

NATIONAL CONFERENCE ON AGRICULTURE (*KHARIF* CAMPAIGN-2021)

through Video Conference

30 April, 2021

RABI REVIEW & *KHARIF* PROSPECTS



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AREA AND PRODUCTION OF CROPS IN 2020-21 (2nd Adv. Est.)

Crops	Area (Million hectare)			Production (Million ton)		
	<i>Kharif</i>	<i>Rabi</i>	Total	<i>Kharif</i>	<i>Rabi</i>	Total
Rice	39.45	4.53	43.98	103.75	16.57	120.32
Wheat	-	31.58	31.58	-	109.24	109.24
Sorghum	1.54	2.55	4.10	1.85	2.89	4.74
Bajra	7.29	-	7.29	10.30	-	10.30
Maize	8.03	1.68	9.70	21.41	8.75	30.16
Ragi	1.00	-	1.0	1.87	-	1.87
Small millets	0.41	-	0.41	0.31	-	0.31
Barley	-	0.69	0.69	-	1.99	1.99
Total Coarse cereals	18.34	4.92	23.27	35.74	13.63	49.36
Total Pulses	13.18	15.81	28.99	8.46	15.96	24.42
Total food grains	70.98	56.84	127.81	147.95	155.40	303.34
Total oil seeds	20.82	8.00	28.82	25.01	12.3	37.31

RAINFALL – RABI & SUMMER SEASON (mm)

METEOROLOGICAL SUBDIVISIONS	POST-MONSOON, 2020 (01.10.20 to 31.12.20)			WINTER - 2021 (01.01.21 to 28.02.21)			MARCH, 2021 ONWARD (01.03.21 to 21.04.21)		
	ACTUAL	NORMAL	% DEP.	ACTUAL	NORMAL	% DEP.	ACTUAL	NORMAL	% DEP.
EAST & NORTH EAST INDIA	142.1	166.7	-15%	11.5	52.1	-78%	89.7	143.5	-37%
NORTH WEST INDIA	34.3	55.9	-39%	39.1	78.9	-51%	45.2	69.6	-35%
CENTRAL INDIA	84.9	76.0	12%	8.8	15.2	-42%	11.7	14.5	-19%
SOUTH PENINSULA	319.4	277.1	15%	56.1	16.2	246%	33.7	35.7	-6%
COUNTRY AS A WHOLE	124.6	123.8	1%	27.8	40.8	-32%	38.8	56.2	-31%

- Post monsoon rainfall : was (+) 1%
 - Rabi 2020-21 rainfall winter : was (-) 32%
- Rabi: Western disturbances rains coupled with cold wave condition benefitted Rabi crops (wheat, mustard and gram)
- Summer 2021 rainfall : was (-) 31%

STATUS OF AREA SOWN FOR SUMMER CROP

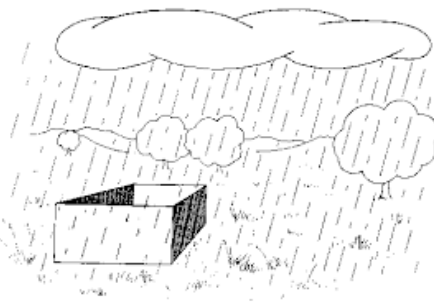
(on 30.4.2021)

Sl. No.	Crops	Area Sown (LAKH HA)		Increase/ Decrease over last year
		2021	2020	
1	Rice	39.23	34.01	5.22
2	Pulses	13.93	8.71	5.22
a	Greengram	11.01	6.68	4.33
b	Blackgram	2.59	1.78	0.81
c	Other Pulses	0.33	0.25	0.08
3	Coarse Cereals	11.98	11.41	0.57
a	Jowar	0.64	0.77	-0.13
b	Bajra	3.41	3.45	-0.05
c	Ragi	0.21	0.17	0.04
d	Maize	7.72	7.01	0.70
4	Oilseeds	10.61	9.32	1.30
a	Groundnut	5.83	5.07	0.76
b	Sunflower	0.51	0.46	0.05
c	Sesamum	4.19	3.75	0.44
d	Other Oilseeds	0.09	0.04	0.04
Total		75.75	63.44	12.31

IMD- FORECAST FOR MONSOON 2020:

1st Stage IMD Forecast on Monsoon (15 April 2020):

- Southwest monsoon seasonal (June to September) rainfall over the country as a whole is likely to be normal, 96-104% of Long Period Average LPA (88cm). (Avg 98% LPA)
- Neutral Indian Ocean Dipole:
- La Nina is towards neutral conditions
- Region wise forecast will be released by IMD in last week of May 2021



