

Agriculture Pricing Policy



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Why Fixing Prices?

- ❖ Large and growing population
- ❖ Two successive droughts in 1965-66 & 1966-67
- ❖ Demand of more food with limited land and water resources
- ❖ Inadequate foreign exchange constrained FoC to import key staples from global markets
- ❖ 'Ship to mouth': Heavy dependence on foreign aid (PL-480) often had political strings attached;
- ❖ To advise & implement a remunerative price policy, 'twins' {APC (CACCP) & FCI} conceived & borne in Jan, 1965.



Determinants of MSP

Seven main parameters determine MSPs

1. DD-SS-of main product and by-products-;
2. cost of production;
3. price trends in the market, both domestic and international,
4. inter-crop price parity,
5. ToT-between agriculture and non-agriculture sector, and
6. likely impact of MSP on consumers, producers and overall economy of that product;
7. rational utilization of natural resources such as land, water resources



Additional Parameter

- ❖ An addition parameter- a minimum of 50 percent as the margin over cost of production added recently in determining MSP.
- ❖ Cost of production, though an important factor, not the only factor that determines MSP.
- ❖ MSP is NOT a 'cost plus' pricing



Institutions Created

- ❖ Mere announcement of MSPs without back up of market intervention in the form of procurements would not be effective.
- ❖ To advise & implement a remunerative price policy, 'twins' {APC (CACP) & FCI} conceived & borne in Jan, 1965.
- ❖ Besides setting up of FCI to primarily undertake procurement operations of foodgrains, NAFED established in 1985 with the responsibility of price support for pulses and oilseeds.



Various kinds of costs

- ❖ Number of cost concepts but most widely used are 3 types. These are A2, A2 +FL and C2:
- ❖ Cost A2: All actual expenses in cash and kind incurred in production + rent paid for leased-in-land
- ❖ Cost A2 +FL: Cost A2 + imputed value of family labour
- ❖ Cost C2: Cost A2 +FL + imputed interest on value of owned capital assets (excluding land) + imputed rental value of owned land (net of land revenue)
- ❖ Cost C2 is always more than cost A2+FL which in turn is more than A2.



Whose Cost to be considered? (1/2)

- ❖ Crop-wise, State-wise cost of production (CoP) considered while formulating price policy.
- ❖ The question arises as to Whose Cost to be considered?
- ❖ CoP varies a great deal from region to region, state to state, district to district and farm to farm.
- ❖ If these costs were to be normally distributed, about 50 percent of farmers would be those whose CoP would be less than weighted average Cost but there would also be other 50 percent whose costs would be much higher than this weighted average.



Whose Cost to be considered? (2/2)

- For instance, when 51 percent of production is covered at weighted average C2 Cost.
- Then, other 49 percent of growers would often question the reliability of cost estimates.
- This is a characteristic of any data set and this *per se* is not a reflection on the quality of data.
- Such a state of affairs would always emerge in all crops, *albeit* with varying magnitudes.



Weighted Average Cost Vs. Bulk line Cost

- ❖ Though there is no mechanical linkage of MSP with any cost, yet it is important to think of an alternative to the weighted average CoP viz. bulk line cost in pricing policy.
- ❖ definition of bulk line may have to be crop specific for a specified period depending upon abundance or scarcity of the individual commodity and comparative advantage of growing that crop.
- ❖ For instance, all-India weighted average cost of production of a crop covers only 41 percent of production
- ❖ indicates prevalence of high level of efficiency gaps in the production system.
- ❖ address inefficiency through technology transfer and replication of best farming practices on a wider scale across states.

