#### Knowledge Reservoir on Agriculture and Allied Sectors and Role of Chartered Accountants



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# **Role of Chartered Accountant** (CA)

- Agriculture is a critical sector of the Indian economy and is essential for economic growth.
- CAs Endeavor to formulate a model, which can enable value addition in the business of agriculture and become partners in National Development.
- CA's Assist in simplifying procedures which will enable easier implementation of agricultural projects and assist project leaders
- CA's Focus on Achieving 'Value Maximization' in Agriculture sector
- CA's Accounting for Agriculture

# Agriculture

- Is the source of all the food that we eat.
- It is the cultivation of animals, plants, fungi, and other life forms for food, fibre, biofuel and other products used to sustain life.
- " the art or science of cultivating the ground, including rearing and management of livestock, husbandry, farming, etc. and also including in its broad sense farming, horticulture, forestry, butter and cheese-making etc." (The Webster's New International Dictionary)

# History of Agriculture

- Previous to the domestication of plants, man was a hunter and a gatherer and most probably stored little food.
- Because cultivation of plants requires more labor than hunting and gathering, between about 8000 and 3500 B.C., increasing numbers of humans shifted to dependence on cultivated crops and domesticated animals for their subsistence.
- Domesticated animals such as cattle and sheep provided New Stone Age humans with additional sources of protein-rich meat and in some cases milk.

- Animal hides and wool greatly expanded the materials from which clothes, containers, shelters, and crude boats could be crafted.
- Because plows and wheels did not come into use until the Bronze Age (c. 4000-3500 B.C.), most people made little use of animal power for farming, transportation, or travel.
- Domesticated herd animals were used as a steady source of manure to enrich the soil and thus improve the yield of the crops that were gradually becoming the basis of their livelihood

# **Green Revolution**

- Refers to a series of research, development, and technology transfer initiatives that increased agriculture production around the world
- Led by Norman Ernest Borlaug, an American agronomist humanitarian and Nobel laureate who was called "the father of the Green Revolution"
- The term "Green Revolution" was first used in 1968 by former United States Agency for International Development (USAID) director William Gaud
- Occurred between the 1940s and the late 1970s

# United Nations (UN) and Agriculture

- UN an international organization whose stated aims are facilitating cooperation in international law, international security, economic development, social progress, human rights, and achievement of world peace.
- Food and Agriculture Organization (FAO) UN's lead agency for agriculture and rural development
- FAO advances long-term strategies to increase food production and food security.

- International Fund for Agricultural Development (IFAD) – UN specialized agency, that finances agricultural development programmes and projects to help rural people overcome poverty.
- World Food Programme (WFP) UN Programme, which in case of emergency, helps in delivering food aid to the victims of war, civil conflict, drought, floods, earthquakes, hurricanes, crop failures and natural disasters.

## UN's Millennium Development Goals (MDGs) and Agriculture

- MDGs 8 international development goals that all 193 United Nations member states and at least 23 international organizations have agreed to achieve by the year 2015
- About 70% of the MDGs' target group live in rural areas, particularly in Asia and Africa, and for most of the rural poor agriculture is a critical component in the successful attainment of the MDGs.
- Thus, a necessary component in meeting the MDGs by 2015 in many parts of the world is a more productive and profitable agricultural sector.

# Indian Agriculture

- Agriculture is a critical sector of the Indian economy
- Agriculture including allied activities, accounted for 14.5 per cent of gross domestic product (GDP) at 2004-05 prices, in 2010-11.
- About half of India's population is wholly or significantly dependent on agriculture and allied activities for their livelihood.
- India's arable land area of 159.7 million hectares (394.6 million acres) is the second largest in the world, after the United States.

