



Haryana Horticulture

Creating Horticulture Agri-business Opportunities in Haryana

27-11-2022

Department of Horticulture,
Govt. of Haryana



Objectives

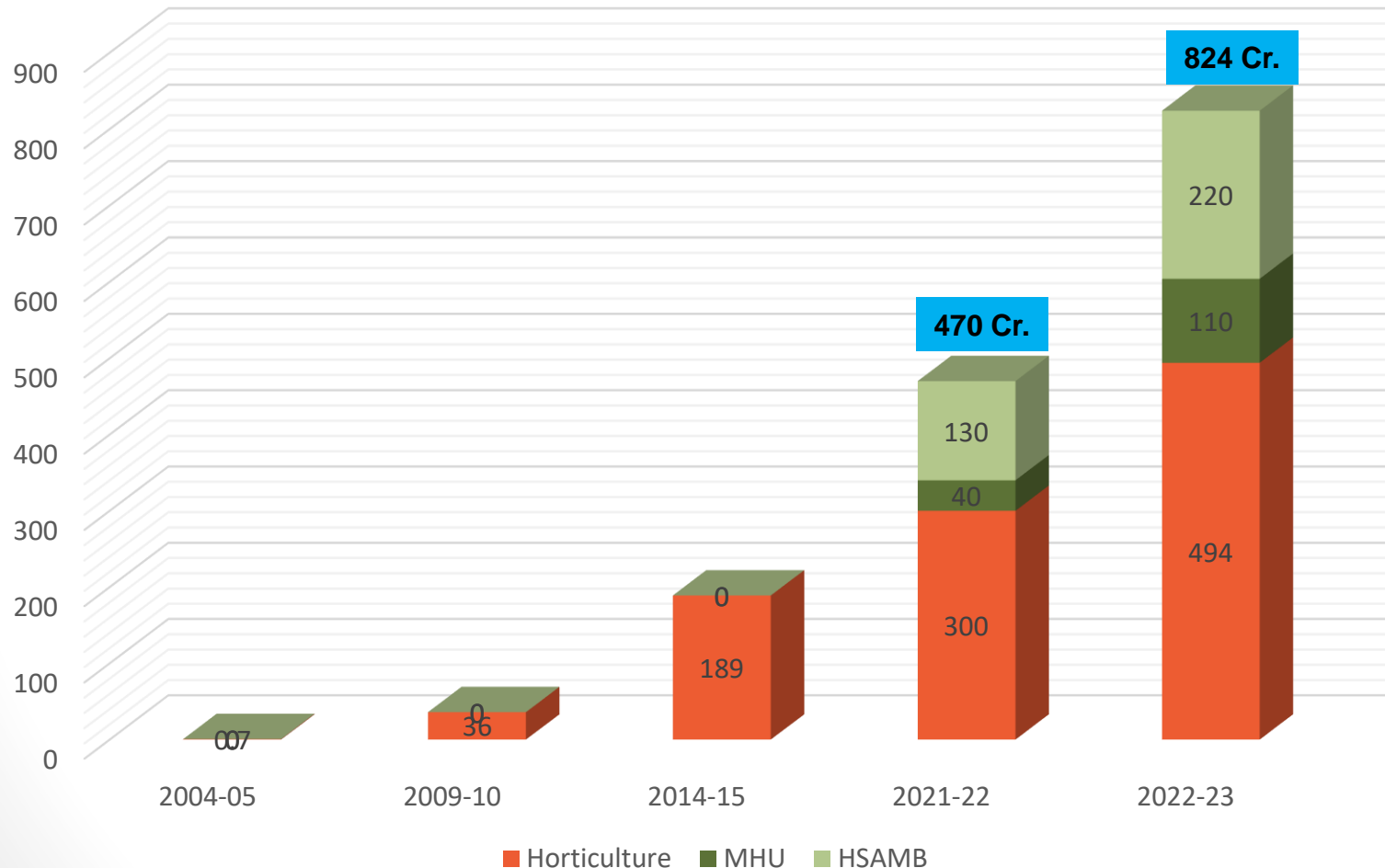
- **Food Security & Nutritional Security**
- **Higher Yields & Greater Return & Economic Sustainability**
- **Higher Employment & Greater Employability**
- **Higher Income & Wide Scope for Diversification & Doubling Farmers Income**
- **Higher Income & Agribusiness, Export & Foreign Exchange**

Challenges

- **MSP in grain crops – a challenge for non-MSP horticulture crops**
- **Capital intensive Horticulture technologies**
- **Research & Development activities – Climate smart agriculture**
- **Creation of Market linkages - On farm logistics and marketing infrastructure.**
- **Food Quality – sanitary & phytosanitary measures**
- **Brackish water & water conservation**
- **Depletion of ground water**
- **Deterioration of soil health**
- **Budget restriction in major infrastructure activities viz. protected structures, water tanks, etc.**

