

Elements of Capacity Building of Agricultural Advisory Board Members - A Case of Srikakulam District

Keywords : *Capacity Building, Agriculture, Andhra Pradesh and Srikakulam*

Marketing advisory regarding principal agricultural commodities is important from the farmer's point of view for making agriculture profitable. A periodic review of dynamics of various local, national and international factors and their inclusion into the models for analyzing the price behavior of various crops would help farmers in choosing crops and consequently realizing remunerative prices for their produce. From farmers point of view marketing advisory is important in two aspects : Right time at which maximum prices prevail in the designated markets. What would be the price at that time to sell the produce such that the farmers would realize remunerative prices for their produce (Rajendra Prasad *et al.*, 2018).

In Srikakulam district the total cultivable area in total geographical area is 62.43 per cent. The gap between the cultivable area and the net sown area warrants agricultural intensification in the district. The Boddepally Raja Gopal Rao Vamsadhara Project (Stage II- Phase - II), Sardar Gouthu Latchanna Thotapalli Barrage project, Madduvalasa and upcoming Neradi and Jhanjhavathi. provide huge opportunities for improving the cropping intensity. Around 4 lakh ha. of current fallows, other fallows, land put to non agricultural uses and cultivable waste together along with annual average rainfall of 1162 mm and the anticipated augmentation in irrigation facilities provide huge opportunities for agricultural intensification in Srikakulam District. The village secretariats play major role in strengthening the

schemes meant for service delivery at the grassroot level.

The Government of Andhra Pradesh has constituted the Agri Advisory Boards (AABs) at different levels right from Village to State level to address the needs of the farming community. To achieve the goals in establishing the AABs, periodic capacity buildings of AAB members play a vital role and accordingly, the Department of Agriculture has proposed 3 level capacity building programme to train the AAB members involved at different levels. As such, it is proposed to develop Master Trainers (9 ADAs, One MAO from each ADA sub division, ADAs & AOs of DRC) by way of TOT (Training of Trainers) at District level (Government of A.P, 2020). Srikakulam district was studied for evolving elements of capacity building of master trainers at district level for onward transmission of the same to the members of the AABs at mandal and village levels.

This paper focuses on marketing intelligence involving price forecasting at market level, related capacity building project feasibility techniques to suggest prospective enterprises to the aspiring rural youth and enhance value addition activities at the village level.

Price forecasting techniques viz., moving averages, ARCH, GARCH etc., and project feasibility techniques viz., B: C ratio, NPW etc., along with qualitative analyses viz, chi-square, garrate ranking etc., can be introduced as part of capacity building.

MATERIAL AND METHODS

Marketing Intelligence

Data were collected regarding the details of the weekend prices of the principal agricultural commodities viz., Rice, Groundnut, Onion, Ragi, Chilli, Green gram, Black gram, Cashew and Maize from the designated markets in Andhra Pradesh for the respective commodities from 2011 to 2021 from the official website of the Department of Agriculture & Cooperation, Government of India.

Simple statistical tools like mean, standard deviation, coefficient of variation used to arrive at the congenial time for marketing of the commodities under study, correlation to elicit the relationship between the market arrivals and the price, index numbers to observe the price fluctuations and related illustrations for details of the same along with the techniques like exponential smoothening and regression for the purpose of forecasting were employed (Richard *et al.*, 1998).

Project feasibility

Prospective enterprises like Custom hiring centre, Cashew processing, Dairy farm, Floriculture, Mushroom, Cold storage and Vermi-composting during 2017-18 financial year were considered. Data both numerical and qualitative of already established

enterprises for the above said elements and sub components were collected from surviving industries across the geography of Andhra Pradesh. Based on the collected data ex-ante analysis was conducted by conceiving the above prospective enterprises in new locations (Rajendra Prasad, 2020). Various project appraisal techniques viz., NPW, BCR, IRR, BEP, profitability index (PI) along with SWOT analysis were used to analyse the projects for their feasibility.

Feasibility study is used to determine the viability of an idea in terms of legal, technical and economic viability. The elements of the project feasibility to be covered in order to advice the farmers not only in Srikakulam but also in every possible district and agro climate

The elements of the feasibility analysis is listed under here

1. Market and its sub components
2. Market size and potential,
3. Detailed competition review
4. Customer research and need assessment
5. Routes to market
6. Technology and its sub components such as proto type development, legal assessment, technical feasibility and product road map, operations such as manufacturing requirement, operational costs
7. Sales resources and support.