- India's gross irrigated crop area of 82.6 million hectares (215.6 million acres) is the largest in the world.
- India has grown to become among the top three global producers of a broad range of crops, including wheat, rice, pulses, cotton, peanuts, fruits, and vegetables.
- Worldwide, as of 2011, India had the largest herds of buffalo and cattle, is the largest producer of milk, and has one of the largest and fastest growing poultry industries

- Major Crops and Products in order of importance: rice, wheat, oilseed, cotton, jute, tea, sugarcane, lentils, onions, potatoes; dairy products, sheep, goats, poultry; fish
- The total plan outlay for the Department of Agriculture and Cooperation was increased by 18% from Rs.17,123 crore in 2011-12 to Rs.20,208 crore in 2012-13 in the Union Budget 2012.
- Target for agricultural credit raised by Rs.1,00,000 crore to Rs.5,75,000 crore in 2012-13.

# Administration of Agriculture and allied Sectors

- AGRICULTURE
- The Ministry of Agriculture (Krishi Mantralaya) is the nodal Ministry and it comprises of the following 3 Departments:
- (i).Department of Agriculture and Cooperation (Krishi aur Sahkarita Vibhag).
- (ii).Department of Agricultural Research and Education (Krishi Anusandhan aur Shiksha Vibhag).
- (iii).Department of Animal Husbandry, Dairying and Fisheries (Pashupalan, Dairy aur Matsyapalan Vibhag).

- B. FOOD PROCESSING
- The Ministry of Food Processing Industries (MOFPI), Government of India is responsible for formulation and administration of the rules and regulations and laws relating to food processing in India. The ministry was set up in the year 1988, with a view to develop a strong and vibrant food processing industry, to create increased employment in rural sector and enable farmers to reap the benefits of modern technology and to create a of surplus for exports and stimulating demand for processed food.

- C. PUBLIC DISTRIBUTION
- Ministry of Consumer Affairs, Food and Public Distribution
- The Department of Food & Public Distribution (http://dfpd.nic.in/) under the Ministry of Consumer Affairs, Food and Public Distribution is the nodal Department whose primary Policy objective is to ensure food security for the country through timely and efficient procurement and distribution of foodgrains.

- D. PANCHAYATS
- The 73rd amendment to the constitution accorded constitutional status to the Panchayats.
- Subject to the provisions of the constitution, the legislature of state may, by law endow the Panchayats with such powers and authority as may be necessary
- As per Schedule XI, Article 243G of the Constitution of India, it has power and authority with respect to implementation of schemes for economic development and social justice w.re.to agriculture, including agricultural extension

# Department of Agriculture & Co-operation (DAC)

- DAC is one of the 3 constituent Departments of Ministry of Agriculture
- DAC has administrative control over 4 Attached Offices, 21 Subordinate Offices, 2 Public Sector Undertakings and 8 Autonomous Bodies, 11 National-Level Cooperative Organizations and 2 Authorities
- The functions and duties performed by DAC relate to the matters as have been assigned to it in the Government of India (Allocation of Business) Rules, 1961, as amended from time to time.

- DAC is headed by Secretary to the Government of India, at secretariat level, who is assisted by Principal Adviser, four Additional Secretaries, one Financial Adviser and one Agriculture Commissioner, both of the rank of Additional Secretary to the Government of India, ten Joint Secretary and Horticulture Commissioner.
- In terms of its organizational set up, the Department of Agriculture and Cooperation consists of 24 Divisions and one Technology Mission namely Technology Mission on Oilseeds, Pulses and Maize.

## Department of Agricultural Research And Education (DARE)

- DARE coordinates and promotes agricultural research & education in the country.
- DARE is the nodal agency for International Cooperation in the area of agricultural research and education in India
- DARE has the following two autonomous bodies under its administrative control:
  - Indian Council of Agricultural Research (ICAR)
  - Central Agricultural University (CAU), Imphal

## Department of Animal Husbandry Dairying & Fisheries (DADF)

- DADF is responsible for matters relating to livestock production, preservation, protection from disease and improvement of stocks and dairy development, and also for matters relating to the Delhi Milk Scheme and the National Dairy Development Board.
- It also looks after all matters pertaining to fishing and fisheries, inland and marine.
- DADF advises State Governments/Union Territories in the formulation of policies and programmes in the field of Animal Husbandry, Dairy Development and Fisheries.

