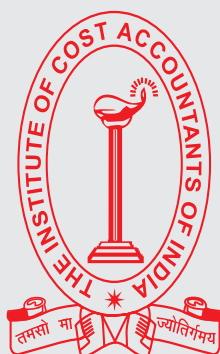


# CONCEPT NOTE ON “AUGMENTING THE FARMERS' INCOME: ROAD MAP FOR CMAs”



**THE INSTITUTE OF COST ACCOUNTANTS OF INDIA**

Statutory Body under an Act of Parliament

[www.icmai.in](http://www.icmai.in)

Behind every successful business decision, there is always a **CMA**



### MISSION STATEMENT

“The CMA Professionals would ethically drive enterprises globally by creating value to stakeholders in the socio-economic context through competencies drawn from the integration of strategy, management and accounting.”

### VISION STATEMENT

“The Institute of Cost Accountants of India would be the preferred source of resources and professionals for the financial leadership of enterprises globally.”

# ABOUT THE INSTITUTE

The Institute of Cost Accountants of India is a statutory body set up under an Act of Parliament in the year 1959. The Institute as a part of its obligation, regulates the profession of Cost and Management Accountancy, enrolls students for its courses, provides coaching facilities to the students, organises professional development programmes for the members and undertakes research programmes in the field of Cost and Management Accountancy. The Institute pursues the vision of cost competitiveness, cost management, efficient use of resources and structured approach to cost accounting as the key drivers of the profession. In today's world, the profession of conventional accounting and auditing has taken a back seat and cost and management accountants are increasingly contributing toward the management of scarce resources and apply strategic decisions. This has opened up further scope and tremendous opportunities for cost accountants in India and abroad.

After an amendment passed by Parliament of India, the Institute is now renamed as "The Institute of Cost Accountants of India" from "The Institute of Cost and Works Accountants of India". This step is aimed towards synergising with the global management accounting bodies, sharing the best practices which will be useful to large number of trans-national Indian companies operating from India and abroad to remain competitive. With the current emphasis on management of resources, the specialized knowledge of evaluating operating efficiency and strategic management the professionals are known as "Cost and Management Accountants (CMAs)". The Institute is the 2<sup>nd</sup> largest Cost & Management Accounting body in the world and the largest in Asia, having approximately 5,00,000 students and 85,000 members all over the globe. The Institution headquartered at Kolkata operates through four regional councils at Kolkata, Delhi, Mumbai and Chennai and 108 Chapters situated at important cities in the country as well as 10 Overseas Centres. It is under the administrative control of Ministry of Corporate Affairs, Government of India.

## THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

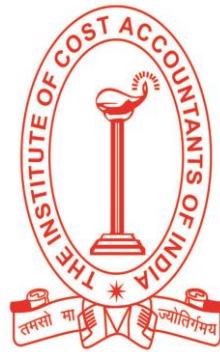
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Any Mistake error or discrepancy noted may be brought to notice of Agriculture Task Force, The Institute of Cost Accountants of India which shall be taken care of.

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**Headquarters:**

CMA Bhawan  
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**Delhi Office:**

CMA Bhawan 3, Institutional Area, Lodhi Road,  
New Delhi – 110003

## ACKNOWLEDGMENTS

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CMA Biswarup Basu  
CMA P. Raju Iyer

President  
Vice President

## AGRICULTURE TASK FORCE

---

CMA P. Raju Iyer, Vice President

Chairman

CMA Chittaranjan Chattopadhyay

Member

CMA (Dr.) K Ch A V S N Murthy

Member

CMA Vijender Sharma

Member

CMA Neeraj D.Joshi

Member

CMA Santosh Sharma

Member

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Member

CMA Dendukuri Zitendra Rao

Member

CMA N Raveendranath Kaushik

Member

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Member

CMA Kishore Bhatia

Member

CMA (Dr). Arindam Gupta

Member

CMA Ria Chowdhury

Secretary



सत्यमेव जयते

प्रधान मंत्री  
Prime Minister

**MESSAGE**

It is heartening to learn that The Institute of Cost Accountants of India has organised a virtual 'Agriculture Meet' on December 23, 2020. The Concept Paper on agriculture "Augmenting the Farmers' Income: Roadmap for CMAs" being brought out on the occasion is commendable.

The growth and prosperity of the nation is intimately connected to agriculture and the all-round development of our farmers. Adopting a holistic approach, we have been giving utmost importance to agriculture sector.

From strengthening existing infrastructure to leveraging technology-intensive methods, our integrated measures are aimed at transforming the lives of our hardworking farmers.

Comprehensive steps from seed to market are constantly opening new vistas of opportunities for our farmers. Continuous boost to agriculture and allied sectors is giving farmers the independence to take decisions, providing them more options for better prices of their produce and easy access to modern methods of farming. Valued stakeholders like ICAI's such an endeavour adds strength to our resolve towards a prosperous future for our *Annadata*.

The deliberations during the 'Agriculture Meet' and the Concept Paper being brought out will surely chart out a roadmap to augment the income of our farmers.

Best wishes for all success of the digital Meet and the publication of the Concept Paper.

(Narendra Modi)

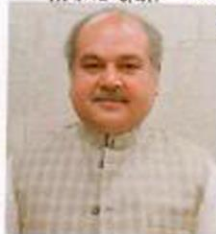
New Delhi  
पौष 01, शक संवत्, 1942  
December 22, 2020

**CMA Biswarup Basu**  
President  
The Institute of Cost Accountants of India  
CMA Bhawan, 3, Institutional Area  
Lodhi Road  
New Delhi

नरेन्द्र सिंह तोमर  
NARENDRA SINGH TOMAR



सत्यमेव जयते



कृषि एवं किसान कल्याण,  
ग्रामीण विकास और पंचायती राज मंत्री  
भारत सरकार  
कृषि भवन, नई दिल्ली  
MINISTER OF AGRICULTURE & FARMERS WELFARE,  
RURAL DEVELOPMENT AND PANCHAYATI RAJ  
GOVERNMENT OF INDIA  
KRISHI BHAWAN, NEW DELHI

### Message

It gives me immense pleasure to know that the Institute of Cost Accountants of India is organizing a **National Conference on "Sustainable Agriculture for Atmanirbhar Bharat" on 23rd December, 2020.**

I am proud that the Institute is the 2nd largest Cost & Management Accounting body in the World and the largest in Asia, having approximately 5,00,000 students and 85,000 qualified CMAs either in practice or in employment all over the globe.

