

Karnataka Agriculture Price Commission

Decadal Shift in Cropping Pattern in Karnataka Research Report July 2016

- This is a comprehensive analysis of the shift in the area of agriculture & horticulture crops at district and regional levels during the decade (2005-06 to 2014-15).
- It's a matter of concern to note that an area of 12.49 lakh ha (11%) used for cultivation of agriculture crops during the last decade has been reduced now. A major portion of this land (52%) was used for oil seed cultivation and 13% was used for cereal crop cultivation.

• But it is very heartening to note that the area under horticulture crops in the State is increasing every year to an extent of 1.6 % (36,000 ha) of the total.

- The major horticulture crops in which area has increased during the decade are mango (51%), areca (40%), coconut (13%), banana (89%), tomato (47%) and onion (11%).
- Though the area under maize, cotton and sugarcane is increasing at the national and international level, it is a matter of concern that the area in rice, ragi and jowar, which are very essential for food security, is decreasing.
- It is again a matter of concern to note that the area under potato, in its traditional district, is drastically reduced to an extent of 65% and that the area under chillies, a major spice crop, is reduced in most of the districts.

• It is a very serious matter of concern that the total area cultivated by the farmers of Karnataka under agriculture and horticulture is converted to non - agricultural use annually by 1% (an average of 60,000 ha) during the last decade.

- It is clearly evident that the land is being converted to non-agricultural purposes as the area under not only food crops but also most of the horticultural crops like grapes, sapota, tomato, mango, coconut are fast declining in Bengaluru district.
- In spite of this, productivity of majority of agricultural crops has been increasing due to appropriate use of technology and introduction of improved varieties. As a result, production is not much reduced though the area of these crops has declined.
- If the area under jowar and minor millets was not reduced, an additional quantities of 6.65 lakh tons of cereals would have been available. Similarly, State would have got

5.19 lakh additional tons of oil seeds if oil seed production if there were no reduction in the area.

- The farmers have taken up larger production in response to the price stimuli although the area has been reduced during the last decade. It is a challenge before the Government to find a way for the better utilization of this situation.

Solutions:

- **Comprehensive production policy:** A state level comprehensive agricultural production policy for agriculture and horticulture crops have to be formulated after looking from different angles viz food security needs, local demand, supply of raw material to the industries, export to foreign countries etc.,
- **Decentralised crop plan:** Suitable crop plans have to be formulated and implemented at state and district levels, in association with the farming community, looking in to food security needs, climate variations, market, commerce and industrial needs.
- It is very essential to identify major crops and cropping systems of each district and encourage them. We have to encourage production of white jowar, ragi and tur essential for our “Annabhagya” scheme, by formulating separate zones.
- In each district, a committee has to be formed under the leadership of Chief Executive Officer of Zilla Panchayath and the committee should consists of farmers, experts, departmental officers and others. This committee should discuss on the crop & production plan for each district and consensus has to be arrived with.
- Cropping systems for each agro ecological zones should be formulated based on the district level crop plans. This should pave way for formulation of suitable state level crop and production plan.

• **Production Restriction:** All the government of incentives, subsidies and procurement should be used in an appropriate way for successful implementation of the crop plan, in such a way that there should not be over production of particular crops in a district.

- **Market information:** In order to facilitate state wide farming community to be in constant touch with and to get daily necessary information from departments like agriculture, horticulture, sericulture etc, an interactive portal has to be established by pooling these departments for this specific purpose.
- **Institutional formation:** It would be very appropriate that the **State Planning Board** should bear the responsibility of bringing out a comprehensive production policy and

a supplementary decentralised crop plan of the districts term for agricultural and horticultural crops suited for the state of Karnataka.

Table -1

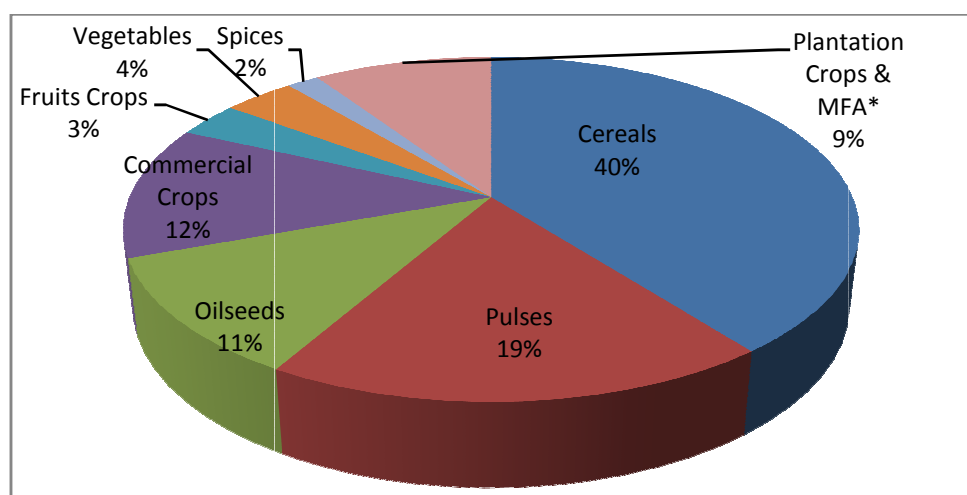
Area transition of agricultural and horticultural crop groups during the last decade (2005-06 to 2014-15) in Karnataka