# Legislations regulating Agriculture and Allied Sectors

- 1. Land legislations
- 2. Legislations of input management [legislations, related to fertilizer, seed, pests and pesticides, genetically modified organisms (GMOs), agricultural biotechnology and other inputs];
- 3. Labour laws in Agriculture;
- 4. Legislation in agricultural marketing;
- 5. Legislations in livestock sector;
- 6. Legislations of agriculture credit and finance,
- 7. Legislation in co-operative sector; and
- 8. The Panchayat.

# **Overview of Agriculture & Allied Sectors**

## RUBBER

- India is the 4<sup>th</sup> largest producer of natural rubber (NR) with a share of 8.2% in world production in 2010.
- India recorded the highest productivity among major NRproducing countries
- As per the Economic Survey 2012, the production of NR in 2011-12 was projected at 9.02 lakh tonnes, an increase of 4.6 per cent over 2010-11.
- India continues to be the second largest consumer of NR with 8.8% share of world consumption in 2010.

## COFFEE

- India is the 6<sup>th</sup> largest producer of coffee after Brazil, Vietnam, Colombia, Indonesia, and Ethiopia.
- With 2 % share in global area under coffee, India contributes about 4% to world coffee production as well as international trade.
- As per the Economic Survey 2012, the country's coffee production reached a high of 3.02 lakh tonnes during 2011-12.
- Indian coffee is primarily an export oriented commodity with about 70% of production being exported.

## TEA

- India is the largest producer and consumer of black tea in the world.
- Tea is grown in 16 states in India.
- Assam, West Bengal, Tamil Nadu, and Kerala account for about 95% of total tea production.
- Tea production in India during the year 2010-11 has been estimated at 0.97 million tonnes as against 0.99 million tonnes in 2009-10.

# **EXPORTS & IMPORTS**

- India's trade policy on agricultural items guided by the twin objectives of ensuring food security and building export markets for enhancing the income of farmers, depending on domestic availability.
- In September 2011, government has put the exports of wheat, non-basmati rice, and cotton under open general licence.
- India is among 15 leading exporters of agricultural products in the world.

- As per the International Trade Statistics 2011, published by the World Trade organization (WTO)
  - India's agricultural exports amounted to US \$ 23.2 billion with a 1.7 per cent share of world trade in agriculture in 2010.
  - India's agricultural imports amounted to US \$ 17.5 billion with a 1.2 per cent share of world trade in agriculture in 2010.

## SEEDS

- Good quality seed is one of the most important inputs for enhancing agricultural productivity and production.
- Since 2005-06, the central government has been implementing a central-sector scheme known as 'Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds' to address the gaps in infrastructure and to increase availability of quality seeds for different crops through various interventions.

- An amount of `1987.83 crore till 15th February 2012 had been released as grants-in-aid under different components of the scheme.
- The Scheme requires major changes and upgradation and accordingly, a National Mission on Seeds for the Twelfth Plan Period had been proposed.

# MECHANIZATION AND TECHNOLOGY

- Farm mechanization has immense potential for improving farm productivity.
- Though India has been witnessing considerable progress in farm mechanization, its spread across the country still remains uneven.
- Current farm power availability hovers around 1.7 kw/ha which is much lower than that of Korea (7+ kw/ha), Japan (14+kw/ha), and the USA (6+kw/ha).

- It is estimated that in order to upscale farm productivity so as to grow more food given the stagnant net sown area, farm power availability must reach at least 2.0 kw/ha by the end of Twelfth Five Year Plan.
- Gradual increase in farm mechanization will also help release agricultural labour for other emerging and valued sectors, thus contributing more towards GDP.