'Atmanirbhar Bharat Abhiyan' focuses on the importance of promoting local products. The mission is also expected to complement "Make in India" initiative which intends to encourage manufacturing in India including agriculture sector which has a great potential. Atmanirbhar Krishi is important to achieve the goal of Atmanirbhar Bharat.

Sustainable agriculture envisages balanced Agri mix between food grains, pulses, cereals, vegetables and so on. Therefore the Indian farmers need to be properly educated and encouraged about the optimal agri product mix wherein the Institute of Cost Accountants of India can play a pivotal role.

I firmly believe that the Cost Accountants are capable enough in devising such a cost mechanism to reduce the cost of agricultural products substantially and to increase the operational efficiency to enable the farmers to achieve higher levels of Income.

Agricultural Costing can assist the policy planners opting balanced approaches towards inclusive growth by enabling optimized resources access and use.

I whole-heartedly look forward to the CMA fraternity for their professional involvement and assistance towards fulfilling the noble initiative of the Government. It is highly commendable that the Institute has already been taking a number of good initiatives to raise awareness in the agricultural domain for the benefit of the society at large.

I am pleased to learn that the Agriculture Task Force of the Institute of Cost Accountants of India is bringing out Concept Paper on Agriculture emphasizing augmenting farmers income.

I extend my best wishes to the Agriculture Task Force of the Institute for taking such thoughtful initiatives and wish the Conference a grand success.

  
(Narender Singh Tomar)

Office : Room No. 120, Krishi Bhawan, New Delhi-110 001 Tel.: 23383370, 23782691 Fax : 23384129  
Resi. : 3, Krishna Menon Marg, New Delhi-110001, Ph. : 011-23794697 / 98, Fax : 011-23794696

परशोत्तम रूपाला  
PARSHOTTAM RUPALA



सत्यमेव जयते

राज्य मंत्री  
कृषि एवं किसान कल्याण  
भारत सरकार  
Minister of State For  
Agriculture & Farmers Welfare  
Government of India  
D.O. No.  MOS(A&FW)/VIP/2019-20/

22 DEC 2020

## MESSAGE

I am happy that the Institute of Cost Accountants of India has constituted an Agriculture Task Force to evolve ways and means of 'Strategic Agri Cost Management' in order to support the Government's objective of 'Augmenting the Farmers' Income'.

To secure future of agriculture and to improve livelihood of half of India's population, adequate attention needs to be given to improve the welfare of farmers and raise agricultural income. Achieving this goal will reduce persistent disparity between farm and non-farm income, alleviate agrarian distress, promote inclusive growth and infuse dynamism in the agriculture sector. Respectable income in farm sector will also attract youth towards farming profession and ease the pressure on non-farm jobs, which are not growing as per the expectations. To achieve doubling farmer's income requires novel strategies focused on development initiatives, technology and policy reforms in agriculture.

It is pleasing that the Institute of Cost Accountants of India is extending its support to the Government's initiatives in terms of preparing Concept Papers on Agricultural Costing and Pricing, conducting awareness programmes and arranging discussion sessions on Pan India basis to analyse the current situation and recommending the steps to be taken in order to achieve the objectives set by the Government for the welfare of the farmers.

Cost Accountants can help in reducing the agriculture cost, improve the ancillary income and help farmers in choosing better crop mix, thereby enhancing the agriculture value creation.

I complement the Institute of Cost Accountants of India for bringing out this very Concept Note on Agriculture and wish the Institute all the success in its initiatives.

  
(PARSHOTTAM RUPALA)

Delhi Office : Room No. 322, 'A' Wing, Krishi Bhawan, Dr. Rajendra Prasad Road, New Delhi-110 001  
Tel. : +91-11-23383975/76 Fax : +91-11-23383971, E-mail : mosrupala@gmail.com  
Gujarat Office : Plot No. 219, Sector-20, Gandhinagar-382 020 Tele. : 079-23260013

## MESSAGE

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**CMA Biswarup Basu**  
President  
The Institute of Cost Accountants of India

The low level of income of farmers is a critical concern in India against the backdrop of which the Government of India proposes to double farmers' income by 2022. As the land size of small and marginal farmers, who constitute 80 per cent of the farmer population in India, is limited, reducing farmers' distress and doubling of farmers' income through the farm sector alone is almost impossible. In this regard, the non-farm sector can not only absorb the excess labour from agriculture but also generate additional income for farm households. To achieve doubling farmer's income requires novel strategies and some change in the policy stance.

I am pleased to inform you that in line with this noble objective of 'Augmenting the Farmers' Income', the Institute has constituted an Agriculture Task Force to evolve ways and means of 'Strategic Agri Cost Management'. The Institute looks forward to extend whole-hearted support to the Government initiatives in terms of preparing Concept papers on Agricultural Costing and Pricing, conducting awareness programmes and arranging discussion sessions on Pan India basis to analyse the current situation and recommending the steps to be taken in order to achieve the objectives set by the Government in this regard for the welfare of the farmers.

I am happy to present this "Concept Note on Augmenting the Farmers' Income: Road Map for CMAs". I congratulate CMA P. Raju Iyer, Vice President of the Institute, and Chairman of Agriculture Task Force and other members of Task Force for their dedicated efforts in bringing out this Concept Paper.

Wish you all to take care of yourselves and your family members, and pray that 2021 would bring in new horizons for us.

With warm regards,

*Biswarup Basu*

**CMA Biswarup Basu**



## MESSAGE

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**CMA P. Raju Iyer**  
Vice-President &  
Chairman, Agriculture Task Force  
The Institute of Cost Accountants of India

The Government of India has envisaged a journey of doubling farmers' income till 2022-2023 and envisioned many policy reforms for the same. Farmers in India rely on major farm produce and do not utilize the by-products or wastes emerging from their farms for monetary benefits. Sustainable utilization of agricultural, household and livestock waste have the potential in augmenting farmers' income significantly which has been established by several case studies conducted recently.