Sl. No.	Crop group	2005-06		2014-15		transition		annual rate of transition
		Area	%	Area	%	Area	%	
Agricultural crops								
1	Cereal crops	56.16	50	48.73	48	-7.43	-13	-1.15
2	Pulses crops	20.50	18	23.21	23	2.71	13	1.48
3	Oil seed crops	28.63	25	13.72	14	-14.91	-52	-8.17
4	Commercial crops	8.25	7	15.39	15	7.16	887	6.45
	Total	113.54	100	101.04	100	-12.49	-11	-1.15
Horticultural crops								
1	Fruit crops	2.58	14	4.07	18	1.49	58	4.96
2	Vegetable crops	4.03	22	4.63	21	0.59	15	0.91
3	Spices crops	2.32	12	2.09	9	-0.23	10	-2.61
4	Plantation crops	9.56	51	11.22	50	1.66	17	1.66
5	Other crops*	0.23	1	0.34	2	0.12	50	4.35
	Total	18.72	100	22.35	100	3.64	19	1.60
	Grand total	129.36		123.39		-5.97	-5	-0.64

*Flower, medicinal and fragrant plants.

Figure 1

Percent share of Agriculture and Horticulture Crops in Karnataka (2014-15)



Note : Others (MFA= *Medicinal, Flower and Aromatic Plants)

Figure -2

Decadal Change for Agriculture and Horticulture Crops in Karnataka 2005-06 to 2014-15

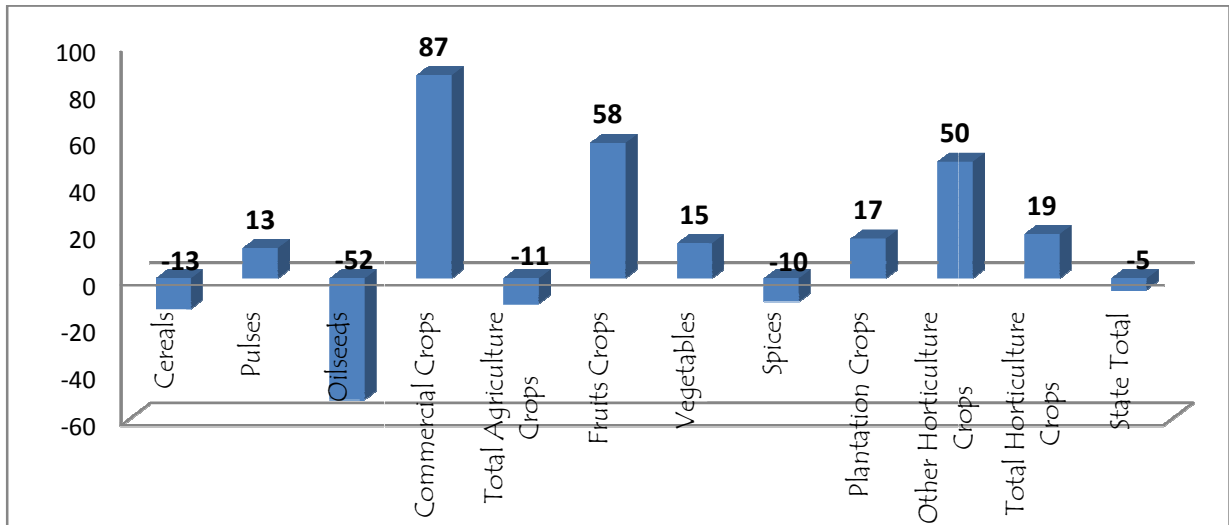


Table 2(a) : Decadal Change for Agriculture Crops in Karnataka 2005-06 to 2014-15
(Area in Lakh Hectares)

