

**- Keynote address on Production and Productivity –
Road Map to reach *Goal of Million Tonnes Production*
of Rapeseed – Mustard seed**



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Demand Projections by author based on various recommended consumption parameters (in million tons)

Category	Production In 2015 (Estimated.)	Demand By 2030 (Projected)	Required Growth in production per year (in Million tons)
Pulses	17.2	40.0	1.52
Coarse Cereals	41.7	102.0	4.02
Wheat	88.9	95.0	0.41
Rice	104.8	156.0	3.41
Oilseeds	26.7	70.0	2.89
Milk	146.3	182.0	2.38
Fish	10.1	16.0	0.39
Egg	39.2	57.0	1.19
Meat	6.0	15.0	0.60
Fruits	86.0	110.0	1.60
Vegetables	167.0	180.0	0.87
Tea	0.9	1.1	0.01
Sugar	25.0	33.0	0.53
Total food Demand	759.8	1057.1	19.82

Please note: Demand for many other items which make part of food system is yet to be estimated.

Source: The POLITIECONOMY, Int'l Research Journal of Political Economy, Volume 3, Issue 1, September 2016, Page 135

Mustard gives Hope to Farmers:

Item	Normal Area (5 Years Average)	Area sown as on			Coverage Area 2015-16	Coverage Area 2014-15	Changed Compared to 2015-16
		25.1.2017	12.1.2017	5.1.2017			
		Area in Lakh Ha.					
Rapeseed & Mustard	63.20	70.54	69.86	69.53	64.51	65.17	(+) 6.03
Groundnut	8.46	5.70	4.58	4.29	5.44	5.96	(+) 0.26
Safflower	2.06	0.95	1.03	1.01	1.17	0.96	(-) 0.22
Sunflower	4.90	1.66	1.42	1.38	3.08	2.84	(-) 1.42
Sesamum	3.01	0.57	0.43	0.36	0.53	0.88	(+) 0.04
Linseed	3.11	3.84	3.65	3.58	2.93	3.19	(+) 0.91
Other Oilseeds	0.17	0.58	0.50	0.49	0.92	0.51	(-) 0.34
Total	84.91	83.84	81.47	80.63	78.58	79.51	(+) 5.26

Estimate of Rapeseed-Mustard Crop 2015-16

State		2013-14			2014-15			2015-16			
		Area (Govt.) Lac./ Ha	Yield Kg/Ha	Crop Lac MT	Area (Govt.) Lac. Ha	Yield Kg/Ha	Crop Lac MT	Area Lac./ Ha.	Change over Previous year	Yield Kg/Ha	Crop Lac MT
U.P.	Mustard	8.17	1102	9.00	8.92	701	6.25	8.73	(-) 0.19	800	8.40
	Toria	2.50	600	1.50	2.50	480	0.50	2.50	0.00	480	0.80
Rajasthan	Mustard	28.14	1187	33.40	25.76	866	22.30	23.45	(-) 2.31	1092	25.6
	Taramira	2.36	530	1.25	1.60	625	0.40	0.75	(-) 0.85	506	0.38
Pb/Haryana		5.83	1372	8.00	5.55	1081	6.00	6.20	(+) 0.65	1400	7.00
Gujarat		2.82	1702	4.80	1.93	1243	2.40	1.91	(-) 0.02	1538	2.95
M.P.		8.14	893	6.00	6.63	535	3.55	6.25	(-) 0.38	608	3.80
Chhattisgarh		1.40	717	1.00	1.35	667	0.90	1.26	(-) 0.09	600	0.75
W. Bengal		4.57	613	2.80	4.74	633	3.00	4.76	(+) 0.02	651	3.10
Eastern India & Others		7.37	814	6.00	7.32	642	4.70	7.47	(+) 0.15	670	5.00
Total		71.30	1034	73.75	65.17	767	50.00	64.51	(-) 0.66	881	58.00