Horticulture Budget

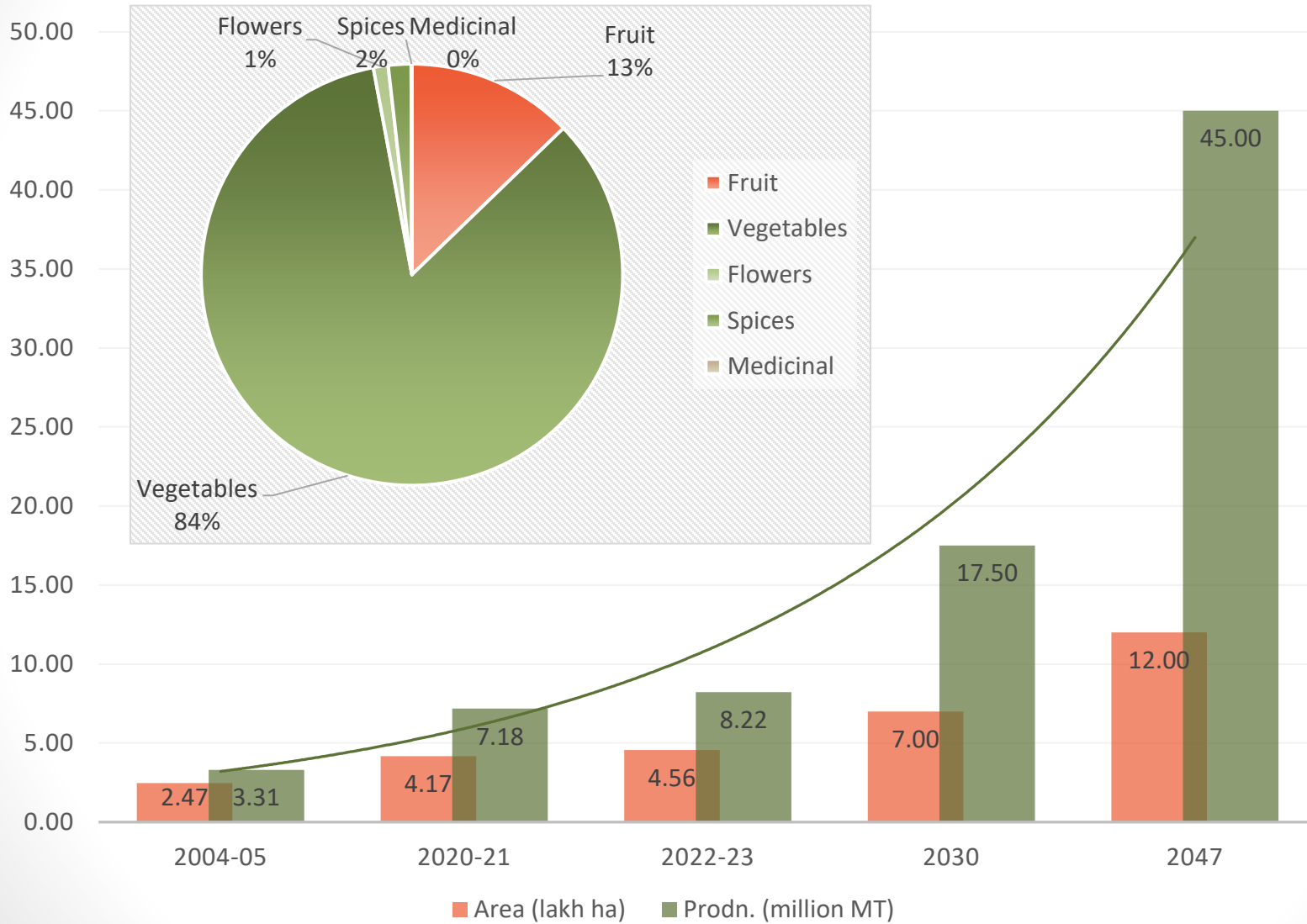
(Rs. in Crore)



Horticulture Diversification (%age)

Year	Geographical Area (lakh ha)	Gross Cropped Area (lakh ha)	Horticulture Area (lakh ha)	%
1966-67	43.99	45.99	0.19	0.41
1990-91	43.78	59.19	0.68	1.15
2004-05	43.71	59.19	2.47	4.17
2020-21	43.71	72.24	4.17	5.77
2022-23	43.71	72.24	4.56	6.31
2030	43.71	72.24	7.00	10.00
2047	43.71	72.24	12.00	16.00

Horticulture: Area and Production - Projections



Horticulture Activities

Crop Area and Farmer Enrolment Programme

Area & Production Estimation Programme

Area Expansion Programme

Farmer Outreach/ Extension Programme

Skill Development Programme

Planting Material, Seed Sampling & Monitoring

Centres/ GGNs Self Sustainable Model

Pesticide Residue Monitoring Programme

IT & ICT Programme

Initiatives

- **Protected Cultivation**
- **Creation of Water Resources**
- **FPO formation**
- **Crop Cluster Programme – On Farm Marketing Support**
- **Online application and ICT programme**
- **DBT**
- **Protected price**
- **Horticulture Insurance**

Crop Diversification Initiatives

1. Horticulture Diversification

- With less than 0.5% area under horticulture of gross cropped area, it grows to 6.5% now, and intends to make it 16% by 2047. Big push for horticulture budget ~800 crore annually.

2. Mera Pani Meri Virasat (MPMV)

- Horticulture (9000 acres) in Kharif 2021 and targeted to diversify by 20,000 acres in 2022.

Produce Procurement & Risk Mitigation Initiatives

1. Meri Fasal Mera Byora (MFMB)

- Linked with e-kharid for selling of horticulture produce in mandi's.
- Around 1 lakh farmers registered, linked with horticultural farmer welfare schemes for online application and processing

2. Bhavantar Barpayee Yojna (BBY)

- 21 Horticultural crops have been covered with protected price and yield, an amount of Rs. 14.12 crore has been disbursed to farmers.

3. Insurance Schemes (MBBY)

- First State to launch an assurance based Mukhyamantri Baagwani Bima Yojna (MBBY) for 21 horticultural crops with very low farmer share of Rs. 750-1000 per acre & crop coverage of Rs. 30,000 to 40,000 per acre.