To support the Government in this noble objective, the Institute has constituted an 'Agriculture Task Force' for evolving ways and means for 'Strategic Cost Management Systems towards Augmenting Farmers' Income'.

I am thankful to CMA Biswarup Basu, President and Council of the Institute for giving me this opportunity to Chair the Agriculture Task Force. The terms of reference assigned to the task force are broad and wide encompassing multiple dimensions of 'Agriculture Costing'. The Task Force had a number of meetings under my chairmanship. We have deliberated on various issues and come out with the present Concept Note on "Augmenting the Farmers' Income: Road Map for CMAs". The concept note highlights the importance of agriculture sector, talks about the Minimum Support Price (MSP), discusses the Farmers' Welfare, speaks about Farmer Producer Organizations (FPOs), delves about Indian Farm Laws Reforms and correlates the role CMAs can play in augmenting the farmers' income.

I am hopeful this Concept Note will be useful and provide directions for the future course of actions. I do look forward to come out with innovative systems for the benefits of Indian agriculture sector.

I put on record my heartfelt gratitude to the Agriculture Task force members and officials of the Institute.

With warm regards,



**CMA P. Raju Iyer**

## Augmenting the Farmers' Income: Road Map for CMAs

### 1. Agri Sector: Prime Driver of the Economy

India is a known agrarian economy for ages; and as such agriculture continues to be the key driver of the Indian economy. Post-Independence, the 'Green Revolution' of 1960s gave a big fillip to the Indian agriculture. Simultaneously, India was actively looking to shore up its food reserves and prevent shortages. Through the 1980s and onwards, India witnessed surplus agri produce and also achieved substantial success in agri exports.

The Gross Value Added (GVA) by the Agriculture Sector for the year 2019-20 is estimated to be a monumental Rs.32.54 lakhs crores constituting 17.6% of the total GVA for the economy. The net area sown is of the order of 14 crore hectares and provides employment to 13.77 crores of cultivators and 16.72 crores of agri labourers, i.e. an aggregate work force of 30.49 crores.

The Mission of Agriculture can be stated as

*"To meet the food and nutritional needs of global population; securing the livelihoods of millions through employment and entrepreneurship; and help achieve overall socio-economic inclusion"*

India is the third largest producer of food grains and second largest producer of fruits and vegetables in the world. India is the largest exporter of Rice in the world, in the recent years. India is also the second most populous nation in the world. Indian farmers shoulder the onerous responsibility of taking care of the food and nutritional needs of her population.

Indian agriculture sector is also the largest employer. During the post COVID 19 scenario, reverse migration saw millions reaching back to their native nests and engaging in agriculture in some way or the other. Agriculture's contribution to the nation's GDP is reported to have grown by 3.4 percent while overall GDP is reported to have shrunk by 23.9 percent during the first quarter of FY 2020-21.

On the global arena, the one sentence, remarks of a visiting dignitary that "India can be the food factory for the world" aptly summarizes the significance of India's agriculture and associated sectors.

Notwithstanding the strengths and its significance, agriculture is often under focus, for the challenges associated with it. Agriculture needs structured institutional engagement, investments, enabling policies and regulation; these in turn demand decision support systems backed by reliable data and monitoring mechanisms.

The primary process of agriculture involves growing crops by using land over an agri season. The input resources include labour, water, manure, fertilisers, chemicals, pesticides, etc. Agriculture represents huge value-chain in the economy. For example, manufacturing sector provides number of inputs & support equipments needed for the agriculture sector. These are fertilisers, chemicals and pesticides; and tractors, soil cultivators, harrower, harvester, combine, sowing & irrigation equipment & other agri implements. Similarly, number of industries sustain on use of agri outputs as its main raw materials. Examples are textiles, jute, food processing, tea, coffee, beverages, tobacco products, etc. This value-chain creates huge employment, investment & trade opportunities. It also supports social and economic development across all regions and geographies.

The economic momentum propelled by the agriculture sector by means of input consumption and output supply to industrial and service sectors is obvious and evident. Indian economy is, thus, intertwined with agriculture as agriculture is highly significant not just to meet the food and nutritional needs of the nation but also for creating critical rural demand for the manufacturing and services sectors.

Therefore, several economists consider agriculture as the primary driver for any economy with a multiplier impact of agri income on GDP ranging from five to ten percent.

## 2. Minimum Support Price (MSP)

Minimum Support Price (MSP) is the price at which the government procures harvested crops from the farmers. The concept of MSP was evolved for the first time in 1965 as part of the Price Support Policy of the Government that is directed to provide insurance to agricultural producers against any sharp fall in farm prices. The objectives of the MSP could be summarized as under:

- a. Assure remunerative and relatively stable price environment for the farmers by inducing them to increase production and thereby augment the availability of food grains.
- b. Improve the economic access of food to people.
- c. Evolve a production pattern which is in line with the overall needs of the economy.

Apart from ensuring remunerative prices to farmers, the MSP helps to incentivize the framers and thus enables adequate production of food grains that can be made available at affordable prices to all the sections of populace in the country. It also aims to motivate the farmers to adopt the latest technology, and facilitate balanced and prudent utilization of the available scarce inputs like land, irrigation facilities, etc. The implicit economic gain is better standard of living to both land owners and agricultural and non-agricultural labourers. The apparent focus is on agriculture for raising agriculture output and increasing food security.

At present, the MSP covers 24 crops that include seven cereals (paddy, wheat, maize, jowar, bajra, barley and ragi), five pulses (gram, arhar/tur, moong, urad, lentil), eight oilseeds (groundnut, rapeseed-mustard, toria, soyabean, seasmum, sunflower, safflower, nigerseed), and four commercial crops (copra, sugarcane, cotton and raw jute). The MSPs are announced by the Government of India at the beginning of the sowing season for certain crops on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP). Support prices generally affect farmers' decisions indirectly, regarding land allocation to crops, quantity of the crops to be produced etc. It is from this perspective that the MSP becomes a significant incentive for the farmers to produce appropriate quantities as may be targeted by the Government.