## FERTILIZERS

- India is meeting 80% of its urea requirement through indigenous production but is largely import dependent for meeting the requirements of potassic (K) and phosphatic (P) fertilizers.
- Chemical fertilizers have played a significant role in the development of the agricultural sector.
- The Nutrient Based Subsidy (NBS) Policy for fertilizers was implemented in 2010.
- Under the NBS Policy, a fixed subsidy is announced on per kg basis of nutrient annually.

- An additional subsidy is also given to micro-nutrients.
- With the objective of providing a variety of subsidized fertilizers to farmers depending upon soil and crop requirements, the government has included seven new grades of complex fertilizers under the NBS.
- Under this scheme, manufactures /marketers are allowed to fix the maximum retail price (MRP).
- Farmers pay only 50% of the delivered cost of P and K fertilizers, the rest is borne by the Government of India in the form of subsidy.

# IRRIGATION

- Central government initiated the Accelerated Irrigation Benefit Programme (AIBP) from 1996-97 for extending assistance for the completion of incomplete irrigation schemes.
- Under this programme, projects approved by the Planning Commission are eligible for assistance.
- Under the AIBP, `50,380.64 crore of central loan assistance (CLA)/grant has been released up to 30 November 2011.

# AGRICULTURAL PRODUCE AND PRICING

- Government announces minimum support prices (MSPs) for major agricultural commodities each season taking into account the recommendations of the Commission for Agricultural Costs and Prices (CACP), the views of state governments and central ministries
- It organizes purchase operations through the Food Corporation of India, and cooperative and other agencies designated by state governments.

- In 2011-12, the MSPs of various agricultural crops have been increased.
- National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED) appoints state agencies to undertake Price Support Scheme (PSS) operations.
- Government provides working capital to the central agencies for undertaking PSS operations
- The government also implements the Market Intervention Scheme (MIS) for horticultural and agricultural commodities, generally perishable in nature and not covered under the PSS
## ANIMAL HUSBANDRY, DAIRYING AND FISHING

- The 11<sup>th</sup> Five Year Plan envisaged overall growth of 6-7% per annum for the sector.
- In 2010-11, this sector contributed 121.84 million tones of milk, 63.02 billion eggs, 42.99 million kg wool, and 4.83 million tonnes of meat
- India ranks first in the world in milk production, which was 121.84 million tonnes in 2010-11.
- In order to encourage entrepreneurship skills of individuals, a central-sector 'Poultry Venture Capital Fund' Scheme is also being implemented on capital subsidy mode since 1 April 2011, 37 covering various poultry activities.

- The Government of India provides financial assistance to states/UTs to control major livestock diseases and strengthen veterinary services including reporting of animal diseases through various centrally sponsored schemes
- The Ministry of Agriculture is also implementing a World Bank- assisted project on 'Preparedness, Control and Containment of Avian Influenza'

# AGRICULTURAL CREDIT AND INSURANCE

- Farmers have been receiving crop loans up to a principal amount of `3 lakh at 7 per cent rate of interest since 2006-07.
- Initiatives taken to provide Kisan Credit Cards (KCC) to all eligible and willing farmers in a time-bound manner.
- About 10.78 crore KCCs had been issued up to October 2011
- The Government is implementing a revival package for Short-term Rural Cooperative Credit Structure involving financial outlay of `13,596 crore.

- In the case of Agricultural insurance, there are various major crop insurance schemes under implementation in the country, viz:
- National Agricultural Insurance Scheme (NAIS)
- Modified NAIS (MNAIS)
- Pilot Weather Based Crop Insurance Scheme (WBCIS)

### **AGRICULTURE MARKETING**

- The role of the agriculture market is to deliver agricultural produce from the farmer to the consumer in the most efficient way.
- Agriculture markets are regulated in India through the Agricultural Produce Market Committees (APMC) Acts.
- According to the provisions of the APMC Acts of the states, every APMC is authorized to collect market fees from the buyers/traders in the prescribed manner on the sale of notified agricultural produce.