Marketing Support

1. Setting up International Market

- India International Horticulture Market is being established with total cost of Rs. 7000 crore.

2. Setting up of Flower Market

- Flower market for domestic trade is being set up at Gurugram.

3. Spice Market

- Masala Market is being established at Sonapat.

4. Honey Trade Centre has been completed shall be inaugurated.

Horticulture Initiatives



- Fruits:
 - Covering 10000 ha per year.
 - Target to increase productivity from 15 MT to 25 MT by 2030.



- Vegetables:
 - To increase area twice and production thrice by 2030.
 - Target to increase productivity from 18 MT to 30 MT per ha.

Mushroom Initiatives

- Haryana is leading State for button mushroom production with more than 13000 MT/ annum.
- Big support to mushroom units: more than 50 units with year-round facility for mushroom production are being established each year.



Vertical Farming & Diversification

- **Unique integration model for promotion of precision cultivation – vegetable with MI, Staking, mulching.**
- **~Rs. 500 crore provided @50-65% assistance.**
- **Productivity enhancement – twice.**
- **Impact:**
 - ~ 25,000 farmers benefitted.
 - Around 3000 acres under poly house cultivation.
 - More than 8000 acres under low-cost bamboo cultivation.
 - 3000 acres under low-tunnels.
 - 14,000 acres under mulching.
- **Target to brought 1 lakh ha. under protected cultivation and 10 lakh ha. area under all horticulture crops by 2030 to cover 15% area in agriculture.**
- **Target to enhance productivity 2 times from 15 MT to 28 MT per ha. by 2030.**



Water Resource Management

- Unique integration model: water farm pond + Orchard + Micro-Irrigation.
 - ~17000 farmers benefitted.
 - ~24,000 acres brought under catchment area with orchard establishment and micro-irrigation.
- Around 3115 water farm pond constructed
- Rs. 300 crore provided @70-100%.



Bhavantar Bharpayee Yojana (BBY)

- **Price Protection Scheme (BBY) implemented in the State for horticulture crops**
 - Scheme launched in 2018-19.
 - Farmers are compensated when wholesale price falls below protected price.
 - Protected price fixed for all 21 crops.
 - 21 fruit, vegetables & spice crops are covered.
 - Online portal: www.bby.hortharyana.gov.in
 - An amount of Rs. 14.12 crore has been disbursed to 5403 farmers.
 - Helped farmers to diversify

Technology, QC Lab & IT Initiatives

11 Centre of Excellence

2 Pesticide Residue Labs

16 Online Portals for program monitoring

Center of Excellence



- **Established 11 Center of Excellence (CoE) and 3 are under establishment for different horticulture commodities with an investment of around Rs. 100 crore for fruits, vegetables, potato, bee-keeping, semi-arid crops, flowers, onion, etc.**

- **Activities**

- Latest technologies under demonstration of precision farming, high-density plantations, protected cultivation, vertical farming, new crops, new varieties, organic farming, etc.
- Provides more than 2 crore soil less hybrid vegetable seedlings and more than 2 lakh grafted fruit plants to the farmers per year.
- Bee Policy-2021 to double honey production to 9000 MT in 5 years.
- Potato Policy-2022 to cover 15% seed potato business in India in 5 years.
- 120 Village of Excellence (VoE) linked with CoEs.