Sl. No	Crops	2005-06		2014-15		Decadal Change		
		Area	%	Area	%	Area	%	CAGR
1	Maize	9.36	8	13.37	13	4.01	43	4.54
2	Paddy	14.85	13	13.27	13	-1.59	-11	-1.19
3	Jowar	15.20	13	10.46	10	-4.74	-31	-3.59
4	Ragi	9.39	8	7.08	7	-2.30	-25	-2.20
5	Bajra	4.31	4	2.34	2	-1.97	-46	-5.77
6	Wheat	2.53	2	1.98	2	-0.55	-22	-3.35
7	Other cereals	0.52	N	0.23	N	-0.30	-56	-8.54
Total Cereals		56.16	50	48.73	48	-7.43	-13	-1.15
1	Bengal gram	4.18	4	9.39	9	5.21	124	7.89
2	Tur	6.00	5	7.28	7	1.28	21	3.07
3	Green gram	4.01	4	2.63	3	-1.38	-34	-6.26
4	Horse gram	2.69	2	1.81	2	-0.89	-33	-5.59
5	Cow pea	0.69	1	0.72	1	0.03	4	1.13
6	Black gram	1.11	1	0.70	1	-0.41	-37	-5.36
7	Avare	0.87	1	0.60	1	-0.27	-31	0.06
8	Other pulses	0.94	1	0.08	N	-0.86	-92	-8.21
Total Pulses		20.50	18	23.21	23	2.71	13	1.48
1	Ground nut	10.40	9	6.54	6	-3.86	-37	-4.77
2	Sun flower	14.27	13	3.56	4	-10.72	-75	-15.16
3	Soya bean	1.33	1	2.56	3	1.22	91	7.82
4	Sesamum	1.03	1	0.44	N	-0.59	-57	-7.68
5	Safflower	0.81	1	0.33	N	-0.48	-60	-8.96
6	Castor	0.25	N	0.12	N	-0.13	-52	-8.29
7	Niger seed	0.33	N	0.11	N	-0.22	-67	-11.54
8	Linseed	0.13	N	0.05	N	-0.08	-62	-10.97
9	Rapeseed & Mustard	0.07	N	0.02	N	-0.05	-70	-9.77
Total oil Seeds		28.63	25	13.72	14	-14.91	-52	-8.17
1	Cotton	4.13	4	8.76	9	4.63	112	8.15
2	Sugar cane H	2.21	2	4.80	5	2.59	117	8.08
3	Tobacco	1.01	1	0.94	1	-0.06	-6	-0.22
4	Mulbery	0.88	1	0.88	1	0.01	1	-1.69
Total Commercial Crops		8.25	7	15.39	15	7.16	87	6.45
Others		0.02	N	N	N	-0.02	100	-
Total		113.54	100	101.04	100	-12.49	-11	-1.15

N = Negligible

**Table 2(b) : Decadal Change for Horticulture Crops in Karnataka 2005-06 to 2014-15
(Area in Lakh Hectares)**

Sl. No	Crops	2005-06		2014-15		Decadal Change		
		Area	%	Area	%	Area	%	CAGR
1	Mango	1.21	6	1.83	8	0.62	51	4.68
2	Banana	0.56	3	1.07	5	0.50	89	7.14
3	Sapota	0.23	1	0.31	1	0.08	36	2.70
4	Grapes	0.10	1	0.21	1	0.11	105	7.74
5	Pomegranate	0.11	1	0.19	1	0.08	73	5.45
6	Lemon	0.08	N	0.12	1	0.05	59	6.24
7	Papaya	0.04	N	0.08	N	0.04	111	7.45
8	Guava	0.06	N	0.07	N	0.00	5	-0.06
9	<i>Others Fruits Crops</i>	<i>0.18</i>	<i>1</i>	<i>0.19</i>	<i>1</i>	<i>0.01</i>	<i>6</i>	<i>-0.25</i>
	Total Fruits Crops	2.58	14	4.07	18	1.49	58	4.96
1	Onion	1.48	8	1.65	7	0.17	11	0.51
2	Tomato	0.44	2	0.64	3	0.21	47	4.27
3	Green Chilli	0.32	2	0.45	2	0.13	41	3.49
4	Potato	0.76	4	0.43	2	-0.32	-43	-7.37
5	<i>Others Vegetables</i>	<i>1.04</i>	<i>6</i>	<i>1.46</i>	<i>7</i>	<i>0.41</i>	<i>39</i>	<i>3.13</i>
	Total Vegetables	4.03	22	4.63	21	0.59	15	0.91
1	Dry Chillies	1.23	7	0.83	4	-0.40	-33	-7.86
2	Pepper	0.16	1	0.30	1	0.13	81	7.95
3	Ginger	0.25	1	0.24	1	-0.01	-4	0.81
4	Turmeric	0.12	1	0.20	1	0.08	71	7.64
5	<i>Others Spices</i>	<i>0.55</i>	<i>3</i>	<i>0.52</i>	<i>2</i>	<i>-0.03</i>	<i>-5</i>	<i>-1.45</i>
	Total Spices	2.32	12	2.09	9	-0.23	-10	-2.61
1	Coconut	4.55	24	5.15	23	0.60	13	1.25
2	Arecanut	1.87	10	2.61	12	0.74	40	3.75
3	Coffee	2.22	12	2.30	10	0.08	4	0.42
4	Cashew	0.67	4	0.75	3	0.08	11	0.63
5	Oil Palm	0.03	N	0.13	1	0.10	338	17.53
6	<i>Others Plantation Crops</i>	<i>0.22</i>	<i>1</i>	<i>0.27</i>	<i>1</i>	<i>0.06</i>	<i>27</i>	<i>2.07</i>
	Total Plantation Crops	9.56	51	11.22	50	1.66	17	1.66
	Others*	0.23	1	0.34	2	0.12	50	4.35
	Grand Total	18.72	100	22.35	100	3.64	19	1.60

N = Negligible