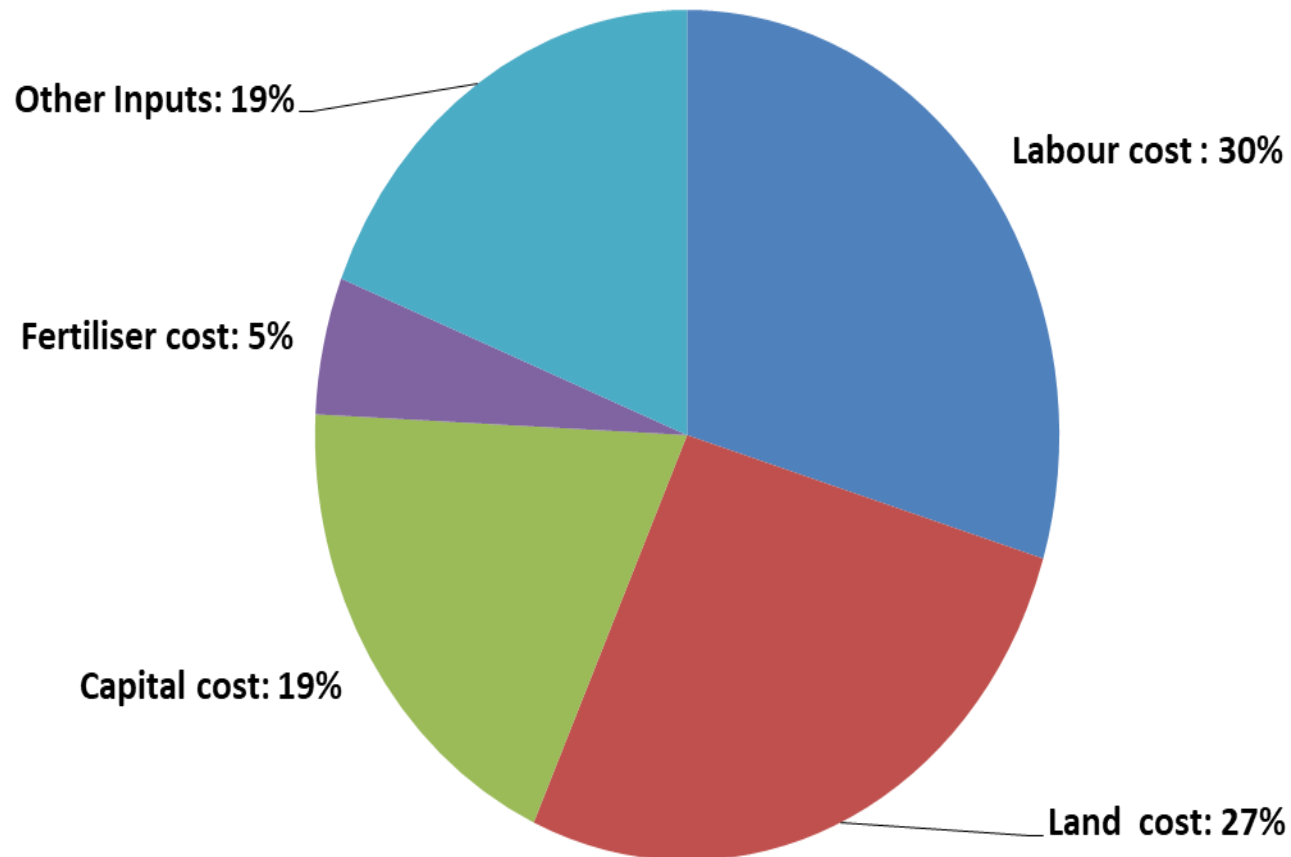


Structure of Comprehensive Cost of Cultivation

- ❖ Labour cost, the largest single factor of production, is followed by land cost, capital cost, other inputs, fertilizer (5%).
- ❖ Though fertilisers play a crucial role in productivity, it constitutes just 5% in total cost of production of crops.
- ❖ In case prices of fertilisers increase by 20%, just as an example, its impact on total cost of production will be 1%.
- ❖ Many a times farmers organisations make out a case to increase MSP at least as much as increase in prices of fertilisers
- ❖ one may be conscious of the fallacy in this argument.



Structure of Comprehensive Cost of Cultivation



Just in case fertilizer prices increase by 20% (to rationalize/contain subsidy), cost of production would increase by 1% only.