Preparedness for all the possible scenarios:

- Early withdrawal
- Less rainfall
- Excess rainfall

Contingency plan for 648 districts is ready (ICAR-CRIDA)

Drought prone areas: Bundelkhand region (UP & MP) Vidarbha, Marathwada (Maharashtra), North Interior Karnataka, Saurashtra, Kutch (Gujarat), Anantpur (Andhra Pradesh), Adilabad, Nizamabad (Telangana), Jharkhand, North West Rajasthan



LET US STRATEGISE ACCORDINGLY

- Agro-climatic zone wise planning
- Cluster approach for crop productivity enhancement
- Cropping system centric interventions :
Focus on Pulse, Oil seeds, Nutricereals
- Utilization of rice fallow, rice bunds, intercropping, rainfed areas, summer season
- Increasing Seed Replacement Ratio and Varietal Replacement
- Increasing water and nutrient use efficiency
- Large scale adoption of improved technologies



INTERVENTIONS FOR RICE

Production (million ton)

2020-21 (2 nd estimates)			Target 2021-22		
<i>Kharif</i>	<i>Rabi</i>	Total	<i>Kharif</i>	<i>Rabi</i>	Total
103.75	16.57	120.32	104.3	16.8	121.10

- **Line Transplanting & Machine Transplanting**
(20% of farmers in Bihar, Jharkhand, Odisha, Chhatisgarh, MP use broadcasting method)
- **Direct seeded Rice (DSR)**
(Jharkhand, Odisha, Chg, MP 8% farmers use this method)
- **System of Rice Intensification (SRI)**
- **Promotion of hybrids**
- **Tolerant varieties: Drought, salinity, submergence (flood tolerant)**
- **Chemical weed control in Eastern region**



SAFE & JUDICIOUS USE OF TRICYCLAZOLE & BUPROFEZIN in RICE

How to avoid presence of residue in rice export: GAP

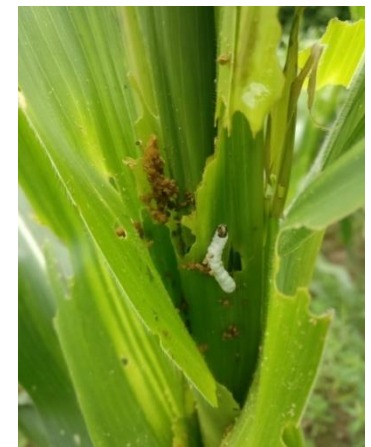
- **Tricyclazole : Neck & Panicle blast**
- **Buprofezin : Leaf hopper, mealy bug, whitefly**
- Apply at booting stage or just before appearance of panicles
- Waiting period 30 days
- No violation of label claim (correct dose, right time & method, good brand)
- **Massive campaign done last year by states yielding results – export has increased**
- Attention by 7 basmati growing states: Punjab, Haryana, J&K, H.P, Uttarakhand, UP, Bihar

FOCUS ON KEY TECHNOLOGIES : MAIZE

Production (million ton)

2020-21 (2 nd estimates)			Target 2021-22		
<i>Kharif</i>	<i>Rabi</i>	Total	<i>Kharif</i>	<i>Rabi</i>	Total
21.41	8.75	30.16	22.1	8.8	30.9

- Large scale adoption of single cross hybrids
- Tolerant varieties: Drought, salinity.
- Integrated Nutrient Management
- Integrated Pest Management for control FALL ARMY WORM
- Diversification of paddy with maize
- Maize drier



SUSTAIN PULSES PRODUCTION

Production (million ton)					
2020-21 (2 nd estimates)			Target 2021-22		
<i>Kharif</i>	<i>Rabi</i>	Total	<i>Kharif</i>	<i>Rabi</i>	Total
8.46	15.96	24.42	9.82	15.18	25.00

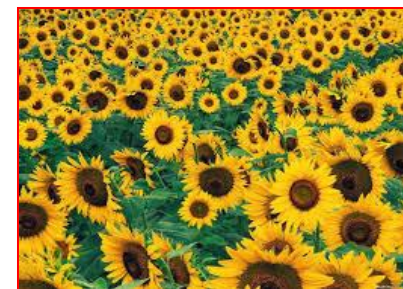
- Intercropping with Oilseeds, Sugarcane, Maize, Cotton
- Utilization of bunds for Arhar
- Seed treatment with Rhizobium
- Fertilizer Application based on Soil Health Card.
- Micro-nutrients as per requirement - Molybdenum in particular for nodulation
- Amelioration with lime in acidic soils.
- Weed management in Kharif
- Pest surveillance and integrated pest management (bio-pesticides & pheromone trap etc.).
- Minor kharif pulses [cowpea, mothbean, horse gram (kulthi)]