Blog: Vijay Sardana Online

Crop data for 2013-14 & 2014-15 as per COOIT Trade Estimate

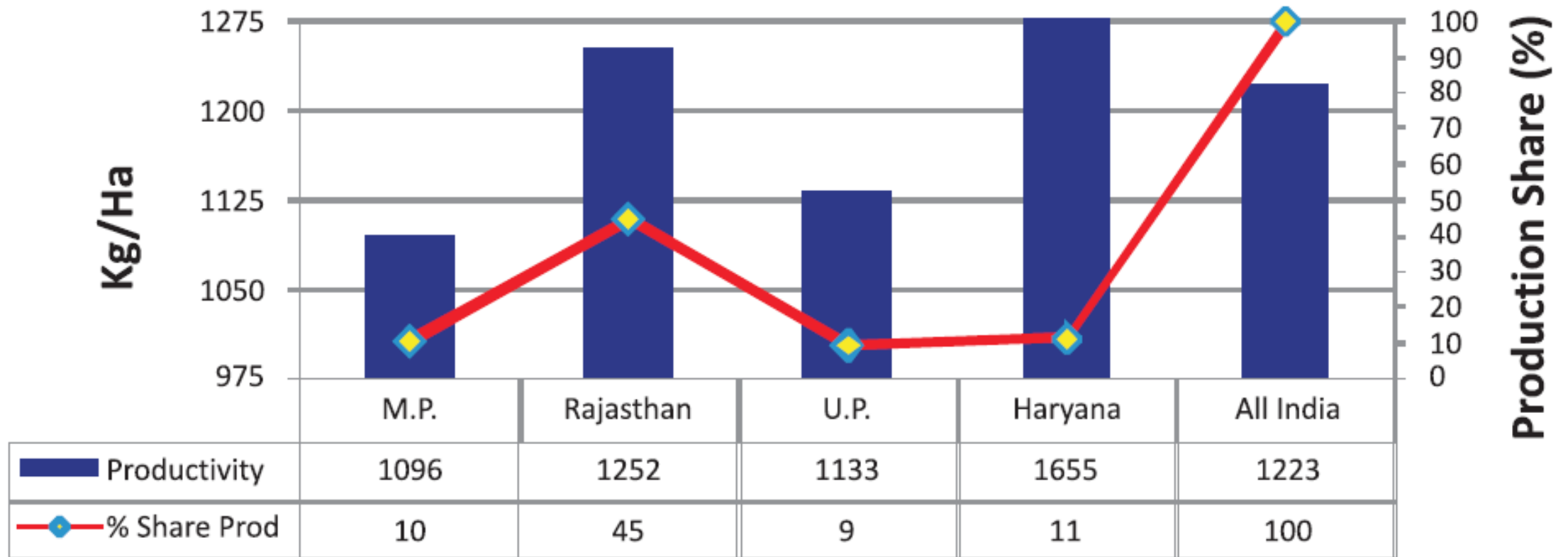
- Mustard is giving hope, that is why new farmers are joining.
- We have to provide ensure they get the proper guidance to meet the objective.
- Mustard is climate smart & healthy crop and we must convey this to all.

Sr. No	State	Rapeseed & Mustard	
		2016-17	2015-16
1.	Andhra Pradesh	0.02	0.01
2.	Telangana	--	--
3.	Arunachal Pradesh	0.29	0.30
4.	Assam	3.02	2.11
5.	Bihar	1.27	1.23
6.	Chhattisgarh	1.48	1.26
7.	Gujarat	2.00	1.91
8.	Haryana	5.37	5.80
9.	Himachal Pradesh	0.08	0.04
10.	Jammu & Kashmir	0.24	0.31
11.	Jharkhand	2.70	1.94
12.	Karnataka	0.01	--
13.	Kerala	--	--
14.	Madhya Pradesh	7.23	6.25
15.	Maharashtra	--	--
16.	Odisha	1.08	0.96
17.	Punjab	0.39	0.40
18.	Rajasthan	27.98	25.43
19.	Tamil Nadu	--	--
20.	Uttar Pradesh	11.89	11.23
21.	Uttarakhand	0.19	0.19
22.	West Bengal	4.89	4.76
23.	Others	0.41	0.38
Total – All India		70.54	64.51

Source: Ministry of Agriculture, GOI
File : Rabi Crop Wise Summary

What are the ground level challenges and how to address them?