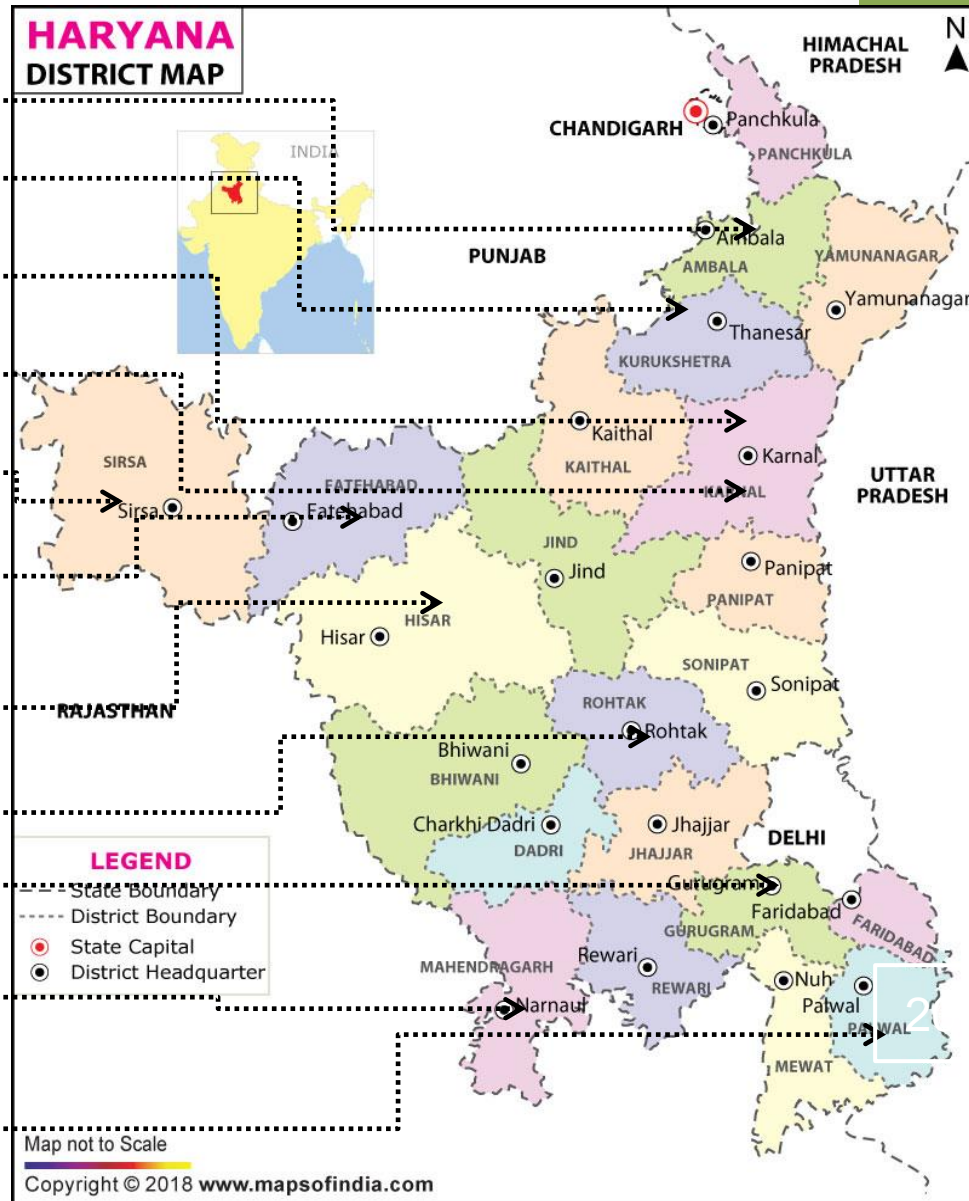
- **Impact**

- ~ 3000 acres brought under protected cultivation
- ~ 8000 acres brought under vertical farming
- ~ 14000 acres brought under mulching
- ~ 10000 bee-boxes per year
- ~ Significant impact in diversification to ~2 lakh ha. area since establishment of Centers



Excellence Centres – 11 Established + 4 Under Progress

- Integrated Bee Keeping Development Centre, Ram Nagar (Kurukshetra)
- Centre for Sub-tropical fruits, Ladwa (Kurukshetra)
- Potato Technology Centre, Shamgarh (Karnal)
- Centre of Excellence for Vegetables, Gharuanda (Karnal)
- Centre of Excellence for Fruits, Mangiana (Sirsa)
- Guava Demonstration Centre, Bhuna (Fatehabad)
- Multi Crops Demonstration Centre, Barwala (Hisar)
- Hi-tech Greenhouse Seedling Centre, Rohtak
- Hi-tech Greenhouse Seedling Centre, Gurugram
- Integrated Horticulture Development centre Sundrah (Mahendargarh)
- Integrated Horticulture Development Centre Hodal (Palwal)



Center of Excellence

Sn.	Centre	Amount (Rs. in Crore) Date of Inauguration	Activities
Centers with Israel Co-operation			
1	Centre of Excellence for Vegetables (CEV), Gharaunda, Karnal	6.00 (17.01.2011)	Vegetable Cultivation Technologies, Protected Cultivation, Precision Farming, Hybrid Vegetable Cultivation
2	Centre of Excellence for Fruits (CEF), Mangiana, Sirsa	9.70 (22.06.2013)	Citrus, Pomegranate, Fruit Cultivation Technologies, New Varieties, Precision Farming, Grafted Plants
3	Centre for Sub-Tropical Fruits (CSTF), Ladwa, Kurukshetra	9.10 (06.04.2016)	Sub-Tropical Fruit Mange, Cultivation Technologies, New Varieties, Precision Farming
4	Integrated Bee-keeping Development Centre (IBDC), Ramnagar, Kurukshetra	10.50 (10.11.2017)	Honeybee rearing, Bee Boxes, Bee Colonies, Honey Processing, Labs, Bumble Bees
5	Centre of excellence for Semi-Arid Horticulture Crops, Gignow, Bhiwani	8.25 (Under Establishment)	Semi-Arid Fruit-Date Palm Cultivation Technologies, New Varieties, Precision Farming, Grafted Plants

Center of Excellence cont....

Sn.	Centre	Amount (Rs. in Crore)	Activities
Centers established under State Plan & MIDH			
1	Potato Technology Centre, Shamgarh, Karnal	4.50 (06.04.2016)	New Potato Varieties, Aeroponics, Seed Potato Production, Minitubers, Tissue Culture Lab,
2	Guava Demonstration Centre, Bhuna, Fatehabad	5.42 (27.10.2020)	Guava Fruit Cultivation Technologies, New Varieties, Precision Farming, Grafted Fruit Plants
3	Centre for Vegetable Seedling Production, Gurugram	1.05 (17.12.2013)	Hybrid Vegetable Seedling Productions
4	Centre for Vegetable Seedling Production, Samargopalpur, Rohtak	1.05 (17.12.2013)	Hybrid Vegetable Seedling Productions
5	Integrated Horticulture Development Centre, Hodal, Palwal	4.94 (13.10.2018)	Fruit & Vegetable Cultivation Technologies, Precision Farming, Hybrid Vegetable Seedling Productions
6	Integrated Horticulture Development Centre, Sundrah, Narnaul	4.98 (01.09.2019)	Fruit & Vegetable Cultivation Technologies, Precision Farming, Hybrid Vegetable Seedling Productions
7	Integrated Horticulture Development Centre, Barwala, Hisar	3.00 (Under Establishment)	Fruit & Vegetable Cultivation Technologies, New Varieties, Precision Farming, Hybrid Vegetable Seedling Productions
8	Center of Excellence for Flowers, Munimpur, Jhajjar	5.00 (Under Establishment)	Fruit & Vegetable Cultivation Technologies, Hybrid Vegetable Seedling Productions
9	Center of Excellence for Onions, Pinangan, Nuh	10.00 (Under Establishment)	Onion Cultivation Technologies, Seed Production, Bulb Production, Precision Farming

