

GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE AND FARMERS WELFARE
DEPARTMENT OF AGRICULTURE AND FARMERS WELFARE

LOK SABHA
UNSTARRED QUESTION NO. 2081
TO BE ANSWERED ON THE 20TH DECEMBER, 2022

REDUCING USE OF FERTILIZERS

2081. SHRI DHARAMBIR SINGH:

Will the Minister of AGRICULTURE AND FARMERS WELFARE कृषि एवं किसान कल्याण मंत्री be pleased to state:

(a) whether the Government has contemplated any plan to use other fertilizers with chemicals in place of chemical fertilizers in the fields and if so, the details thereof;

(b) whether the overuse of chemical fertilizers is causing increase in arsenic in fields and if so, the methods to prevent it; and

(c) the overuse of chemical fertilizers is affecting exports and if so, the reduction in exports in last five years, crop-wise?

ANSWER

MINISTER OF AGRICULTURE AND FARMERS WELFARE

कृषि एवं किसान कल्याण मंत्री (SHRI NARENDRA SINGH TOMAR)

(a): The Government of India encourages the soil test based balanced and integrated nutrient management through conjunctive use of both inorganic and organic sources (manure, biofertilizers etc.) of plant nutrients with 4R approach i.e., right quantity, right time, right mode and right type of fertilizer to reduce the consumption of chemical fertilizers. In addition, growing leguminous crops and use of Resource Conservation Technologies (RCTs) are also advocated. The ICAR imparts training to educate farmers on all these aspects as and when required.

(b): As such, there is no adverse effect of chemical fertilizers listed in FCO, 1985 with balanced and judicious use. Arsenic (As) contamination is generally geogenic in nature.

ICAR suggests following remedial measures to minimize the effect of arsenic in soil-plant system.

- (i) *Boro* rice requiring more groundwater should be replaced with other suitable and less water demanding crops.
- (ii) Growing of relatively arsenic tolerant rice varieties Muktaashri (IET 21845) , IET 1444, *Gotrabhog*, *Nayanmoni*, and Shatabdi.
- (iii) Direct Seeded Rice using drum seeder and seed drill
- (iv) Preference to growing non-edible and leguminous crops during dry season.
- (v) Storing of Arsenic contaminated groundwater in ponds and subsequent dilution with rainwater.
- (vi) Conjunctive use of ground and surface water.
- (vii) Recharge of groundwater with harvested rainwater, free of arsenic.
- (viii) Increased use of FYM and other manures + green manure crops.
- (ix) Application of appropriate amendments (zinc/iron salts as and wherever applicable).
- (x) Cost-effective phytoremediation employing hyper-accumulating plant/microbial spp. like brake fern (*Pteris vittata*), water hyacinth (*Eichornia crassipes*), Blue Green Algae (BGA), and weed species (viz, *Lantana camara*, *Enhydra* sp., *Fimbristylis* sp., *Croton sparsiflora* etc.) hold promise in detoxification of arsenic from soils and aquatic systems.
- (xi) Capacity building and awareness programmes.

(c): Maximum Residue Level (MRL) of chemicals needs to be maintained as per the importing countries requirement. However, there is no report on affect the agricultural export due to overuse of chemical fertilizers. A statement showing product wise quantity exported to the world by India is at Annexure I.

Annexure-I

India's Export to World: APEDA Products															
Product	2017-18			2018-19			2019-20			2020-21			2021-22		
	Qty	Rs. Crore	US\$ Mill	Qty	Rs. Crore	US\$ Mill	Qty	Rs. Crore	US\$ Mill	Qty	Rs. Crore	US\$ Mill	Qty	Rs. Crore	US\$ Mill
Non Basmati Rice	8648488.58	22967.82	3564.39	7599674.1	21185.28	3047.83	5040707.72	14364.66	2014.6	13095130.21	35476.61	4799.91	17262235.08	45652.35	6124.27
Basmati Rice	4056758.62	26870.17	4169.48	4414584.16	32804.3	4722.52	4454656.69	31025.88	4330.69	4630463.14	29849.89	4018.71	3948161.03	26416.54	3540.4
Wheat	322790.14	624.37	96.72	226224.99	424.95	60.54	217354.23	439.14	61.84	2088487.66	4037.6	549.7	7239366.78	15840.34	2121.75
Maize	705513.84	1228.46	190.34	1051855.92	1872.51	270.3	370066.09	1019.3	142.78	2879202.93	4675.78	634.85	3690469.1	7615.42	1020.88
Guargum	494101.27	4169.56	646.94	513211.87	4707.05	676.47	381880.14	3261.6	456.91	234871.29	1949.07	262.99	321394.92	3334.77	446.77
Pulses	180193.85	1473.26	228.32	289617.95	1822.58	263.04	235699.03	1533.74	214.89	296169.79	2116.69	284.26	410375.86	2834.29	379.75
Groundnuts	504019.2	3386.3	524.82	489187.11	3298.33	473.81	664442.92	5096.39	711.41	638582.92	5381.61	727.4	514163.87	4697.1	629.26
Fresh Onions	1588985.72	3088.82	479.32	2183766.42	3468.87	498.17	1149896.84	2320.7	324.2	1578016.57	2826.53	378.49	1537496.85	3432.16	460.56
Other Fresh Vegetables	739055.09	1882.32	292.03	735743.1	2069.66	296.19	754007.57	2064.77	289.38	682085.8	2143.2	289.12	770233.22	2160.74	290.15
Other Fresh Fruits	321157.55	1443.76	224.05	372213.73	1834.57	262.38	496577.66	2065.82	288.12	609612.93	2233.31	301.99	761031.2	2900.7	388.41
Fruits & Vegetables Seeds	14463.13	670.9	104.03	16151.15	849.23	122.76	14796.09	723.44	101.51	17177.18	808.4	108.83	11549.89	750.67	100.79
Fresh Grapes	188221.18	1899.95	294.59	246133.77	2335.25	334.78	193690.51	2176.87	298.04	246107.37	2298.45	313.62	263075.62	2302.16	305.68
Floriculture	20703.46	507.31	78.73	19726.56	571.41	82	16949.39	541.61	75.9	15695.29	575.98	77.84	23597.22	771.41	103.5
Fresh Mangoes	49180.48	382.34	59.28	46510.22	406.5	60.26	49658.68	400.21	56.11	21033.56	271.88	36.22	27872.77	327.45	44.07
Millet	156274.02	370.07	57.36	219402.5	542.5	77.99	129726.1	433.62	60.56	147501.08	443.17	59.82	159332.15	479.58	64.33
Others (Betel Leaves & Nuts)	13185.92	137.52	21.34	17364.51	174.27	25.04	14003.48	137.13	19.22	10151.6	137.79	18.67	14056.58	215.23	28.85
Walnuts	3595.69	127.21	19.72	1874.86	66.77	9.61	1648.22	52.78	7.36	1069.66	29.79	4.03	2482.55	73.98	9.92
Other Cereals	1344.02	3.63	0.56	5750.05	11.74	1.7	1690.4	4.53	0.63	2425.31	7.78	1.05	2227.41	7.22	0.97
Total	18,008,031.76	71,233.77	11,052.02	18,448,992.97	78,445.77	11,285.39	14,187,451.76	67,662.19	9,454.15	27,193,784.29	95,263.53	12,867.50	36,959,122.10	119,812.11	16,060.31

Source: DGCIS