Fixation of MSP-Collection of Costs Data

- For fixation of the Minimum Support Prices (MSPs), **representative** data on inputs and output in physical and monetary terms, data on cost of cultivation/ cost of production on a continuing basis required.
- The “Comprehensive Scheme for Studying the Cost of Cultivation of Principal Crops in India” (CCS) was launched by the Government of India in 1970-71 for the purpose.
- Precision** in cost estimates is highly imperative. Just as an example, a rupee increase in MSP of paddy has a financial implication of Rs. 4200 crore on the exchequer in a season.



Crops Coverage under MSP

Crop Group / No. of crops	Crops Covered
Cereals (7)	Paddy, Jowar, Bajra, Maize, Wheat, Ragi and Barley
Pulses (5)	Bengal Gram, Arhar (Red Gram), Moong (Green Gram), Urad (Black Gram) and Masur (Lentil)
Oilseeds (7)	Groundnut, Rapeseed & Mustard, Soyabean, Sunflower, Safflower, Sesamum and Nigerseed
Fibers (2)	Cotton and Jute
Sugar (cane) (1)	Sugarcane (FRP)
F & V (1)	Copra (dry and dehusked coconut)



Sampling Design (1/3)

A three stage stratified **random** sampling design is employed

Tehsil



Revenue Village/ Cluster of Villages



Operational Holding



Sampling Design (2/3)

- Each state is divided into homogenous agro-climatic zones based on cropping pattern, soil types, rainfall, etc.
- The primary sampling units (tehsils) are allocated to different zones in proportion to the total area of all the crops covered by the study.
- The primary sampling units are selected in each zone (stratum) with PPS (probability proportional to the area under the selected crops) and with replacement.



Sampling Design (3/3)

- ❖ Within each tehsil, the village/cluster is selected following PPS. From each tehsil, only one village/cluster is selected.
- ❖ In each selected village/cluster, all the operational holdings are enumerated and classified according to size into 5 size classes.
- ❖ The 5 size classes of operational holdings:
 - less than 1 hectare;
 - between 1 and 2 hectares;
 - between 2 and 4 hectares;
 - between 4 and 6 hectares; and
 - Above 6 hectares.
- ❖ From each sample village / cluster of villages, 10 operational holdings are selected with allocation of two samples each in five size classes of holding size, by simple random sampling without replacement.



MSPs for KMS, 2019-20

(Rs./qtl)

Crop	Cost 2019-20	MSP 2018-19	MSP 2019-20	MSP as % of Cost
Paddy	1208	1750	1815	150.2
Ragi	2100	2897	3150	150.0
Maize	1171	1700	1760	150.3
Tur (Arhar)	3636	5675	5800	159.5
Groundnut	3394	4890	5090	150.0
Soybean	2473	3399	3710	150.0
Cotton (M)	3501	5150	5255	150.1