OILSEEDS ARE OUR PRIORITY NOW

Production (million ton)

2020-21 (2 nd estimates)			Target 2021-22		
<i>Kharif</i>	<i>Rabi</i>	Total	<i>Kharif</i>	<i>Rabi</i>	Total
25.0	12.3	37.3	26.2	11.4	37.6



- **Intercrop with pulses/cotton/maize/millet.**
- Adoption of Broad Bed Furrow and Ridge Furrow techniques.
- Improved varieties of Soybean, Groundnut, Sesame, Sunflower.
- Soil test based application of macro and micro nutrients
- **Replacement of upland/low yielding paddy area with oilseeds.**
- Introduction of soybean in non-traditional areas – Bihar, Jharkhand, Odisha, Manipur other North Eastern states
- **YMV in soybean.**
- **Soybean:** Targeting 73 potential districts of Chg, Kar, MP, Mah, Raj
 - 42 districts intercropping
- **Sunflower:** Targeting 63 potential districts of AP, Bih, Ch, Kar, MP, Mah, Odi, Pun, TN, Tel, WB
- **Sesame:** Targeting 59 potential districts of Guj, WB, MP, Maha, Raj, UP

Oil Palm Area Achievement and Target

State	Area Achieved upto March 2020 (ha)	Target 2020-21 (ha)	Ach. upto 2020-21 (ha)	Target 2021-22 (ha)
General States				
Andhra Pradesh	175839	10000	8801	15000
Chhattisgarh	5383	300	153	500
Goa	970	0	0	200
Gujarat	6049	225	10.15	500
Karnataka	46330	1700	624.6	2000
Kerala	5794	0	0	1000
Odisha	22906	700	195.32	1500
Tamil Nadu	32409	450	300	1500
Telangana	19522	2500	1823	15300
Total GS	315202	15875	11799.76	37500
NE States				
Arunachal Pr.	3126	2240	1120	4000
Assam	2196	1200	0	2000
Manipur	0	200	97.83	1000
Meghalaya	0	0	0	1000
Mizoram	26642	2200	264	2500
Nagaland	4072	1100	825	1500
Tripura	530	0	0	500
Total NE state	36566	6940	2306.83	12500
Other States	3067	0	0	0
Grand Total	354835	22815	14106.59	50000

STRATEGIES FOR NUTRICEREALS- Millets

BUT HOW TO CREATE DEMAND IS CHALLENGE

Production (million ton)

2020-21 (2 nd estimates)			Target 2021-22		
<i>Kharif</i>	<i>Rabi</i>	Total	<i>Kharif</i>	<i>Rabi</i>	Total
14.33	2.89	17.22	15.2	2.9	18.1



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■ Implementation of NFSM - Nutri-cereals

- Integrated nutrient management
- Integrated pest management
- Water saving technologies : Sprinkler
- Value chain integration of small producers
- Formation of FPO,s/COE/Processing clusters
- Capacity building of farmers
- 14 states, 202 districts, 2021-22



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REQUIREMENT & AVAILABILITY OF SEEDS FOR MAJOR CROPS IN KHARIF-2021

Crops Group	Crop	Requirement (in Quintals)	Availability (in Quintals)	Surplus/Deficit (in Quintals)
1. Cereals	Paddy	76,87,396	85,12,940	8,25,544
	Maize	11,23,718	10,50,273	-73,445
2. Nutri-Cereals	Bajra	2,26,062	2,39,467	13,405
	Jowar	1,10,304	1,17,295	6,991
	Ragi	45,347	50,108	4,761
3. Pulses	Arhar	2,89,092	3,22,854	33,762
	Urd	2,35,883	2,44,086	8,203
	Moong	1,79,714	2,28,813	49,100
	Cowpea	10,145	10,949	804
	Moth	25,000	28,522	3,522
4. Oilseeds	Groundnut	19,86,292	21,69,544	1,83,252
	Soybean	28,98,669	28,11,013	-87,656
	Sunflower	13,737	14,122	385
	Sesame	19,550	24,023	4,474
	Niger	3,504	3,689	185
	Castor	49,556	91,297	41,741

*Deficiency in Maize & Soybean will be met from NSC, Private Seed Companies & Farm Saved Seed.