Collaborations & MoUs

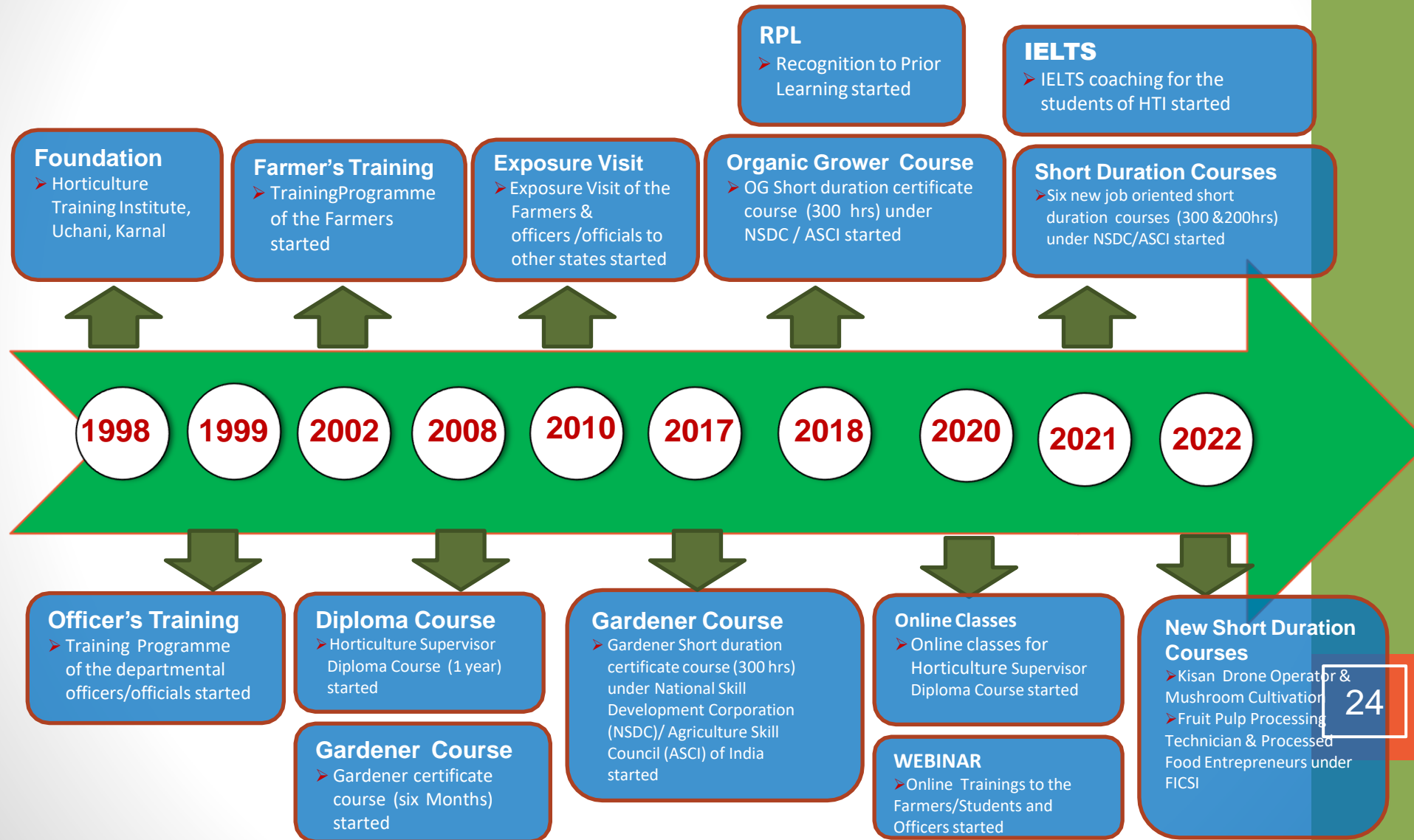
Israel & UK Govt. - CoEs

CIP – Potato Varieties

CPRI – Aeroponics and production Tech.

NCIPM – e-pest Surveillance & Fruit Fly Project

Horticulture Training Milestones





खुशहाल बागवानी

बागवानी अनुदान



एकीकृत बागवानी विकास मिशन
Mission for Integrated Development of Horticulture (MIDH) (19 विलो में)
यहाँ क्लिक करें
<http://hortnet.gov.in>

फसल पंजीकरण, भावांतर, बीमा, प्रशिक्षण



मेरी फसल मेरा ब्योरा
Men Fasal Mera Bhyora (MFMBS)
यहाँ क्लिक करें
<http://fasal.haryana.gov.in>

एफ पी ओ निर्माण, अनुदान, संवर्धन



लघु कृषक कृषि-व्यापार संघ हरियाणा
Small Farmer Agri-Business Consortium Haryana (SFACH)
यहाँ क्लिक करें
<http://sfacharyana.in>

अन्य सेवाएं



बागवानी तकनीकी जानकारी
Horticulture Technical Information
यहाँ क्लिक करें
<http://info.hortharyana.gov.in>