For the calculation of the MSP, the CACP takes into account a comprehensive view of the entire structure of the economy of a particular commodity or group of commodities. The factors include

- Cost of production
- Changes in input prices
- Input-output price parity
- Trends in market prices
- Demand and supply
- Inter-crop price parity
- Effect on industrial cost structure
- Effect on cost of living
- Effect on general price level
- International price situation
- Parity between prices paid and prices received by the farmers
- Effect on issue prices and implications for subsidy

The Commission makes use of both micro-level data and aggregates at the level of district, state and the country. The Commission draws a comprehensive questionnaire, and sends it to all the state governments and concerned National organizations and Ministries to seek their views. Subsequently, separate meetings are also

held with farmers from different states, state governments, National organizations like FCI, NAFED, Cotton Corporation of India (CCI), Jute Corporation of India (JCI), trader's organizations, processing organizations, and key central Ministries. The Commission also makes visits to states for on-the-spot assessment of the various constraints that farmers face in marketing their produce, or even raising the productivity levels of their crops. Based on all these inputs, the Commission finalizes its recommendations/reports.

The cost estimates take into account real factors of production and include all actual expenses in cash and kind incurred by the farmer for the production, rent paid for leased land, imputed value of family labour, interest value of owned capital assets (excluding land), rental value of owned land (net of land revenue), depreciation of farm implements and buildings and other miscellaneous expenses.

Procurement of agricultural crops is made by the FCI, state agencies and cooperatives. A counterpart of the MSP is the Market Intervention Scheme (MIS), which is also a price support mechanism implemented on the request of State Governments for the procurement of perishable and horticultural commodities, like fruits & vegetable, in the event of a fall in market prices. Its objective is to protect the growers of these horticultural/agricultural commodities from making distress sale in the event of the bumper crop. All the agricultural and horticultural commodities for which Minimum Support Price (MSP) are not fixed and are generally perishable in nature are covered under Market Intervention Scheme (MIS). The MIS has been implemented in case of commodities like apples, garlic, oranges, grapes, mushrooms, clove, black pepper, pineapple, ginger, red-chillies, coriander seed, chicory, onions, potatoes, cabbage, mustard seed, castor seed, copra, palm oil etc.

### 3. Farmers Welfare

However, over the years – more particularly during the last couple of decades - India has been experiencing agrarian distress. The primary reasons attributable to the distress are considered to be the low level of farmers' income and year to year fluctuations in the said income.

In spite of several policy initiatives, farmers' income continued to remain low leading to huge disparity between farm workers and non-farm workers. One estimate puts the farm workers earnings just as low as 25% of the earnings of the workers from other sectors.

Land being limited by nature, the net area sown remained constant around 14 crore hectares since 1970-71. As a result the net area sown per agri worker has slipped down from 1.12 hectares in 1970-71 to just 0.46 hectares by 2010-11 thereby putting severe stress and restraint on the scare resources. The eventual impact is a severe agrarian distress being evidenced farm loans & waivers, farmers' suicides, unabated urban migrations, reduction in the usage of cultivable land, and so on.

In order to mitigate the agrarian distress and ensure the welfare of farmers, the Government of India has set for itself a focused goal of doubling the farmers' income (as of 2015-16) by 2022-23 and to bring about a parity between farm workers and non-farm workers. It is envisaged that the key factors that could facilitate the growth in farmers' income may consist of:

- (i) Higher Productivity
- (ii) Efficient utilization of the Input Resources
- (iii) Multiplication of the Sources (Farm Income, Milk, Poultry, etc.)
- (iv) Modernisation and Diversification
- (v) Farm Cost Management (Cost Monitor, Cost Control, Cost Reduction, Cost Savings, etc.)
- (vi) Bettering the Inventory Management (Value Chain Management)
- (vii) Improvements in Marketing Management (Supply Chain Management)
- (viii) Farmer Enlightenment

- (ix) Bouquet of Insurance Products including Crop, Health etc.

With the ambitious goal of doubling farm income by 2022, agriculture sector is expected to generate better momentum in the next few years due to increased investment in agricultural infrastructure such as irrigation facilities, warehousing and cold storage. Furthermore, the growing use of genetically modified crops will likely improve the yield for Indian farmers. India is expected to be self-sufficient in pulses in the coming few years due to concerted effort of scientists to get early maturing varieties of pulses and the increase in minimum support price.

Going forward, the adoption of food safety and quality assurance mechanisms such as Total Quality Management (TQM) including ISO 9000, ISO 22000, Hazard Analysis and Critical Control Points (HACCP), Good Manufacturing Practices (GMP) and Good Hygienic Practices (GHP) by the food processing industry will offer several benefits. The agri export from India is likely to reach the target of US\$ 60 billion by the year 2022.

#### 4. Farmer Producer Organisation (FPO)

Farmer Producer Organisation (FPO) is a type of producer organisation (PO) where the members are farmers. FPO is basically conceived to help its shareholders in the ease of doing agriculture. The FPO is coterminous with a mandal /sub-block or two of the revenue districts. The binding factor for the shareholders of FPO is the common interest in a commodity or group of commodities such as better production practices, collective procurement of inputs or value addition through value chain development or marketing.

The main objective of FPO is to ensure better income for the producers through an organization of their own. Small producers do not have the volume individually (both inputs and produce) to get the benefit of economies of scale. Besides, in agricultural marketing, there is a long chain of intermediaries who very often work non-transparently leading to a situation where the producer receives only a small part of the value that the ultimate consumer pays. The aggregation through the mechanism of PO enables the primary producers to avail the benefits of economies of scale. They will also have better bargaining power vis-à-vis the bulk buyers of produce and bulk suppliers of inputs.

