disseminate technical information as service and provide subsidized inputs available under different schemes. The RSKs are headed by an Agricultural Officer and the financial sanction power is very limited which needs to be extended. The staff strength of RSKs needs to be extended. The staff of RSKs need to be provided at least two wheelers / motor bikes to reach the farmer's field whenever it is necessary and urgent except for the limited reasons and factors. The efforts of all the Department of Agriculture deserves all the encouragement for their efforts to implement the Scheme in a positive mode.



## Chapter 9

### OBSERVATIONS AND RECOMMENDATIONS

The goal of ISOPOM being implemented in Karnataka is to make a difference in the lives of farmers in all the 30 districts of the state through increasing average productivity of selected oil seeds and maize crops.

#### Observations of the study:

This ambitious coverage of the area and number of farmers under the programme was not commensurate with the human resources available. As a result, few observations were noticed in the implementation of the programme which are presented below:

#### 1. Limited publicity given to the Scheme

Wide publicity and creating awareness about any farmer oriented development scheme is more important. It was observed from the primary opinion data that awareness about ISOPOM with farmers is poor. About 54.09% of the sampled beneficiaries of the Scheme expressed their ignorance, though they have availed the benefits under the scheme, they lack knowledge on purpose and objective of the Scheme.

#### 2. Insufficient training programme

Training programmes are very essential for updating the knowledge level of implementing officers and to improve the knowledge of the farmers to imbibe and adopt the new technologies incorporated in the scheme to achieve better production and productivity. The financial achievement made for training component is relatively lower than other components.

#### 3. Staff Shortage

As expressed by the implementing officers at district, taluk and RSK level, there is shortage of staff to discharge the duties very effectively as the staff are overburdened with implementation of various schemes. The situation goes very critical during sowing seasons as lot of human resource is required for distribution of inputs under various schemes.

#### 4. Coverage of farmers

As the Scheme does not cover all the oil seed and maize growing farmers, still many interested farmers are left out from the scheme benefits. Instead of covering all the districts for all the crops, it is better to concentrate selected oil seed crops in a district with more focus on improving development of a particular crop to increase productivity and overall development of the crop selected.

#### 5. Computerization of billing and accounting

It was observed that most of the RSKs, still use manual bill books and it is better to introduce computer billing which can also take care of financial accounting of RSKs very effectively.

#### 6. Accessibility to RSKs.

As the RSKs are located in Hobli Head Quarters, the villages which are located very far away from the RSKs, farmers face problem to contact the officers to get the update information about the schemes.

#### 7. Input distribution

The inputs under the Scheme are distributed at RSKs which sometimes problem to farmers to transport the inputs provided. It is better if the inputs are distributed either at village or Panchayat level. Suitable transport facilities need to be arranged even at the cost of charging some cost for transportation of the inputs to deliver the same to the farmers.

#### 8. Limited field days organization:

As the main purpose of the scheme is to see that farmers adopt new technologies to enhance productivity, organization of field days is very essential to motivate the farmers in this regard. The primary data collected indicate that only 10% of the sampled beneficiary farmers are aware of Field days.



**9. Technology and Knowledge dissemination on IPM**

As the IPM is one of the major components of production technology, still the per cent financial progress achieved in respect of IPM component demonstration through Farmer Field School concept is not encouraging.

**10. Limited infrastructure for post-harvest processing and value addition**

The commercial viability and profitability depends not only on total production of the commodity alone, but a community based or industry based processing units and Units for making value added products will boost the crop cultivation. In this direction, oil seed and maize based processing units are needed which are very limited at present.

**11. Suitable crop contingency plan**

As the most of the oil seed and maize crops are grown under rainfed situation, whenever there are erratic climate changes, there should be a suitable crop contingency plan to the farmers to buffer the unwarranted situations.

**Recommendations:**

From the evaluation study, the following are the few listed recommendations made that may be considered to make the implementation of the scheme better.

**1. Needs wide publicity**

There is a need to give wide and more publicity about the purpose and benefits of the Scheme in advance through different extension tools which can reach the farmers timely and easily.

**2. More training programmes, exposure visits to officers and farmers**

Though there is a training component under ISOPOM, but still more training programmes and exposure visits to the farmers and officers need to be organized.

**3. ICT applications for knowledge dissemination**

Now there are so many mechanisms through ICT applications in agricultural extension, this application need to be explored and adopted for effective transfer of technology.





#### **4. Involvement of scientists of the university in field day programmes**

Field days are the better means to motivate the farmers to know about new technologies in practical. Though Field days are organized under ISOPOM, there is a need to organize these field days in larger way. The services of crop specialists in the agricultural universities may be utilized more effectively.

#### **5. Infrastructure development for post-harvest processing and value addition**

As the Post-Harvest processing and value addition are more important to get more profit, the oil seed and maize crops based processing units need to be established in a PPP model for better results.

#### **6. Empowering RSKs financially and administratively**

The main purpose of RSKs is to discriminate technical information as service and provide subsidized inputs available under different schemes. The RSKs are headed by an Agricultural officer and the financial sanction power is very limited which needs to be extended. The staff which needs to be extended. The staffs of RSKs need to be provided at least two wheelers / motor bikes to visit the farmers field whenever it is necessary and urgent.

#### **7. Strengthening Field Schools**

Introducing concept of Farmers Field School in ISOPOM, Farmers Field Schools are based on the principles of farmer to farmer learning in the field situation of the beneficiary farmers. Such FFS may help to focus on technology demonstrations, organizing field days etc.

#### **8. Commodity based farmers associations**

Looking at the success of many associations based on a particular commodity, it is essential with regard to oilseed and maize crops. These associations may be well used in community based activities like mechanization using high cost machines, marketing of the produce and to avail the benefits provided by the government organizations in a better way.