एकीकृत बागवानी

एकीकृत बागवानी विकास योजना
Integrated Horticulture Development Scheme
(3 विलो में व कुछ म्दो में सभी विलो के लिए)
यहाँ क्लिक करें
<http://hortnet.gov.in>



भावांतर भरपाई योजना
Bhavantar Bhrayee Yojana (BBY)
यहाँ क्लिक करें
<http://lbbby.hortharyana.gov.in>



किसान उत्पादक संगठन निर्माण
Farmer Producer Organisation Formation (FPO)
यहाँ क्लिक करें
<http://fpo.sfacharyana.in>



एकीकृत कीट प्रबंधन
Integrated Pest Management
यहाँ क्लिक करें
<http://ipm.hortharyana.gov.in>



संरक्षित संरचना पोर्टल
Protected Structure Portal
(3 विलो में - रेवाड़ी, फरीदाबाद, कैथल)
यहाँ क्लिक करें
<http://polynet.hortharyana.gov.in>



मुख्यमंत्री बागवानी बीमा योजना
Mukhya Mantri Bagwani Bima Yojana (MBBY)
यहाँ क्लिक करें
<http://mbby.hortharyana.gov.in>



पैक हाउस - सप्लाय चैन
फसल समूह विकास कार्यक्रम
Crop Cluster Development Programme (CCDP)
यहाँ क्लिक करें
<http://ccdp.sfacharyana.in>



फल व सब्जी पौध बुकिंग
Fruit & Vegetable Plant Booking
यहाँ क्लिक करें
<http://nursery.hortharyana.gov.in>



प्रधानमंत्री कृषि सिंचाई योजना
Pradhan Mantri Krishi Sinchayee Yojana
(31.03.2021 तक सभी विलो के लिए)
यहाँ क्लिक करें
<http://minet.hortharyana.gov.in>



बागवानी प्रशिक्षण एवं भ्रमण
Horticulture Training & Travel (HTT)
यहाँ क्लिक करें
<http://kaushal.hortharyana.gov.in>



फल नर्सरी लाइसेंस
Fruit Nursery License
यहाँ क्लिक करें
<http://fruitlicense.hortharyana.gov.in>



सब्जी बीज लाइसेंस
Vegetable Seed License
यहाँ क्लिक करें
<http://seedlicense.hortharyana.gov.in>