REQUIREMENT & AVAILABILITY OF FERTILIZERS FOR *KHARIF* 2021

(Lakh Tonnes)

Fertilizers	<i>KHARIF</i> : 2020		<i>KHARIF</i> : 2021
	Assessed requirement	Total sales	Assessed requirement
Urea	167.68*	166.72	177.53**
DAP	51.61	64.20	65.18
MOP	20.22	18.27	20.24
NPK	52.95	63.25	61.87
SSP	26.42	26.02	26.46

*Reserve Allocation: 3.70 LMT (Total Allocation=171.38 LMT)

** Reserve Allocation : 2.85 LMT (Total Allocation = 180.37 LMT)

Use of Bio-fertilizers, Neem Coated urea, Use of Micro-nutrients

Source: INM & FMS, DAC, GOI

Tentative Targets: 2021-22

	Kharif 2021	Rabi 2021-22	Total
Crops	Production (million ton)		
Rice	104.3	16.8	121.1
Wheat	-	110.0	110.0
Jowar	2.20	2.90	5.10
Bajra	10.50	-	10.50
Maize	22.1	8.80	30.90
Ragi	1.90	-	1.90
Small Millets	0.61	-	0.61
Barley	-	2.20	2.20
Total Coarse Cereals	37.31	13.90	51.21
Total Pulses	9.82	15.18	25.00
Total Foodgrains	151.43	155.88	307.31
Total Oilseeds	26.20	11.30	37.50
Cotton - million bales (1 bale=170 kgs)	37	-	37
Sugarcane (million ton)	397	-	397
Jute & Mesta- Million bales (1 bale+180kg)	10.6		10.6

Increasing Onion area in Kharif Season-2021

States	Area Ha (2019-20)	Area in Ha (2020-21)	3 year average (2018-19 to 2020-21)	Proposed Area to be increased
MP	5280	4729	5243	6500
Gujarat	5000	2520	3840	5500
Rajasthan	17813	22295	14432	24500
Haryana	9000	7250	9417	10000
UP	4000	4287	4096	4500
Total	41093	41081	37028	51000

- **37 lakh metric ton (2020-21), 38.68 lakh mt (2019-20)**
- **Major states : Karnataka (50%), Maharashtra and Andhra Pradesh (20%)**
- **Availability gets affected when these traditional areas are hit by natural calamities**
- **Kharif Onion: Meeting local demand and maintaining prices during lean period**

Horticulture Crops – Roadmap for Planting material production

Sl No /Crop	Area at present (000 ha)	Annual Area increase target(%)	Area to be increased in coming five years (000 ha)	No of plants (lakhs)	Seeds required (tons)	No of Nursery /seed production units required
Fruit crops						
1. Apple (HDP-3x1.5=2222 plants /ha)	308	1	15	342		34
2. Almond (1111 plants/ha)	10	2	1	1		5
3. Walnut (400 plants/ha)	107	2	11	43		24
4. Date palm (160 plants/ha)	*	*	5	8		5
5. Grapes (2777 plants/ha)	141	3	21	587		25
6. Kiwi (500 plants/ha)	5	3	1	4		10
7. Dragonfruit (3000 plants/ha)	*	*	5	150		10
8. Apricot (816 plants/ha)	*	*	10	82		10
9. Strawberry (36300/ha)- every year	2	5	0.5	908		25
10. Papaya (300g/ha)- every 18 months	139	3	21		19	
Vegetable crops						
1. Processing Tomato (500g/ha) every year	*	*	50		125	
2. Processing Potato (50K ATS plants/ha) every year	*	*	50	25000		50
3. Onion in Non traditional area (8kg/ha) every year	*	*	50		2000	
Spice crops						
1. Turmeric(Every year)-2500 kg/ha	239	3	36		448125	20
2. Ginger(Every year)-1800 kg/ha	168	3	25		226800	10
3. Cumin(Every year)-15kg/ha	842	3	126		9473	
4. Coriander (Every year)-15kg/ha	632	3	95		7110	
5. Large cardamom-3000 plants /ha	*	*	1	0.03		5