- The Directorate of Marketing & Inspection launched an Information and Communication Technology Project -Agricultural Marketing Information System Network (AGMARKNET)" in the country, during the Ninth Plan,
- The Agmarknet portal of the Government of India is a portal on agricultural marketing backed by a wide area information network connecting agricultural markets, State Marketing boards/Directorates and also providing linkages to the websites of the important National and International Organisations

### FOOD SECURITY

- The primary Policy objective of the Department of Food & Public Distribution under the Ministry of Consumer Affairs, Food and Public Distribution is to ensure food security for the country through timely and efficient procurement and distribution of foodgrains.
- The National Food Security Bill 2011 was introduced in the Lok Sabha on December 22, 2011.
- The Bill was referred to the Standing Committee on Food, Consumer Affairs and Public Distribution on January 5, 2012.

### FOOD PROCESSING

- India is the world's 2<sup>nd</sup> largest producer of food next only to China
- The Food Processing Industry is one of the largest industries in India – It is ranked 5<sup>th</sup> in terms of production, consumption, export and expected growth
- The processed food market accounts for 32% of the total food market, i.e US \$ 29.4 billion in a total estimated market of US \$ 91.66 billion.

- The Indian food processing industry stands at \$135 billion and is estimated to grow with a compound annual growth rate (CAGR) of 10% to reach \$200 billion by 2015
- The industry contributed 7% to India's GDP
- It employs 13 million workers directly
- Fruits and Vegetables processing which is currently around 2% of total production will increase to 25% by end of 2025

 The Government has formulated and implemented several Plan schemes to provide financial assistance for setting up and modernizing food processing units, creation of infrastructure, support for research and development and human resource development in addition to other promotional measures to encourage the growth of the processed food sector.

### Major Schemes in Agriculture Sector

# National Food Security Mission (NFSM)

- Centrally Sponsored Scheme launched in August 2007.
- The National Food Security Mission will have 3 components (i)Rice (ii) Wheat &(iii) Pulses.
- Major objective of this scheme To increase the production of rice by 10 million tons, wheat by 8 million tons and pulses by 2 million tons by the end of the Eleventh Plan (2011-12).
- It would also create additional employment opportunities.

## Rashtriya Krishi Vikas Yojana (RKVY)

- State Plan Scheme of Additional Central Assistance launched in August 2007
- Objective To incentivize States to enhance public investment to achieve 4% growth rate in agriculture and allied sectors
- Guidelines under RKVY are applicable to all the States and Union Territories that fulfill the eligibility conditions.
- RKVY is projectised and States have taken up over 5300 projects in last five years

# National Horticulture Mission (NHM)

- Centrally Sponsored Scheme launched in 2005-2006
- Objective To promote holistic growth of the horticulture sector through an area based regionally differentiated strategies.
- The scheme is fully funded by the Government and different components proposed for implementation financially supported on the scales laid down.
- At present, 372 districts in 18 States and 3 Union Territories have been covered under NHM.

#### Horticulture Mission for North East and Himalayan States(HMNEH)

- Objective To to improve livelihood opportunities and to bring prosperity to the North Eastern Region (NER) including Sikkim,
- Earlier launched as "Technology Mission for Integrated Development of Horticulture in North Eastern States including Sikkim (TMNE)" in 2001-02.
- Mission has now been renamed as Horticulture Mission for North East and Himalayan States(HMNEH).

- Consists of four mini missions which individually address specific goals and cover entire spectrum of horticulture right from production to consumption through backward and forward linkage.
- Mini Mission-I for Research & Development.
- Mini Mission-II for Improving Production and Productivity
- Mini Mission-III for Post-harvest Management and Marketing
- Mini Mission-IV for Processing and value addition.

# National Mission on Micro Irrigation (NMMI)

- Centrally sponsored scheme on micro-irrigation introduced in January 2006.
- Later upscaled to National Mission on Micro Irrigation (NMMI) during XI plan period.
- Under NMMI 40% of cost of the micro irrigation system will be borne by the Central Government, 10% by State Government and remaining amount by the beneficiary. Additional assistance of 10% of the cost of the Micro Irrigation system will be borne by the Central Government in respect of small and marginal farmers.