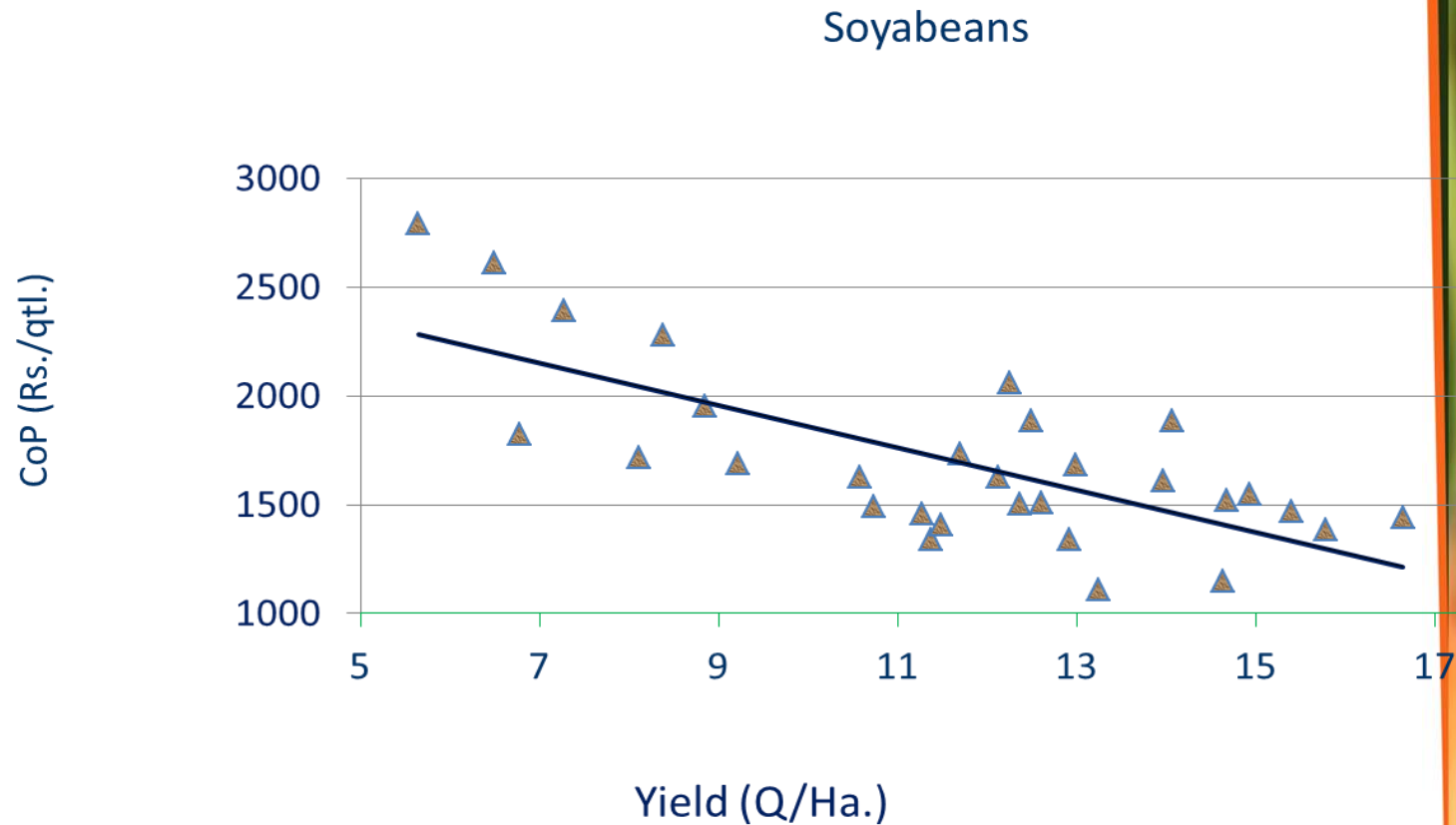


Inverse Relationship- Productivity & Cost

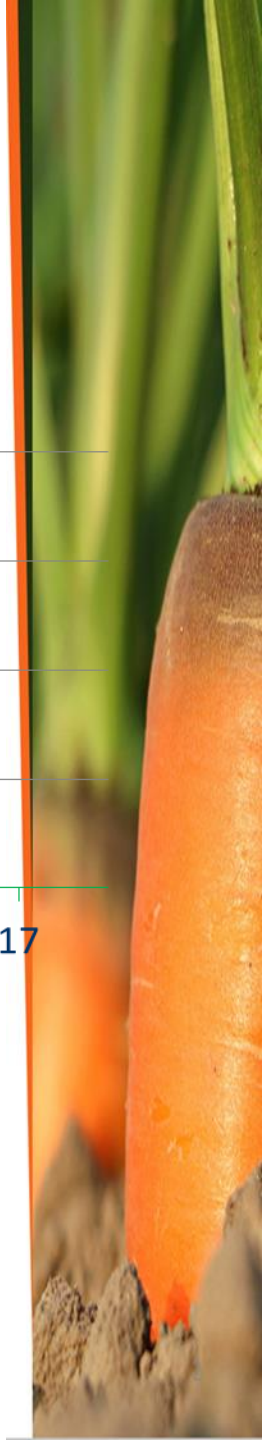
Empirics show that higher productivity reduces the Real cost of production and have the potential to drive up farm income, other things being constant