Farmers normally need support of FPO in reducing the costs of cultivation, getting the best and latest technology in affordable terms and to aggregate their produce, process and sell in a remunerative market. The FPO can support their members in all the activities encompassing the agri value chain commencing from pre-production activities and extending to post-harvest and marketing. In brief, the PO could undertake the following activities:

- (i) Procurement of inputs
- (ii) Disseminating market information
- (iii) Dissemination of technology and innovations
- (iv) Facilitating finance for inputs
- (v) Aggregation and storage of produce
- (vi) Primary processing like drying, cleaning and grading
- (vii) Brand building, Packaging, Labeling and Standardization
- (viii) Quality control
- (ix) Marketing to institutional buyers
- (x) Participation in commodity exchanges
- (xi) Export

The productive land under an FPO may be around 4000 ha. The PO may cover generally one or two contiguous Gram Panchayats for ease of management. Studies have shown that a PO will require about 700 to 1000 active producers as members for sustainable operation.

An FPO becomes an FPC when registered under the Companies Act. As of March 31, 2019, a total of 7,374 FPCs have been registered in the country. The top four states, Maharashtra, Uttar Pradesh, Tamil Nadu and Madhya Pradesh, account for 50% of producer companies registered in India. Out of these, 6391 producer companies are working on agriculture and allied activities, such as cultivation, plantations, dairies, non-timber forest produce, fish, poultry, etc.

Finance Minister in her Budget speech had said that cooperatives and farmer producer organisations (FPOs) will be the primary vehicles for ensuring better prices as part of the government's plan to raise income and make farming a more rewarding economic activity.

*"We hope to form 10,000 new Farmer Producer Organisations, to ensure economies of scale for farmers over the next five years," she said.*

She also announced that the government would invest widely in agricultural infrastructure and support private entrepreneurs in driving value-addition to farmers' produce from the field. For allied activities, like bamboo and timber government would focus on value-addition from the hedges and for generating renewable energy.

*"Annadata can also be Urjadata. Dairying through cooperatives shall also be encouraged by creating infrastructure for cattle feed manufacturing, milk procurement, processing & marketing. I place my appreciation for our farmers who have made India self-sufficient in pulses. I am sure they will repeat such a success even in the production of oilseeds. Our import bill shall be reduced by their Seva," she further said.*

The Policy document of Government of India contains following Mission in respect of Farmer Producer Organisations (FPOs):

- ❖ To promote economically viable, democratic, and self governing Farmer Producer Organisations (FPOs).
- ❖ To provide support for the promotion of such FPOs by qualified and experienced Resource Institutions (RIs).
- ❖ To provide the required assistance and resources – policy action, inputs, technical knowledge, financial resources, and infrastructure – to strengthen these FPOs.
- ❖ To remove hurdles in enabling farmers access the markets through their FPOs, both as buyers and sellers.
- ❖ To create an enabling policy environment for investments in FPOs to leverage their collective production and marketing power

## 5. Agriculture Reforms & Indian Farm Laws 2020

More than half of Indian population know only one trade – farming. So if the farmer is not strong, India may not sustain for long to feed her 1.4 billion people. Therefore, Government has announced lot of support measures for the farmer to ensure that he should carry on farming as a matter of pride and comfort. The farmer needs support.

Given the importance of agriculture sector, Government of India took several steps for its sustainable development. Steps have been taken

- To improve soil fertility on a sustainable basis through the soil health card scheme,

- To provide improved access to irrigation and enhanced water efficiency through Pradhanmantri Gram Sinchai Yojana,
- To support organic farming through Paramparagat Krishi Vikas Yojana (PKVY) and
- To support for creation of a unified national agriculture market to boost the incomes of farmers.

The Covid-19 pandemic caused massive disruption in all sectors. To save the farmer, number of measures were announced that included Rs.30,000 crore Additional emergency Working Capital for farmers through NABARD; Rs.2 lakh crore credit boost to 2.5 crore farmers under Kisan Credit Card Scheme; Rs.1 lakh crore Agri Infrastructure Fund; higher MSP for host of crops; Rs.10,000 crore for Micro Food Enterprises; and number of relief measures for animal, dairy, fishery, horticulture & sericulture products.

The three agricultural bills, passed by the Parliament and brought into force, w.e.f. September 2020, collectively seek to provide farmers with multiple marketing channels and provide a legal framework for farmers to enter into pre-arranged contracts among other things. The three Acts are collectively referred to as the 'New Farms Acts 2020'. The Government has envisaged that these Acts will bring revolutionary changes in the Indian Agricultural sector by providing freedom to the farmers to sell their produce to anyone anywhere and also enable them with proper bargaining power through contract farming.

**The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020:** This act permits intra-state and inter-state trade of farmers' produce beyond the physical premises of the Agricultural Produce Market Committee (APMC) market yards (*mandis*) and other markets notified under state APMC Acts.

Prior to this legislation, agricultural trade in India could only be conducted in APMC market yards (*mandis*). This Act, however, allows trading in "outside trade areas" – such as farm gates, factory premises, warehouses, silos and cold storages. The act prohibits state governments from levying any market fee or cess on farmers, traders, and electronic-trading platforms for trading the produce of farmers in such areas.

The Act seeks to facilitate lucrative prices for farmers through competitive alternative trading channels in order to promote barrier-free inter-state and intra-state trade of agriculture goods. It also permits the electronic trading of farmers' produce in the specified trade area, facilitating direct and online buying & selling of such produce through electronic devices and internet.

**The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020:** It is an act that creates a national framework for contract farming through an agreement between a farmer and a buyer before the production or rearing of any farm produce.

This Act relates to contract farming, providing a framework on trade agreements for the sale and purchase of farm produce. The mutually agreed remunerative price framework envisaged in the legislation is touted as one that would protect and empower farmers. The written farming agreement, entered into prior to the production or rearing of any farm produce, lists the terms and conditions for supply, quality, grade, standards and price of farm produce and services. The method of determining such price, including guaranteed price and additional amount, will be provided in the agreement.

The Act protects farmers engaging with agri business firms, processors, wholesalers, exporters, or large retailers for farm services and sale of future farming produce by a mutually-agreed lucrative price framework in a fair and transparent manner through a contract. The Act provides for a three level dispute settlement mechanism by the conciliation board, Sub-Divisional Magistrate, and Appellate Authority.