## National Bamboo Mission (NBM)

- NBM is a Centrally Sponsored Scheme under implementation in 27 States
- Objective to harness the potential of bamboo crop in the country
- Envisages promoting holistic growth of bamboo sector by adopting area based regionally differentiated strategy to increase area under bamboo cultivation and to improve marketing of bamboo and its products.
- To address forward integration, the Mission is taking steps to strengthen marketing of bamboo products, especially those of handicraft items.

#### Integrated Scheme of Oilseeds, Pulses, Oil-palm and Maize (ISOPOM)

- Centrally Sponsored Scheme since 1.4.2004.
- Is being implemented in 14 major States for Oilseeds and Pulses, 15 States for Maize and 9 states for Oil Palm.
- Implemented by State Governments through their Departments of Agriculture, Indian Council of Agricultural Research (ICAR), National Seeds Corporation (NSC), State Farms Corporation of India (SFCI), Krishak Bharati Cooperative Ltd. (KRIBHCO), National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED) and Indian Farmers Fertiliser Co-operative Limited

# National Project on Organic Farming

- Being Implemented since October 2004 through a National Center of Organic Farming at Ghaziabad and six Regional Centres
- The project supports organic input production infrastructure, technical capacity building of stake holders, human resource development through training, statutory quality control of organic inputs, technology development and dissemination, market development and awareness.
- The revised scheme on 'National Project on Organic Farming' is effective from 2010-11

#### National Agricultural Insurance Scheme (NAIS) and Modified NAIS (MNAIS)

- NAIS is being implemented since Rabi 1999-2000, as part of risk management in agriculture with intention of providing financial support to farmers in the event of failure of crops due to natural calamities, pests and diseases.
- No State-wise allocation of funds is made under this scheme because it is demand driven.
- Funds are released to Implementing Agency, which in turn settles admissible claims of farmers as per provisions of scheme.

- Progress of scheme is measured in terms of farmers/area covered, sum insured, premium collected, claims paid and farmers benefited.
- NAIS has been modified and approved for implementation on pilot basis in 50 districts from Rabi 2010-11 season for a period of two years.

### **Pilot Weather Based Crop Insurance Scheme (WBCIS)**

- To bring more farmers under the fold of Crop Insurance WBCIS was announced in the Union Budget 2007 in selected areas on pilot basis
- WBCIS is intended to provide insurance protection to farmers against adverse weather incidence, such as deficit/excess rainfall, low/high temperature, frost etc. which are deemed to impact adversely the crop production.
- The WBCIS is based on actuarial rates of premium but to make the scheme attractive, premium actually charged from farmers have been restricted to at par with NAIS.

### National Mission on Agricultural Mechanisation (NMAM)

- Objective catalyzing an accelerated but inclusive growth of agricultural mechanization in India.
- NMAM puts 'Small and Marginal Farmers' at the core of interventions
- Mission also proposes to cater to 'adverse economies of scale' by promoting 'custom hiring services' through 'rural entrepreneurship' model.
- Mission will provide a suitable platform for converging all activities related to agricultural mechanization by providing a 'single window' approach for implementation.

# National e-Governance Plan in Agriculture (NeGP-A)

- The Mission Mode Project has been introduced during last phase of the 11thplan to achieve rapid development of agriculture in India through use of Information and Communication Technology (ICT) for ensuring timely access to agriculture related information for the farmers.
- 12 clusters of services have been identified and the project has been sanctioned for implementation in 7 States i.e. Assam, Himachal Pradesh, Karnataka, Jharkhand, Kerala, Madhya Pradesh and Maharashtra.