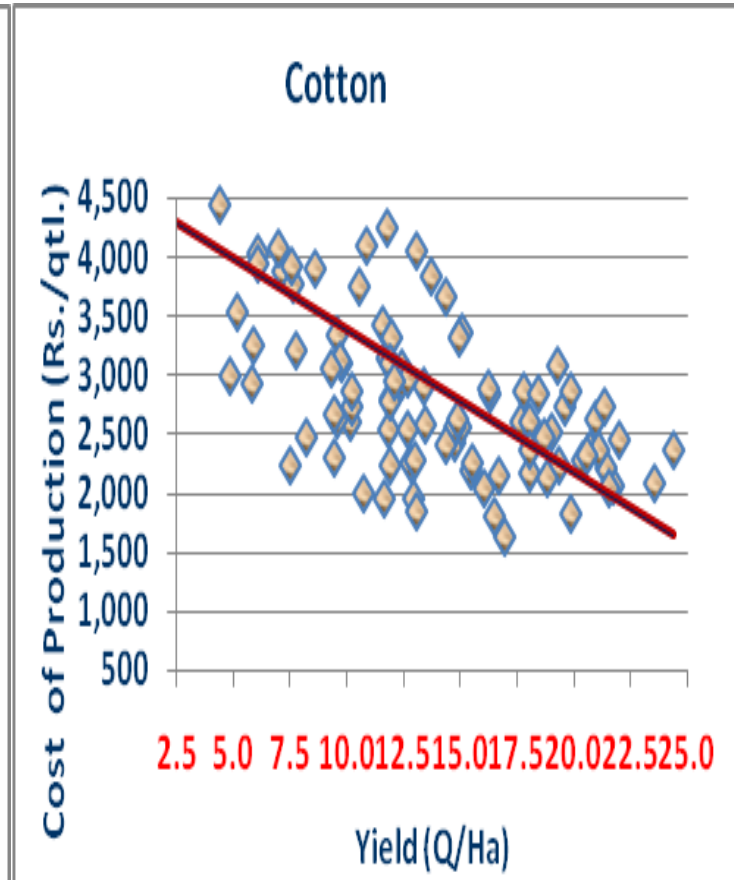
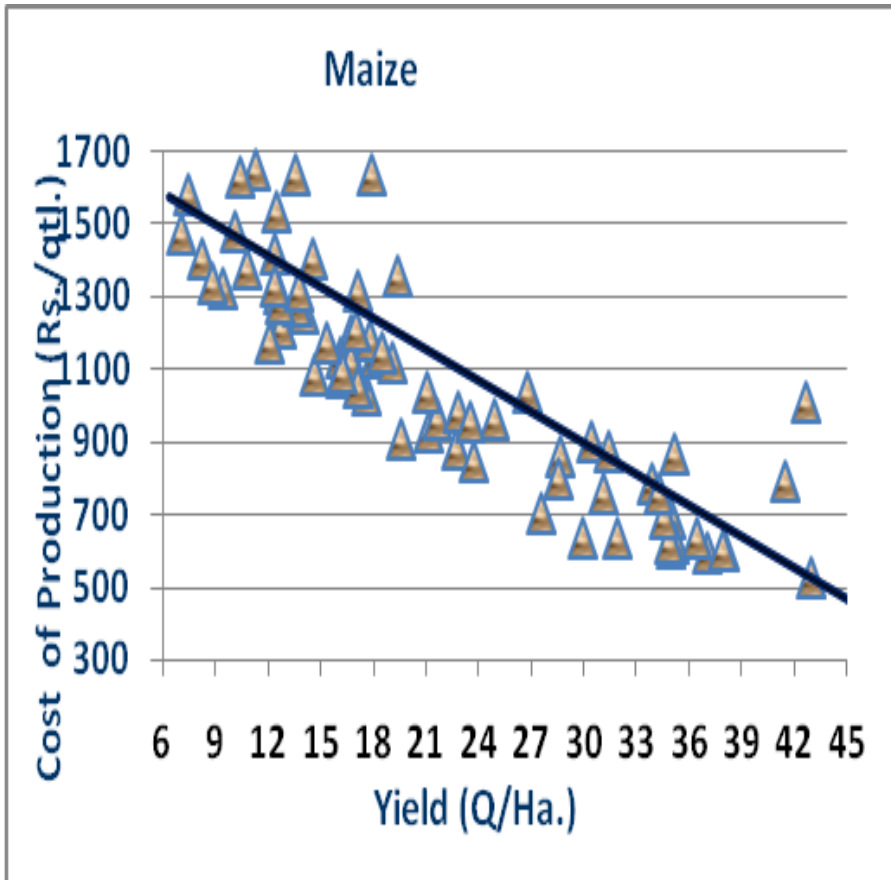
Inverse Relationship Between Yield and Cost