Table 1. Advisory of Department of Agriculture, Government of Andhra Pradesh Pertaining to Agriculture of Srikakulam District

MAJOR CROPS	ADVISORY
Paddy	Only recommended varieties
Groud Nut	Replace new varieties with old varieties, Area expansion
Cotton	Cost reduction, Marketing advisory
Corn	Huge Potential but sustainability
Red Gram	Fitting it into systems
Castor oil	-
Sugarcane	Revival of Co operative Sugar Factories
Sunflower	Area expansion strategies

Fig 1. Methodology of Estimation of Feasibility of Establishment of Crop Based Agro-Industry

The family consumption has to be deducted from the production per acre from sample average



Multiplied with the total acreage in the District/ Mandal/Village



Total produce available for processing in the District/Mandal/Village



The feasibility of establishing the crop based value addition project in the District/Mandal/Village

(Source : Rajendra Prasad *et al.*, 2018)

RESULTS AND DISCUSSION

The resultant advisories like congenial time for marketing of agricultural commodities at village, district and state level along with enhancement value addition and agro based industrial activity at village level could attract youth towards agriculture by generating additional employment opportunities. The relevant cases in this regard are presented below.

Establishment of Agro Based Industries

A feasibility study is used to determine the viability of an idea in terms of legal, technical and economic viability. The elements of project feasibility during 2017-18 were collected from surviving industries across the geography of Andhra Pradesh. Ex-ante analysis was conducted by conceiving the above prospective enterprises in new locations. The

results revealed that custom hiring centre involving a few paddy trans planters is recommended for a small farm household with availability of family labour. Cashew processing unit is recommended for prospective large investors with an anticipated yield of 32 per cent IRR. Dairy farm is recommended for community based collective investors Floriculture can be recommended for aspiring entrepreneurs having technical background. Mushroom unit had a yield of 24 per cent IRR and can be recommended for credit worthy small farmers. Cold storage unit with an initial investment of 25 lakhs could be recommended for agriculturally intensive areas with commercial crops like fruits and vegetables. Small and medium farmers can be encouraged to take up vermin-composting units given the production and marketing strategies. Hence, small farmers are encouraged to take up MSRI, Dairy, Vermicomposting and large farms are encouraged to take up Cashew processing, Floriculture depending on the capital availability and risk bearing ability.

Marketing Intelligence of Major agricultural commodities

The results of correlation, regression, moving averages and other simple statistical analyses are presented here under.

The relationship of yearly, weekly, monthly and seasonal correlations with the respective prices revealed that season exhibited high correlation between arrivals and prices in case of cashew nut. The positive value (0.856) revealed the potential market in the form of consumer demand for the commodity. Similar trend was exhibited by the Groundnut, onion Negative correlation was observed in case of Red gram reflecting the supply demand gap in case of the commodity during the study period. Highest positive correlation between market arrivals and the prices of chilies, ragi year on year basis was observed. Negative correlation throughout the

Table 2. Size category wise feasibility of prospective agro based enterprizes

Prospective Enterprize	Feasibility
Custom hiring centre	Small farm household with availability of family labour.
Cashew processing	Prospective large investors
Dairy farm	Community based collective investors
Floriculture	Aspiring entrepreneurs having technical background
Mushroom	Credit worthy small farmers.
Cold storage	Agriculturally intensive areas with commercial crops like fruits and vegetables
Vermi composting	Small and medium farmers can be encouraged Prospective enterprizes in new locations.

Table 3. The case of congenial time of marketing that can be advised to farmers

Commodity/Crop	Congenial Month & Week	Next Best Alternative Time
RICE	April II	March IV
GROUNDNUT	December III	December II
ONION	April I	January I
RAGI	June I	January II
CHILLIES	August II	June II
GREENGRAM	April IV	April II
BLACKGRAM	October I	November III
CASHEW	November II	June IV
MAIZE	August I	November III
REDGRAM	February II	November II

Table 4. The case of forecast-ed prices of principal agricultural commodities in A.P

Month & Week	Groundnut	Onion	Ragi	Green Chilies	Green gram	Black gram	Red gram
(In Rupees)							
Aug I	6069	3734	5089	1300	5931	4560	5089
Aug II	6099	3735	5119	1500	5961	4590	5119
Aug III	6130	3736	5150	1600	5992	4621	5150
Aug . IV	6162	3737	5181	2100	6023	4652	5181
Sep I	6194	3738	5214	13100	6056	4685	5214
Sep II	6228	3739	5248	1400	6060	4719	5248
Sep III	6263	3740	5282	1700	6124	4753	5282
Sep IV	6298	3741	5318	1500	3160	4789	5318
Oct I	6335	3742	5354	1700	6196	4825	5354
Oct II	6372	3743	5392	2100	6234	4863	5392
Oct III	6411	3744	5431	2300	6273	4902	5431
Oct IV	6451	3745	5470	2400	6312	4941	5470
Nov I	6491	3746	5511	2500	6353	4982	5511
Nov II	6533	3747	5552	2100	6394	5023	5552
No III	6575	3748	5595	1800	6437	5066	5595
No IV	6619	3749	5639	2100	6481	5110	5639

frequencies was observed in case of Green gram and maize representing the all-pervasive scarcity of the commodity in the market.