Proposed Target for planting material for Fruits production during next 5 years

S. No.	Fruits	Quantity (in Lakh)	No. of Nurseries	States involved
1.	Apple	334	66	Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Arunachal Pradesh
2.	Almonds	11	4	Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Arunachal Pradesh
3.	Walnut	44	9	Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Arunachal Pradesh
4.	Date Palm	8	5	Tamilnadu, Gujarat, Maharashtra, Karnataka, Rajasthan
5.	Grapes	558	14	Himachal Pradesh, Tamilnadu, Mizoram, Maharashtra, Karnataka, Telangana, Punjab
6.	Kiwi	5	7	Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Nagaland, Mizoram, Tamilnadu
7.	Kamalam	151	8	Nagaland, Tamilnadu, Mizoram, Gujarat, Maharashtra, Karnataka, Andhra Pradesh, Telangana
8.	Apricot	81	17	Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Arunachal Pradesh
9.	Strawberry	909	8	Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Nagaland, Mizoram, Maharashtra, Uttar Pradesh, Meghalaya
10.	Papaya	19000 Kg	-	Tamilnadu, Gujarat, Maharashtra, Karnataka, Andhra Pradesh, Telangana, Punjab, Bihar, West Begnal, Chhattisgarh
11.	Mandarin	198	77	Haryana, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Arunachal Pradesh
12.	Sweet Orange	50	20	Andhra Pradesh, Maharashtra , Telangana

Proposed Target for planting material for Vegetables and Spices production during next 5 years

S. No.	Vegetables	Quantity	No. of Nurseries	States involved
1.	Tomato	125	NA	Karnataka, Maharashtra, Andhra Pradesh, Telangana, Tamil Nadu
2.	Potato -Apical Rooted Cutting (ARC)	25000 lakhs	50	Uttar Pradesh, West Bengal, Bihar, Gujarat, Madhya Pradesh, Punjab, Haryana
3.	Onion	2000	NA	Rajasthan, Utter Pradesh, Punjab, Madhya Pradesh, Gujarat

S. No.	Spices	Quantity	No. of Nurseries	States involved
1.	Turmeric	3,50,000 ton	NA	Tamil Nadu, Mizoram, Gujarat, Maharashtra, Karnataka, Andhra Pradesh, Telangana, Meghalaya
2.	Ginger	90,000 ton	NA	Tamil Nadu, Mizoram, Karnataka, Andhra Pradesh, Meghalaya, West Bengal
3.	Cumin	9473 ton	NA	Gujarat, Rajasthan
4.	Coriander	7110 ton	NA	Madhya Pradesh, Gujarat, Rajasthan, Assam, Odisha.
5.	Large Cardamom	7.5	2	Nagaland, West Bengal

Area Expansion of Exotic Crops

S. No.	Crops	Present Area (in Ha)	Target Area (in Ha)	States Covered
1.	Avocado (Butter Fruit)	800.32	543	Andhra Pradesh, Goa, Karnataka, Punjab, Tamilnadu, Manipur, Nagaland, Uttarakhand, Arunachal Pradesh, Meghalaya, Sikkim, Tripura
2.	Blueberry (Neel Badri)	1043.84	230	Madhya Pradesh, Maharashtra, Tamil Nadu, Arunachal Pradesh, Nagaland, Uttarakhand
3.	Kamalam	3425.26	3686	Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Goa, Karnataka, Odisha, Punjab, Telangana, Tamilnadu, West Bengal, Assam, Manipur, Mizoram, Nagaland, Uttarakhand, Haryana, Maharashtra, Rajasthan, Arunachal Pradesh, Meghalaya, Sikkim, Tripura
4.	Fig (Anjeer)	2764.35	2677	Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Punjab, Rajasthan, Telangana, Tamil Nadu, Haryana, Nagaland
5.	Kiwi (Kiwi Phal)	4354.34	1855	Arunachal Pradesh, Meghalaya, Nagaland, Himachal Pradesh, Uttarakhand, Rajasthan, Tamilnadu, Manipur, Sikkim
6.	Mango Steen	8.57	600	Karnataka, Arunachal Pradesh, Nagaland, Tripura,
7.	Persimmon (Tendu Phal)	650	645	Arunachal Pradesh, Manipur, Nagaland, Himachal Pradesh, Uttarakhand, Rajasthan, Tripura
8.	Passion Fruits	9947	625	Karnataka, Manipur, Nagaland, Andhra Pradesh, Arunachal Pradesh
9.	Rambutan	35.59	370	Karnataka, Arunachal Pradesh, Manipur, Nagaland, Tripura
10.	Strawberry	2652.61	1735	Andhra Pradesh, Bihar , Goa, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra Punjab, Assam , Manipur, Meghalaya, Nagaland, Tripura, Himachal Pradesh, Uttarakhand, Rajasthan, Tamil Nadu, West Bengal