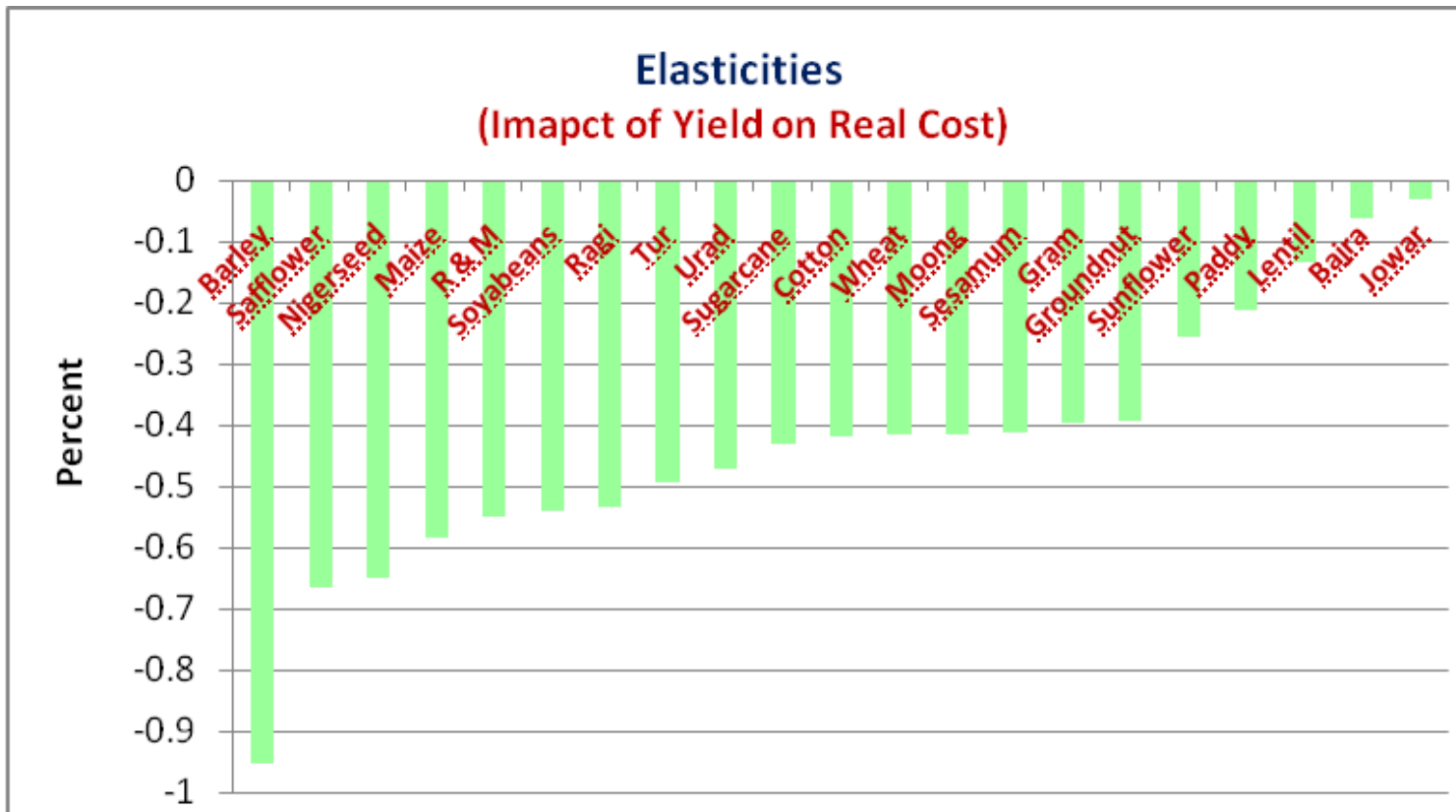
Cost (CoP) of Soyabeans, for instance, can be brought by 4.2% if its yield improves by 10%.