Online portal

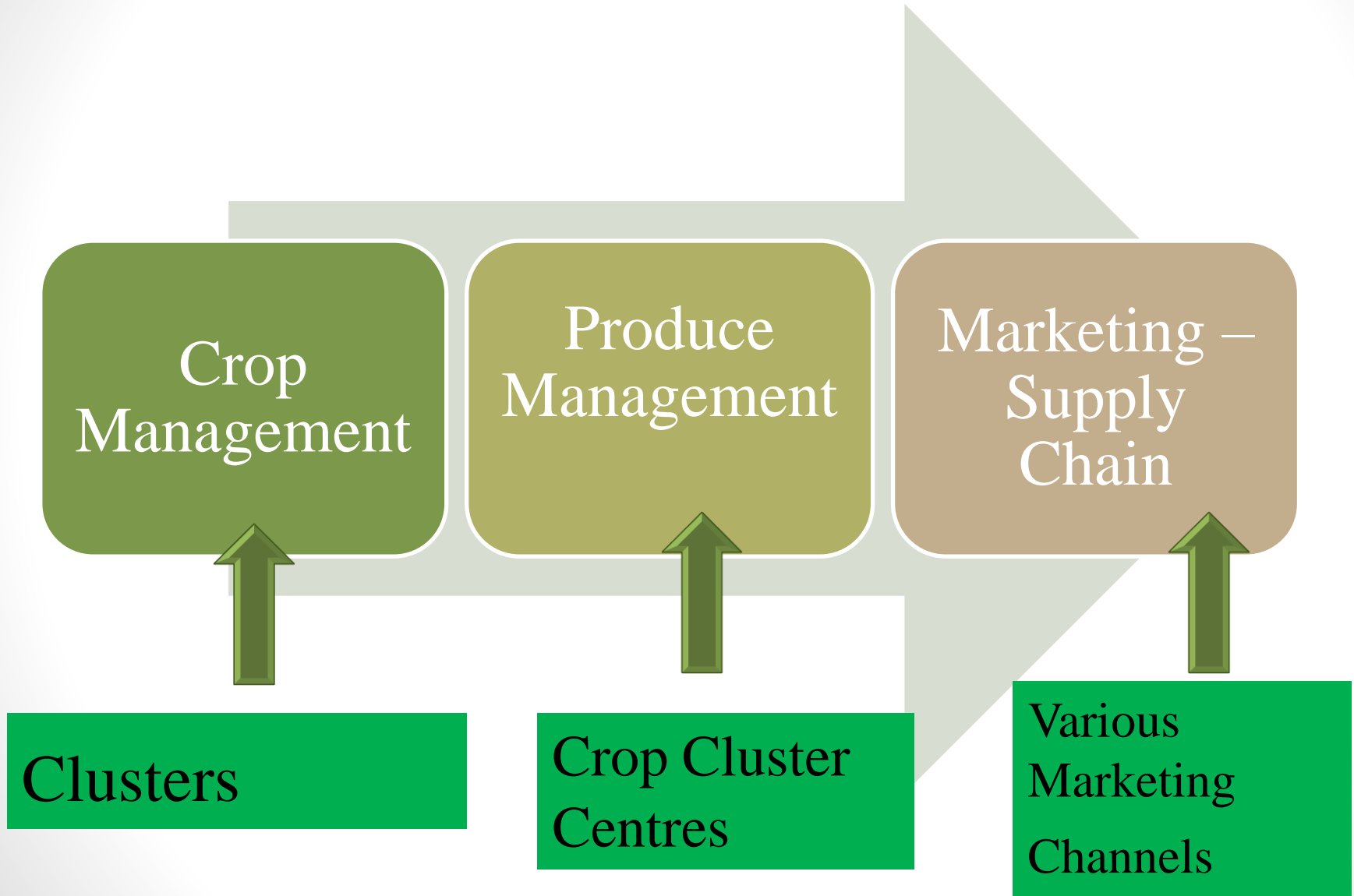
<https://kaushal.hortharyana.gov.in/>

Agri Business Focused Area

- Crop Clusterization
- Crop Mapping
- FPO Formation and Promotion
- Backward and Forward Linkages
- PHM Infrastructure
- Agribusiness of FPOs



Cluster Concept



Crop Cluster: 393

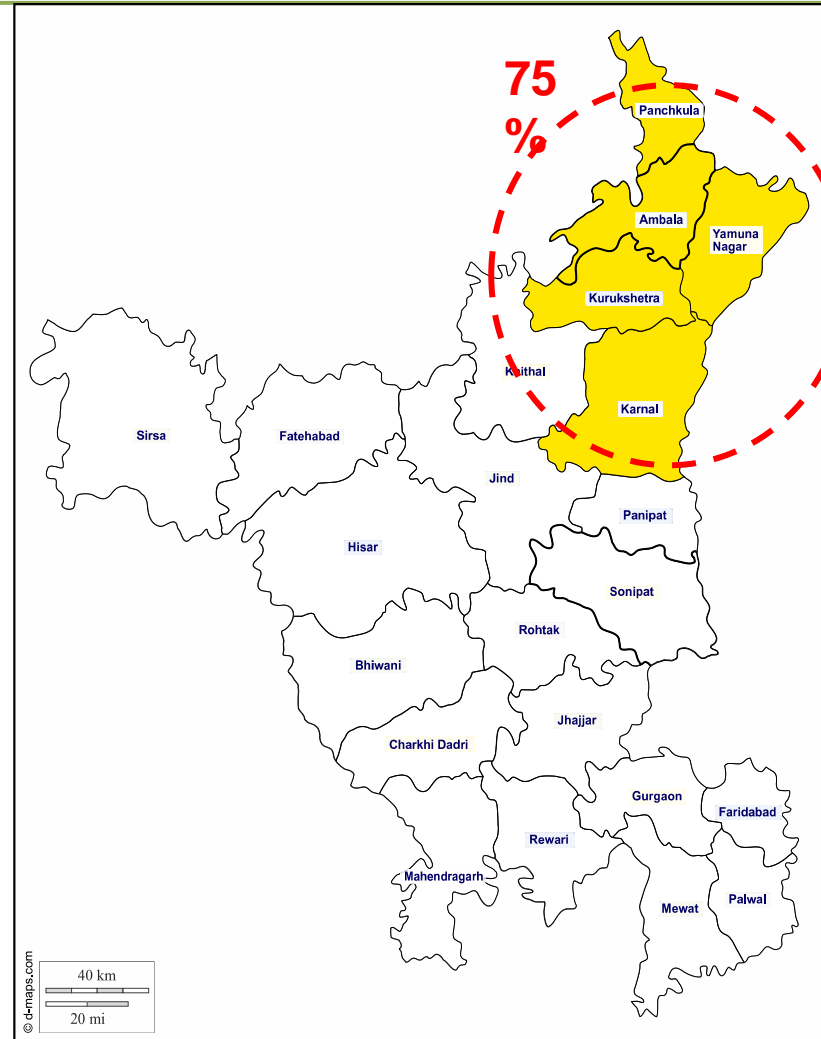


Potato Cluster

- 75% of potato in the state comes from Kurukshetra, Yamuna Nagar, Karnal, Ambala & Panchkula

Generic Infrastructure requirement for Potato

- ▶ Integrated Pack-house
 - ▶ washing
 - ▶ electronic and mechanized sorting & grading line,
 - ▶ Packaging line,
 - ▶ Pre cooling chamber
- ▶ Cold Storage Unit(s)



FPOs in Haryana & Govt. Support

- Total FPOs in State: 683
- Handholding & Management Cost under CSS: Rs. 60.15 lakh per FPO
- Handholding Support Component :
 - Mobilization of farmers
 - Training & Exposure Visits
 - Salary of CEO & Accountants
 - FPO registration cost
 - Office rent, electricity, Minor equipment's for FPOs office, FPO equity support
- Financial support for PHM infrastructure projects
 - Upto Rs. 6.00 crore under CCDP
 - Average cost of projects in hand: Rs. 3.00 crore per project
 - No. of Projects Completed : 33
 - No. of Project Under Progress : 35

Agri Business Activities

- 54 MoU by 34 FPOs with 37 Agri. Sector Companies
- Trading of 13400 MT Horticulture Produce under these MoUs
- FPOs registered on e-NAM : 248
- Input shops : 67
- Custom hiring centres : 48
- Retail outlet/kiosk : 14
- FPO offices : 135

Crop Cluster Development Programme

- CCDP was launched in 2017-18 with a cost of Rs. 510 Cr.
- 10 Integrated Packhouses-cum-Crop Cluster Centres with cost of 45.53 Cr. have been completed.
- 63 with cost of Rs. 198.27 Cr. are under progress.
- 109 projects with cost of Rs. 353.50 Cr. are under consideration