**Essential Commodities (Amendment) Act 2020:** The Essential Commodities (Amendment) Act 2020 amends the Essential Commodities Act,1955 to allow the Government of India to delist certain commodities as

essential, thereby allowing the government to regulate their supply and prices only in cases of war, famine, extraordinary price rises, or natural calamities.

The commodities that have been deregulated are food items, including cereals, pulses, potato, onion, edible oilseeds, and oils. These items can only be regulated in the extraordinary circumstances previously mentioned, by imposing limits on the quantity of stocks of such items that can be held by persons.

The Act requires that imposition of any stock limit on agricultural produce must be based on price rise. A stock limit may be imposed only if there is a 100% increase in retail price of horticultural produce; and a 50% increase in the retail price of non-perishable agricultural food items.

## 6. Role for CMAs in Agri Sector

The Institute of Cost Accountants of India (ICAI) is a premier statutory professional body functioning under the administrative control of the Ministry of Corporate Affairs. Ever since its inception in 1959, the ICAI has contributed significantly to the economic prosperity by means of statutory cost audits, analytical reports for determination and regulation of the essential commodities, corporate performance evaluations, and so on.

The ICAI has an enrolment of about eighty thousands of members acclaimed for their professional acumen in relation to strategic performance management. The Institute operates through its four Regional Councils, 108 chapters in India and 10 overseas chapters. Indian Industry, manufacturing sector as also the service sector, have drawn substantial benefits by utilising the services of CMA professionals.

Agriculture primarily relies on natural resources like land and water while land is generally inherited or acquired or taken on lease/tenancy; water is sourced through irrigation systems which is mostly public and supported by government. Agriculture is significantly influenced by agro-climatic conditions of the area.

Agricultural Costing along with techniques and approaches from Management Accounting can be of immense use to agriculture and agri-businesses. With the markets becoming competitive and resources being scarce, emphasis and use of costing and techniques of Management Accounting in decision making, planning and monitoring/control has been integral to the overall management. However, the application and use of these techniques, as of now, appears limited within the domain of agriculture, in particular when farmers are to be viewed as 'agripreneurs' and agriculture as a 'for profit' economic activity.

In relation to 'Augmentation of Farmers' Income, the visualized contribution from the Institute of Cost Accountants of India may broadly encompass the following avenues:

- (i) Pricing
- (ii) Revenue Management & Cost Control
- (iii) FPO Management
- (iv) Financial Services
- (v) Agricultural Supply Chain Development
- (vi) Inventory Management
- (vii) Capacity Building
- (viii) Agricultural Value Chain Management
- (ix) Cost Benefit Analysis
- (x) Value Added Studies
- (xi) Mechanization
- (xii) Sustainability
- (xiii) Transition from Agri 4.0 to Agri 5.0
- (xiv) Other Avenues



## 6.01 Pricing

Pricing may consist of transformation of Minimum Support Price (MSP) into Compatible Support Price (CSP) and export pricing.

**Transformation of MSP into CSP:** MSPs are considered as an important pillar of Indian Agricultural price policy rolled out with an intention of providing price security to farmers. Theoretically, the support prices are to benefit farmers of most of the crops in the entire nation. In spite of the mechanism of MSP, many a times farmers suffer on account of abnormal delays in receiving payments for their produce, in particular in relation to sugar cane, cotton, soya bean, etc. This happens because of the accumulated losses being incurred by the related manufacturing sector. The Institute of Cost Accountants of India (ICAI) can evolve a system whereby the concept of MSP Pricing can be transformed into Compatible Pricing which is viable for the farmers, affordable to the manufacturers and acceptable to the consumers.

The Objective of Agricultural Costing would be to help in enhancing the access to the precious produce by balancing the interests of both buyers and producers/sellers with due regard to the pulls and pushes at the market place; through frameworks that can be used in developing 'pricing' models. For example, some of fruit pulp buyers compensate processors with 'raw material cost plus' models as both the buyers and processors do not have control on the market prices of the fruits to be processed (imagine Mango or Tomato – prices of which can vary anywhere from Rs. 10 per Kg. or even lesser, or to even Rs. 40 per Kg. or above). Another innovative model used is to source produce at a fixed price throughout the year and this price is derived with analysis of prices prevailing at various points of the previous years or seasons.

**Export Pricing:** In view of the rapid spread of technology in agriculture, farmers are required to face a severe competition, particularly when the farm produce are to be exported. Value-added exports is a generic term often used to classify exports of semi processed and processed products and of unprocessed high value products. The production of value-added products utilizes labour and other inputs that increase the net economic activity of the producing regions. CMAs have a big role to play in Export Pricing Policy Mechanism. CMAs also can contribute in advising agro entrepreneurs while fixing prices for primary products and its sub products / Value – added products.

## 6.02 Revenue Management & Cost Control

The entire functioning of Agri sector may be divided into multifarious non-homogeneous activities with desirable time schedules. These agri activities would include crop-mix, pre sowing functions like soil testing and land preparation, manuring, arrangement of seeds or plantlets, sowing, proper dosing of fertilisers, farm management practices, irrigation, harvesting, marketing, etc.

All these activities are time bound and vary according to soil, crop and region. The productivity of agriculture lies in managing these activities effectively and efficiently. Timeliness is the biggest contributor as also a vital constraint in carrying out these activities.

In order to operate any agri activity in a profitable manner, various tools and techniques of Revenue and Cost Management, such as budgeting, variance analysis, target costing, yield management, etc., can be adopted. Regular reporting and monitoring of performance by means of Key Performance Indicators can enhance the performing efficacy of every agri entity and in turn the whole agri sector.

**Budgeting:** Budgeting in relation to an agri entity can embrace Crop Planning; Input Resource Planning which includes Seeds, Fertilizers, Manures, Tractor hours, Labour hours, Pesticides, Water etc.; Working Capital Planning; Cash flow; and so on. Budgeting can be strengthened by extending the principles of budgetary control as well.

