

# IFA INTERNATIONAL WORKSHOP on Effective Last-Mile Delivery

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## TECHNOLOGY AND FARMERS' PRIORITIES

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# Technology and Farmers' Priorities

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## A Farmer's plea

- I represent millions of farmers in the countryside, remote and far away
- My lands lie parched sometimes;
- Sometimes, when my crops stand high almost ready for harvest, a sudden flood washes them all; My children and I are hungry, I have nothing to sell; The money lender is after me for repayment of the loan;
- I look at the sky for better times next season or perish with desperation and poverty.
- Help me keep my land, grow two spades where one grew, feed my family, my neighbour and the Hungry world-
- I plead for information, knowledge and access to the new world of technology and markets for my survival

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## Realities to Contend With

- Agriculture –
  - \* the most traditional of Occupations of human beings
  - \* basic support of livelihoods for a majority of the world
  - \* Massive increase of world population in the coming decades
  - \* Increasing demand for food, fibre, fuel, medicine, and inputs for manufacture.

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## Agriculture in Developed and Developing Countries

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| <ul style="list-style-type: none"> <li>• Developed Countries –</li> <li>• Employ capital intensive high technology</li> <li>• Have control of Global Trade in Agriculture.</li> <li>• Give strategic priority for sustainable incomes to keep farmers on their farms. WTO negotiations bear this out.</li> </ul> | <ul style="list-style-type: none"> <li>Developing countries –</li> <li>• Largely engaged in subsistence agriculture;</li> <li>• Often import food;</li> <li>• Some of them depend on exports of raw materials without any value addition;</li> <li>• Are hit by low productivity, low technology and low incomes. Hunger and poverty persist.</li> </ul> |
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## New Challenges for Agriculture

- Remunerative Returns
- Access to inputs (seeds, credit, fertilisers, pesticides) infrastructure of roads, transport, markets near and far
- Dwindling resources of water, soil, (Human resources too in some parts)
- Food Security Vs Energy security
- Impacts of Climate Change

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## Remunerative Prices

- Un-remunerative and unstable prices deter continued interest in farming. Market intelligence, market networks and price information have to guide him in remunerative farming;
- Recourse to Information Technology is needed for access to Market Information;
- Cell phones and internet are paving the way for this, but needs to get even more focused. The farmer has to know whom to call, where to call and how to reach;
- An army of catalysts to provide this information is essential to help the farmers.

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## Land and soil

Application of manure/fertilizers needs to be based on soil analysis from time to time;

Farmers need access to Soil Testing laboratories;

Extension workers should guide in the use of appropriate manure/fertilizer regime for restoration of nutrients in depleted soils;

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## Integrated pest management

Pest management needs to be guided by –

Careful choice and application of pesticides;

(Farmers should have information about chemical pesticides that have been phased out);

Application of organic pesticides wherever feasible;

Entomological control of plant pests

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## Water Management

Farming needs to be based on balanced water management in terms of –

Crop-specific water intensity;

Conjunctive use of surface and ground water;

Innovative water conservation methods including rain water harvesting.

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## Infrastructure

Priorities are –

- Connectivity through all weather rural roads;
- Transportation, Warehouses, Cold storages and Cold chains;
- Farmers' income would grow in leaps if they could reach their produce to the markets in good condition in time. Farmers in India incur huge losses without this infrastructure.

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## Impacts of Climate Change

- Agriculture is most vulnerable of all sectors of production to climate change.
- The farmer needs most accurate information on rainfall, as more than 60% of agriculture in countries like India is rain-fed.
- He should know precisely when to sow and when to reap according to climatic factors to avoid damage to his crop.

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## Impacts of Climate Change (Contd)

- The farmer needs information on rain, sun and wind before the commencement of the season, during the season, to plan his activities.
- He needs too, information and expert guidance on the precautions he has to take at every point in time
- The farmer, by himself, is also smart and can report on every event on his field – for example, if the bud does or does not appear when it should have, or other pests or insects have gobbled up the leaves. (Farmers' reports can reinforce research data).

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## Food Security Vs Energy Security

Amongst various challenges for Agriculture is

### -OPTIMIZATION OF LAND USE

between growing Food Crops and Fuel Crops

Which will serve the farmer better?

Which will serve the community better?

Which will serve the Economy better?

The farmer is of course dictated by what will be sustainable agriculture for him – he needs information on the pros and cons of the different alternatives to make the right choices on crops to be grown on his land.

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## Farmers And Technology Application

- Relevant Research and dissemination of research findings;
- Need for knowledge intensive processes in Agriculture;
- Transfer of technologies to the farmers;
- Appropriate technologies at affordable costs to the farmer;
- An active and accessible extension system.

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