Price Fluctuations

Price fluctuations were studied in terms of index numbers and their graphical illustrations. The results revealed that the maize exhibited comparatively lesser weekly fluctuations. The price of cashew is comparatively higher after every preceding successive lower yearly average price index. Black gram is exhibiting highest price indices on a 5 year interval basis which needs detailed analysis. The price fluctuations are rather frequent in case of green gram and also showed highest market prices year after year reflecting demand supply gap every successive year.

Congenial Time for Marketing

The week end average prices for the principal agricultural commodities in Andhra Pradesh were calculated for their mean and standard deviation and after due sorting was arranged with highest means and lowest standard deviation. This time was concluded to be the congenial time for marketing of the respective commodity. The commodity wise congenial time for marketing in Andhra Pradesh was given above.

Forecasting

Weekly moving averages were exposed to the exponential smoothening and their trend was calculated and the consequent prices were forecasted duly considering their price indices for the respective periods. The results are given below.

Possible solutions and advisory

The results of correlation, price fluctuations and forecasting revealed the following issues. The highest potential of cashew nut was revealed by

positive correlation coefficient between Arrivals and prevailing price during the study period (2011-2021).

Similar trend was exhibited by the Groundnut, Onion. Chillies and Ragi must be monitored for yearly fluctuations. All pervasive scarcity of green gram and maize necessitates technological breakthroughs and rationalization of package of practices.

The price fluctuations are rather frequent in case of Green gram represented and also showed highest market prices year after year reflecting demand supply gap every successive year. The principal agricultural commodities of Andhra Pradesh revealed that pre-sowing seasons of *Kharif* and *Rabi* exhibited highest mean prices with lowest instability and hence more congenial for beneficial marketing of the principal agricultural commodities of Andhra Pradesh.

CONCLUSION

- As such, it is proposed to develop Master Trainers by way of TOT (Training of Trainers) at District level.
- The elements like marketing intelligence involving price forecasting at market level, related capacity building in fundamental analysis, project feasibility techniques to suggest prospective enter-prizes to the aspiring rural youth and enhance value addition activities at the village level.
- The resultant advisories like congenial time for marketing of agricultural commodities at village, district and state level along with enhancement value addition and agro based industrial activity at village level could attract youth towards agriculture by generating additional employment opportunities.

LITERATURE CITED

Government of A P 2020 GO.Ms.to.59 Dt. 25.05.2020s GO.Ms. No 70 It. 14.7.2020

and GO.Ms.No 78 dt.06.10.2020 of the Agri
I. & Coop. Dept.s G O A P.
[http://dcmsme.gov.in/dips/state_wise_dips/
apstate%20profile2014-15.pdf](http://dcmsme.gov.in/dips/state_wise_dips/apstate%20profile2014-15.pdf)
<https://www.apagrisnet.gov.in>

Richard I Levin and David S Rubin 1998 Statistics
for management. Pearson & Prentice hall.
Seventh Edition, 883–888.

**Rajendra Prasad V, Govinda Rao S and Suresh
Kumar M 2018** Price Behaviour of principal
agricultural commodities of Andhra Pradesh.
*E proceedings Research frontiers in
Agriculture*, 7-9. ISBN ; 978-93-88237-
13-0.

**Rajendra Prasad V, Ramu Naidu K, Ravali V,
Prasada Rao B H M and Suresh Kumar
M 2018** Exploring Production, Value
addition and Business strategies for
Coarse Cereals - A case of Ragi. *Proceedings of
the National Seminar on futuristic
agriculture for sustainable food security*.
VI-10 :165

Rajendra Prasad V 2020 Project feasibility vis-a-
vis agriculture sector of Andhra Pradesh.
*International Journal of Agricultural
Economics and Statistics*, 11:12-20.
www.apdes.gov.in(Directorate of Economics &
Statistics, Government of India. Andhra
Pradesh official website).

Agricultural College, ANGRAU, Naira, A. P.

**V Rajendra Prasad,
G S Roy,
S Govinda Rao and
K Shanti**

Received on 30.08.2021 and Accepted on 26.11.2021