**Variance Analysis:** Variance analysis would be a helpful tool in evaluating the performance in the light of parameters fixed or budgets allocated. A continuous analysis helps in taking timely corrective actions and without losing the agri season. This is possible only in the environment of real time reporting system; as otherwise it would remain merely a post mortem exercise.

**Target Costing:** Target Costing or Targeting the Farming Expenses is needed because the bottom line in farming is quite thin. Targets will help to improve the margins and enhance the farmers' income. By considering target cost, viable support price of the produce can be negotiated with the buyers on a year to year basis.

**Yield Management:** Most of the farming costs tend to remain fixed for the crop for a season. As such, substantial portion of the revenue earned over the breakeven yield adds up to the farming margins. Evidently, the technique of yield management can turn out to be the game changer.

**Farmer Level Analysis:** Farmer level analysis that can be undertaken by a CMA by using cost data would include:

- (i) Crop-wise income or loss
- (ii) Land parcel-wise/Resource-wise income or loss or contribution
- (iii) Crops that generate better/higher net-income
- (iv) Lands that generate better/higher net-income
- (v) Loans that have higher costs
- (vi) Sell Produce as Produce or Work on Value Addition and so on.

**Key Performance Indicators:** Key Performance Indicators are the crucial indicators to evaluate the performance on a consistent basis. These indicators need to be developed on the basis of activities and their time line. Some of the indicators could be stated as Crop Plantation Report, Tractor Hour Report, Labour Hour Report, Nutrient Consumption Report, Pesticide Consumption Report, Electricity Consumption Report, Water Consumption Report, etc.

### 6.03 FPO Management

The productive land of 4000 hectares visualised to be covered by an FPO constitutes an optimum agri enterprise for adoption of cost management tools and techniques. Further, Break even analysis can be the primary tool for testing the sustainability of the FPO. The structure of an FPO entails incurring certain fixed costs such as office rent, staff salaries, audit expenses, secretarial expenses, admin expenses, etc.

Therefore, effective break-even analysis can lead to a viable and profitable FPO. Since the variables are too many, continuous monitoring of the BEP is essential to track and correct the performance of the FPO. The CEO can be made responsible for timely reporting and initiating remedial measures wherever needed. A proper Management Information System can be developed for comprehensive evaluation.

### 6.04 Financial Services

Financial Services by CMAs would include the following:

- (i) Farm Project Reports
- (ii) Assessment of credit worthiness
- (iii) Credit Risk Mapping & Management
- (iv) Agri Resource Mapping
- (v) Micro Credit , etc.

### 6.05 Agricultural Supply Chain Management

In agriculture, supply chains have always been in existence in the sense that farms carried out production and the final consumer access the produce, with the produce itself traversing through several channels. The existence of several middlemen, absence of information about other links in the chain and inability to invest in improving the performance in almost every part of the chain led to inefficiencies and lower incomes especially in the lower end of the chain.

In this context, a CMA can apply Supply Chain Management techniques for accessing value at each level, resulting in optimal process integration, decreased inventories, quality produce and enhanced customer satisfaction. The Institute of Cost Accountants of India can conduct the Agro Awareness Programme and train the farmers or the Farmer Producer Organization (FPO) / Agro Entrepreneurs regarding the techniques of establishing proper Supply Chain management system.

### 6.06 Inventory Management

Another important aspect to be addressed is inventory management. Farmers are mostly unaware of the modern inventory management system and its practices. Lack of inventory management system adversely affects the overall profitability. The CMA fraternity can help and guide in developing proper inventory management system to suit agricultural sector and its various products. The Institute can also conduct the Agro Awareness Programmes and train the farmers or the Farmer Producer Organization (FPO) / Agro Entrepreneurs in areas such as Inventory Management / Storage & Warehousing system.

### 6.07 Capacity Building

CMAs can facilitate Capacity Building programme for farmers, members of Self-help groups and enhance the capabilities of the primary producers to ensure food security, boost up household incomes and improve their collective bargaining power. Local women can also be trained to help farmers with best practices for improving productivity. The Institute can extend its own expertise to train SHG members with Community Audit concept for financial inclusion and transparency and develop unique models of Community Auditor Training Module.

### 6.08 Agricultural Value Chain Management

Agriculture value chain spreads across the activities comprising Agricultural Inputs, Harvesting & Transportation, Processing & Storage, Packaging, Handling & Distribution and Retailing. Agricultural Costing would contribute to 'net value creation' at each and every node of the value chains – whether integrated or otherwise - and thus economic value optimisation; possibly to defy generally accepted arithmetic and help achieve preferred goal of integrated agri value chains viz., making two plus two to yield more than four. CMAs can be of immense help in identifying and analysing the value addition potential of each of the value chain constituents and maximizing the utilisation of the resources.

### 6.09 Cost Benefit Analysis

A CMA can carry out cost benefit analysis of each of the farming activities as also the irrigation projects and help the farmers and the policy makers in choosing profitable alternatives.

For example, farmers are often encouraged, in addition to agriculture, by government through various schemes to take up additional activities such as pisciculture, bee culture, horticulture, floriculture etc. Very often, the farmers are lured by the visible incentives and subsidies and are tempted to opt for the scheme ignoring the long term viability of the project. CMAs can examine each of such proposals and carry out the cost benefit analysis and bring forth the intrinsic value addition. This will help the farmers in better selection and to enhance their revenue.

Similarly, irrigational and other Infrastructure relevant to the Farming Activities have been budgeted through Huge Capital Costs. For example, the 'Polavaram Project' in Andhra Pradesh is costing close to Rs.50,000 Cr and so much so is the irrigation projects in Telangana which is close to Rs.1 lakh Crore. Measuring-Monitoring-Controlling and thus optimizing is the secret of effective Capital spent. The CMA Community can take up these tasks and can add value to the propositions through relevant cost benefit analysis.

#### 6.10 Value Added Studies

Re-engineering studies of Agricultural activities to have the situation benefits outsmarting the costs can be taken up in line with Business process reengineering. Augmenting the packing activity with the help of Bulk Container transportation to the Traders Silos can optimize the "bundles movement activity".