Inverse Relationship- Productivity & Cost



Impact of Yield Variations on Real Costs



Note: Elasticity in cases of jowar, bajra and lentil are statistically insignificant.

Real costs could be reduced by 5 to 10% (in cases of maize, tur, soyabeans, barley, nigerseed, ragi, urad, R & M, and safflower) if their respective yield increases by 10 %



Imperatives of Productivity Augmentation

- Higher productivity, ceteris paribus,
 - reduces the cost of production and have the potential to drive up farm income,
 - Increases potential for Agri-exports to expand
- can trigger rural demand and drive the economy to a higher growth trajectory.
- Precious natural resource (land) can be 'freed up' for the same level of production, if the production level achieved is already 'sufficient'.
- Equivalently, higher production can be achieved by the same land (allocated to agriculture).



Drivers of Productivity (1/2)

- ❖ Productivity measures output per unit of input, such as labour, capital or any other resource
- ❖ Drivers
 - ❖ Fertilizers
 - ❖ Irrigation
 - ❖ Seed
 - ❖ Management Practices &
 - ❖ Extension Services



Drivers of Productivity (2/2)

- ❖ Irrigation and fertilizers' roles are overlapping in raising returns to farmers, where both represent adoption of technology.
- ❖ a high correlation between Fertiliser consumption and gross returns.
- ❖ Fertiliser used is more in irrigated lands, implicitly subsidy goes to irrigation tract.
- ❖ More emphasis needs to be laid on investment in irrigation and rational utilisation of fertilizers.



Climate change-Its Impact on Cost

- ❖ Climate change **raise the frequency, intensity and duration of extreme weather events like droughts, floods, heat waves, cyclones and hailstorms, thereby cause extensive crop damages**
- ❖ increases agricultural risks by increasing variability in rainfall, causing water stress, enhancing susceptibility to plant diseases and pest attacks
- ❖ This has an adverse impact on productivity and therefore on cost of production and farmers income levels too.



Cost and Competitiveness

- The role of productivity in enhancing competitiveness is critical
- Empirical evidence suggests that volume of international trade, *ceteris paribus*, is greatly influenced by prices
- One way to reduce real prices of commodities is to increase their productivity much faster than demand.



Returns Augmenting

- ❖ Of late, demand from various stakeholders to increase MSP of various agricultural commodities has been intensifying and the main ground on the basis of which this demand is justified is monotonously increasing cost of production year after year.
- ❖ MSP is recommended not solely on the basis of costs, though it is duly factored in while recommending price policy.
- ❖ The answer to contain increasing cost of production lies in enhancing yield levels as, **on a priori basis**, one would expect an inverse relationship between real cost of production and yield rates.



Quiz

1. Which are main Public Procurement Agencies at the centre to procure at MSP?
(a) APC (CACP), (b) FCI , (c) NAFED, (d) Both (b) & (c)
2. Minimum Support Prices (MSP) of how many crops are fixed
(a) Less than 20 (b) Between 20 and 25 (c) More than 25
(d) None, as Government has dispensed with procurement.
3. What is the relationship between Productivity and Cost?
(c) Direct relationship i.e. if one increases, other increases and vice versa. (b) No relationship (both are independent), (c) Inverse relationship, (d) None of these.



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Thank you