Sn.	Component	% assistance
1.	Collection centre/pack house development in different clusters including grading/packing machines, cold rooms/ storages, reefer vans, reefer container, etc.	90
2.	Primary/Minimal & Food Processing Unit	70
3.	Packing and packaging material cost as per project	70
4.	Allied activities: Solar Power, Waste Management, boundary wall, paver blocks, etc. mainly items which are located outside the pack house building but within integrated pack house centre.	70
5.	E-platforms and infrastructures	70
6.	Retail out lets	70
7.	Specialized Transport vehicle	70

Optimal Agro Producer Company Ltd

- No. of Farmer members – 159
- Total project cost – 330.83 Lakh
- Total Subsidy – 280.70 Lakh
- Commodity – Capsicum
- Area under Horticulture crops – 1273.50 Acres



Kharisureran Farmer Producer Company Ltd

- No. of Farmer members – 164
- Total project cost – 331.77 Lakh
- Total Subsidy – 287.16 Lakh
- Main Crop/Crops – Kinnow
- Area under Horticulture crops – 1300 Acres



Grow Smart Farmer Producer Company Ltd

- No. of Farmer members – 199
- Total project cost – 599.92 Lakh
- Total Subsidy – 563.63 Lakh
- Main Crop/Crops – Potato and Onion
- Area under Horticulture crops – 1200 Acres



Pehowa Vegetable Farmer Producer Company Ltd

- No. of Farmer members – 159
- Total project cost – 505.94 Lakh
- Total Subsidy – 439.45 Lakh
- Main Crop/Crops – Potato, Tomato, Capsicum
- Area under Horticulture crops – 1200 Acres



Markandeshwar Farmer Producer Company Ltd

- No. of Farmer members – 159
- Total project cost – 330.83 Lakh
- Total Subsidy – 280.70 Lakh
- Main Crop/Crops – Capsicum
- Area under Horticulture crops – 837 Acres



Investor Engagement

- ✓ **Workshop on Investment in Infrastructure Creation and Market Linkage in Haryana ~ 275+ participants**
- ✓ **Continuous engagement and field visits being organized for the investors**
- ✓ **Reach out activities ongoing to attract individual investors for setting up processing infrastructure**
- ✓ **Dedicated workshop for individual investors to be organized**
- ✓ **Discussions ongoing with interested investors for contract farming, collection centres, O&M Partnerships, Input Shops etc.**



Value Chain Analysis

Year 1



Ginger



Kinnow



Potato



Tomato



Strawberry



Capsicum



Onion



Okra



Garlic



Guava



Honey



Carrot



Green Peas



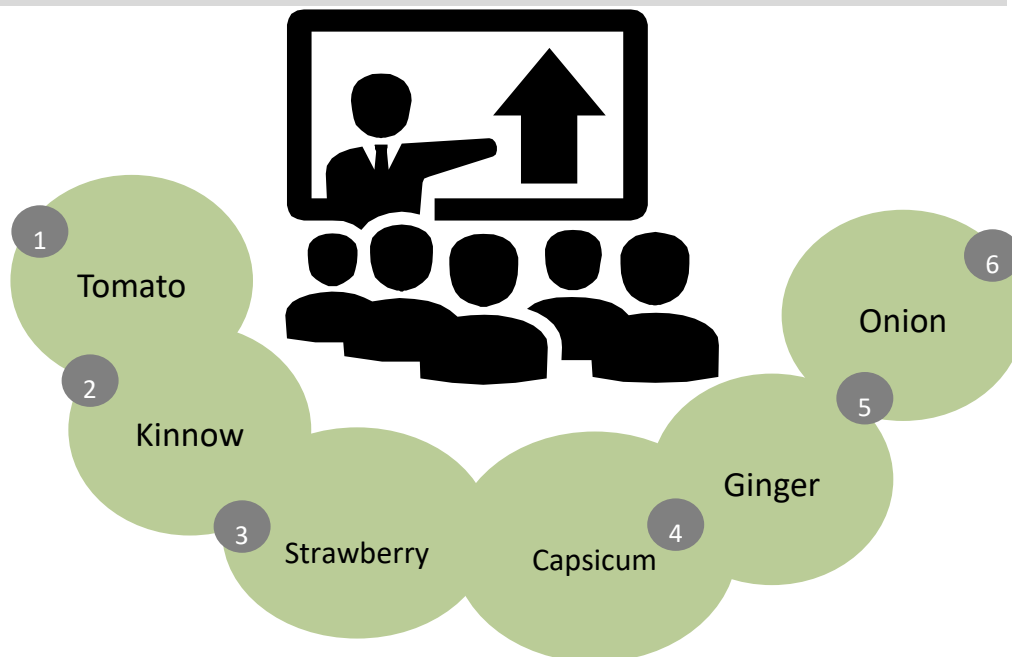
Mushroom



Peach

Strengthening and Capacity building of farmers

Crop Specific Workshops



Other Workshops

E-Nam FPO Module

Packaging Technology for Fresh and Processed produce

Cold Chain Management

Investment in Infrastructure Creation and Market Linkage in Haryana

Social Media Orientation

Training of Board of Directors of FPOs in collaboration with MANAGE - Planned

Thanks

Website: <http://hortharyana.gov.in>



@horticulturehry



Directorate of Horticulture, Haryana



Directorate of Horticulture, Panchkula, Haryana