Area Expansion of Indigenous Crops

S. No.	Crops	Present Area (in Ha)	Target Area (in Ha)	States Covered
1.	Aonla	32011.53	9896	Andhra Pradesh, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Telangana, Nagaland, Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Meghalaya
2.	Karonda	326.7	515	Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Punjab, Rajasthan, Uttarakhand, West Bengal, Nagaland
3.	Seabuckthorn	9270	9092	Ladakh, Uttarakhand, Arunachal Pradesh, Manipur, Nagaland, Himachal Pradesh
4.	Garcina	89.02	1185	Karnataka, Andhra Pradesh, Goa, Assam, Manipur, Nagaland
5.	Jamun	45694.3	2294	Andhra Pradesh, Bihar, Gujarat, Karnataka, Maharashtra, Odisha, Punjab, Rajasthan, Telangana, Manipur, Tripura, Uttarakhand, West Bengal, Nagaland
6.	Hanuman Phal (Soursop)	3	113	Karnataka, Nagaland
7.	Bael	7284.64	535	Bihar, Gujarat, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tripura, Uttarakhand, west Bengal, Meghalaya, Nagaland
8.	Tamarind	17771.77	9791	Andhra Pradesh, Bihar, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Telangana, Nagaland, Tripura, Uttarakhand, West Bengal, Meghalaya
9.	Phalsa	180.27	402	Gujarat, Punjab, Rajasthan, Nagaland
10.	Jack Fruits	69459.9	4853	Andhra Pradesh, Bihar, Chhatisgrah, Goa, Gujarat, Karnataka, Madhya Pradesh , Maharashtra, Odisha, Rajasthan, Telangana, west Bengal, Arunachal Pradesh, Assam, Meghalaya, Nagaland, Tripura, Uttarakhand

PREPAREDNESS

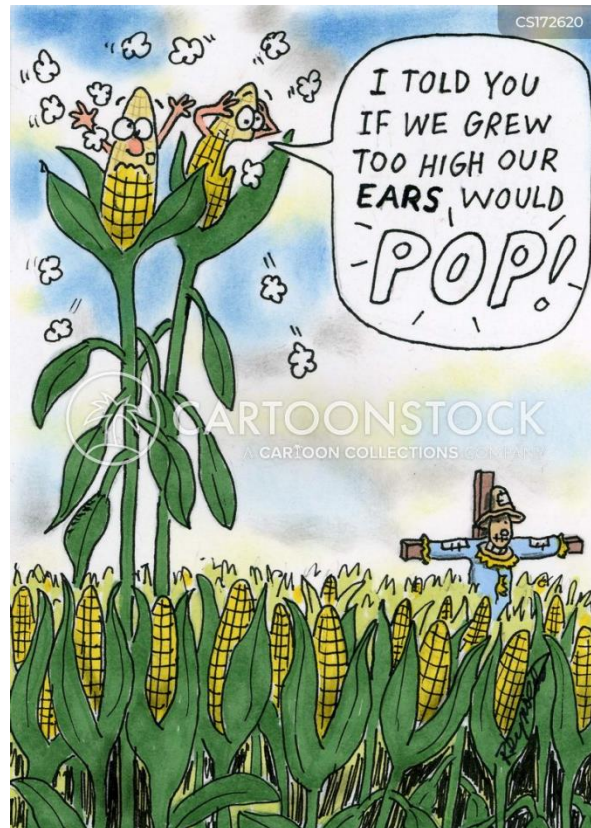
- **Timely arrangement of inputs**
 - Seeds, fertilizers, micronutrients, pesticides, machinery, credit.
 - Timely crop insurance cover
 - Regularly review crop input availability and follow up

- **Mobilizing extension staff for field deployment**
 - Convergence with ATMA and other centrally supported schemes

- **Implementation & monitoring**
 - Close monitoring of flow of funds to ensure timely reach
 - Technical backstopping for cluster demonstration, capacity building
 - Effective monitoring and feed back
 - **Weekly video conferencing for reviewing crop situation & follow up.**
 - **Preparedness for all possible scenarios : Contingency plan (648 distt)**
 - Tentative allocations communicated to states for advance planning

 - **Effective implementation of schemes: PMKSY, PMKY, PMFBY, PM AASHA, RKVY, E NAM, Submission on Mech, Seeds, NMSA, MIDH, NFSM, NMOOP.**

With better planning & implementation highest food grain production will POP again



THANK YOU