Chart-4.4(e): Production Share and Productivity of R&M, TE 2014-15



Source: CACP, using DES data

Table-4.5(e): District-wise Productivity Levels of R&M, TE 2014-15

S.No	Yield Band (Kgs/Ha.)	Haryana		MP*		Rajasthan		UP*	
		Area (%)	No. of Distts.	Area (%)	No. of Distts.	Area (%)	No. of Distts.	Area (%)	No. of Distts.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	0-500	-	-	3.33	1	-	-	-	-
2	501-1000	-	-	13.75	4	2.77	1	32.54	13
3	1001-1500	2.22	1	61.83	5	97.23	23	20.00	9
4	1501-2000	94.07	9	6.79	2	-	-	26.75	8
	Total Area ('000 ha)	541		777		2852		654	
	Max Yield (Kgs/Ha.)	1833		1916		1475		1818	
Land and Productivity	Top 3 distts. In descending order of Yields	Rewari, Gurgaon and Fatehabad		Ratlam, Mandsaor and Sheopur		Karauli, Bharatpur and Dausa		Kasganj, Etah and Agra	
	Area under top 3 distts (%) (highest yield levels)	16.9		13.4		14.7		11.5	

Summary Indicators of	Minimum Yield. (Kgs/Ha.)	1417	466	927	612
	Distt. Having Min. Yield.	Rohtak	Tikamgarh	Pali	Barabanki
	Share of Area under Min. Yield (%)	2.2	3.3	2.8	3.3
	Average Yield (Kgs/Ha.)	1655	1096	1252	1133
	Efficiency Gap (%)	10	43	15	38

Source: CACP, using DES and Concerned State Governments' data, * Data pertains to TE 2013-14

Note: Districts which contribute less than 1% share in total production have not been considered.

How to Achieve the Target of 10 million tons of Rape-seed Mustard?

Proposal from the Author:

Let us develop location wise action plan and **it is very easy and doable.**

Table 5: Impact of technological components on the productivity of rapeseed-mustard

Technological components	Increase in productivity (%)
Improved varieties	9-45
Plant protection measures	7-24
Recommended fertilizers	16-18
Sulphur nutrient	9-16
Thinning to remove excess plants/sqm	13-16
Thiourea spray at flowering	10-12
Timely weeding	11-27
Chemical weed control	14-35

The Proposed Action Plan:

S. No.	Action required	Expected Benefit	Cost implication
1	Identify soil deficiencies & recommend suitable nutrients	Additional 15%	Product cost, but will be recovered due to extra production
2	Timely control of weeds	Additional 10%	Product cost, but will be recovered due to extra production
3.	Proper and timely plant protection activities	Additional 10%	Product cost, but will be recovered due to extra production
4.	Seed replacement based on agro-climatic and soil conditions	Additional 20% to 50% (Average)	Product cost, but will be recovered due to extra production
	Target is : 50 to 60% increase in output	Additional gain : 55% to 75%	Target can be achieved in 2 to 3 years time.

How to start?

- 1. Let us create - “Mission Mustard” – Companies are invited to join Voluntarily only**
- 2. Nominate one person as “Farmers Relation manager”**
- 3. Those who wants to join pl. send the details of their location and let their security guard gates at factory act as extension centers.**
- 4. Map the mustard production area around their factories or total mustard area under their captive farmers’.**
- 5. Let us identify soil testing laboratory in these areas and let SEA enter into MOU with them about soil testing. It is free. Cost of sending sample, if any will be borne by the local company.**

How to start? (2)

6. **With local university / NRC-Mustard develop package of practices based on the location of factory. These will be printed by the companies under their brand and name in technical inputs from University and NRC-M.**
7. **Let us have meeting with Seed and Crop-care companies to source quality inputs for our farmers. If data given by NRC-M & CACP is correct, without GM technology we can achieve the same, focus on seed replacement.**
8. **If required, SEA will coordinate training of field staff at NRC-Mustard / Agri. Universities, if any.**
9. **Let us create a helpline for farmers in every unit. Farmers Relation manager can be given one mobile instrument and SIM, today calls are free and cost of mobile is less than the cost of the “bottle”.**
10. **Still in doubt in implementation, contact the author.**

This is “Mission Possible”.

- ▶ **If SEA Management agrees, let us start from today itself.**
- ▶ **Those who wants to join “Mission – Mustard” can contact SEA leaders and send their contact details by email to SEA.**
- ▶ **We have to ensure that farmer should get value for his efforts. This can be done by focusing on intercropping & by-products like cake, honey and straw.**
- ▶ **I will be happy to put the framework together for SEA and we can achieve the target much before 2022, doubling farmers income.**

One Small Personal Request



Open for Discussion...



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