In order to suit the handling at times the 75kg bag is repacked into 50kg bag and thus the number of articles for the same volume of Quantities would go up. This would certainly increase the Hamali Costs and if replaced with the bulk procurement and usage of special purpose Transportation Vehicles – the optimality could be achieved.

Improved Road Outlays into the Farmer's Fields shall enable weigh scale to be witnessed by the farmer and the integrated farm practices would enable the transportation of bulk quantities. Similarly water security if provided for would lead to optimal watering for the crops (particularly paddy) and thus save the scarce resource.

#### 6.11 Mechanization

Rural psychology and the Rural Life Styles are changing. And the Mechanization has to happen at the same pace so as to augment the Man Power task with machine Task. Similarly proper machine hourly rate fixation is the need of the hour which would result in substantial cost cutting by the farming community. Example could be usage of "Combined Harvester" or "Boom Sprayer". Recently the Government of Andhra Pradesh fixed the hourly usage rate of harvester at Rs.2,200/- which enabled a sort of target Costing mechanism for the Farmer.

#### 6.12 Sustainability

Ecological concerns and environment protection is always to be kept in mind while encouraging the farming community to use fertilizers and pesticides for better yields and productivity. However, the same has to be optimized for and be not allowed to threaten the very sustenance. Hence an incentive mechanism (in the form of Concessional loans or Interest rebates) for Optimal Yield to pesticide usage can be carried on in simple terms and the CMA community can evolve a suitable Data Structures.

#### 6.13 Transition from Agri 4.0 to Agri 5.0

The agriculture sector is undergoing a transformation driven by new technologies, which seem very promising as it will enable this primary sector to move to the next level of farm productivity and profitability. To address this concerns of productivity and profitability, The World Government Summit in 2018 released a report called 'Agriculture 4.0 – The Future of Farming Technology'. The report addresses the four main developments placing pressure on agriculture to meeting the demands of the future: Demographics, Scarcity of Natural resources, Climate change, and Food waste. The report states that, although demand is continuously growing, by 2050 we will need to produce 70 percent more food.

In order to meet these challenges a concerted effort by governments, investors, and innovative agricultural technologies will be required. Agriculture 4.0 will no longer depend on applying water, fertilizers, and pesticides uniformly across entire fields. Instead, farmers will use the minimum quantities required and target very specific areas. Additionally farms and agricultural operations will have to run on technology such as sensors, devices,

## Concept Note on Augmenting the Farmer's Income: Road Map for CMAs

machines, and information technology. Future agriculture will use sophisticated technologies such as robots, temperature and moisture sensors, aerial images, and GPS technology.

The concept of Agriculture 5.0 implies that farms are following Precision Agriculture principles and using equipment that involves unmanned operations and autonomous decision support systems. Thus, Agriculture 5.0 implies the use of robots and some forms of Artificial Intelligence. The focus is shifted from soil, water, seed, fertilizer & live stocks to Robots, sensors, agriculture network data and space based technologies. This transition will basically change the orbit of agricultural operations worldwide and thereby making agriculture a profitable proposition.

CMAs with their technical and financial acumen are better tuned to enable effective execution and transition from Agri 4.0 to Agri 5.0.

### 6.14 Other Avenues

Agricultural Costing would contribute to the sustainability of agriculture with reference to environment, challenges of climate change, ever increasing pressure on scarce natural resources and socio-political-cultural dynamics within the ecosystem while also meeting the aspirations and expectations of the stakeholders associated with the agri value chains.

Agricultural Costing can assist the policy planners opting balanced approaches towards inclusive growth by enabling optimised resources access and use; the biggest dilemma often encountered by policy planners to achieve inclusive growth is whether to opt for direct income redistribution or productive employment; in other words whether to put money in the hands of the needed people or invest scarce resources in productive assets and make people benefit through access to productive assets. This can be better understood with a popular saying from the livelihood promotion fraternity. *"If you give a man a fish, he will be hungry tomorrow. If you teach a man to fish, he will be richer forever."*

## 7. Road Map for CMAs

The Institute of Cost Accountants of India (ICAI) at the Institution level and through the CMA fraternity proposes to associate with the ambitious objective of augmenting farmers' income and has initiated formulation of "Strategic Agricultural Cost and Returns Management". Towards this, the ICAI has constituted a Task Force to formulate the approaches for the engagement of CMAs individually and through ICAI.

The Task Force is mandated to focus and advise on:

- Evolving and developing Agricultural Cost and Management Accounting for Indian Agriculture Sector.
- Integrating Agricultural Cost and Management Accounting into the Institute's curriculum and other professional development programmes.
- Policy planning and interventions by undertaking research and studies and associate with Governments at State and Central levels.
- Networking with institutions in public and private sectors engaged in research, academics, extension and commerce/business.
- Enhancing awareness on cost and returns optimisation as well as minimising risks throughout the agricultural value chains.
- Agricultural credit and ways to enhance cost of credit to both the borrowers and lenders.
- Such other matters as may be relevant towards the set objective.

**The Agriculture Task Force of the Institute is likely to carve out a 'Road Map for CMAs towards Augmenting Indian Farmers' Income'.**

# NOTES

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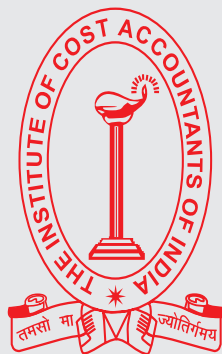


#### **HEADQUARTERS**

**The Institute of Cost Accountants of India**  
CMA Bhawan, 12, Sudder Street  
Kolkata - 700 016  
Tel: +91-033-40364783/ 4779

#### **DELHI OFFICE**

**The Institute of Cost Accountants of India**  
CMA Bhawan, 3, Institutional Area, Lodhi Road  
New Delhi - 110003  
Tel: +91-11-24666100; 24622156/57/58



# **AGRICULTURE TASK FORCE**

# **THE INSTITUTE OF COST ACCOUNTANTS OF INDIA**

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