- Strengthening/ Promoting Agricultural Information System: The scheme envisages to promote e-Governance in Agriculture at the Centre and to provide support to States/UTs. Scheme consists of following components:
  - IT apparatus at DAC Headquarters, field offices and Directorates
  - Development of Agricultural Informatics and Communication;
  - Strengthening of IT Apparatus in Agriculture and Cooperation in the States and Union Territories (AGRISNET)
  - Kisan Call Centers.

### Foreign Direct Investment (FDI) in Agriculture

- The Consolidated FDI Policy effective from 10th April 2012, has been issued by Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India.
- As per the Consolidated FDI Policy 100% Automatic route FDI is permitted in the following areas of Agriculture and Animal Husbandry:
- a) Floriculture, Horticulture, Apiculture and Cultivation of Vegetables & Mushrooms under controlled conditions;

- b) Development and production of Seeds and planting material;
- c) Animal Husbandry (including breeding of dogs), Pisciculture, Aquaculture, under controlled conditions; and
- d) services related to agro and allied sectors
- Besides the above, FDI is not allowed in any other agricultural sector/activity.

## Impact of Climate Change on Indian Agriculture

- Climate change has become an important area of concern for India to ensure food and nutritional security for growing population.
- The impacts of climate change are global, but countries like India are more vulnerable in view of the high population depending on agriculture.
- Since agriculture makes up roughly 16 percent of India's GDP, a 4.5 to 9% negative impact on production implies a cost of climate change to be roughly up to 1.5 percent of GDP per year.

- The Government of India has accorded high priority on research and development to cope with climate change in agriculture sector.
- The Prime Minister's National Action Plan on climate change has identified Agriculture as one of the eight national missions.
- Climate change will aggravate risks to Indian agriculture and may considerably affect food security
- Building climate resilience, is critical.

- The Indian Council of Agricultural Research has initiated a 'National Initiative on Climate Resilient Agriculture' (NICRA) for 2010-12 - a scheme with an outlay of `350 crore.
- This initiative has been planned as a multidisciplinary, multi-institutional effort covering crops, livestock, and fisheries and focusing mainly on adaptation and mitigation of climate change in agriculture.

# **Important Organizations**

- National Bank for Agriculture and Rural Development (NABARD)
- Agricultural and Processed Food Products Export Development Authority (APEDA)
- National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED)
- Indian Farmers Fertiliser Co-operative Limited (IFFCO)
- Indian Council of Agricultural Research (ICAR)

- National Centre for Agricultural Economics and Policy Research (NCAP)
- Food Safety and Standards Authority of India (FSSAI)
- Agriculture Insurance Company of India Limited (AIC)

### **Useful Websites**

- http://agricoop.nic.in/ Department of Agriculture & Cooperation, Ministry of Agriculture, Govt. Of India
- www.mahaagri.gov.in/ Department of Agriculture, Govt. Of Maharashtra
- http://www.dahd.nic.in/dahd/default.aspx -Department of Animal Husbandry, Dairying & Fisheries, Govt. Of India
- http://www.icar.org.in/ Indian Council of Agricultural Research

### **About the Author**

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- In addition to being a Chartered Accountant, Company Secretary, Cost Accountant, MBA, Dip IFR (UK), Mr. Adukia also holds a Degree in Law and Diploma in Labour Laws and IPR.
- Mr. Adukia, a rank holder from Bombay University completed the Chartered Accountancy examination with 1st Rank in Inter CA & 6th Rank in Final CA, and 3rd Rank in Final Cost Accountancy Course in 1983.
- *He started his practice as a Chartered Accountant on 1st July 1983, in the three decades following which he left no stone unturned, be it academic expertise or professional development.*

### **About the Author**

- He has been coordinating with various Professional Institutions, Associations, Universities, University Grants Commission and other Educational Institutions.
- Authored more than 50 books on a vast range of topics including Internal Audit, Bank Audit, SEZ, CARO, PMLA, Anti-dumping, Income Tax Search, Survey and Seizure, IFRS, LLP, Labour Laws, Real estate, ERM, Inbound and Outbound Investments, Green Audit etc.
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