

**GS Paper 3  
Agriculture - Oct'18**

**Shifting From Agricultural Subsidy To Investments**

*Syllabus: Issues related to direct and indirect farm subsidies and minimum support prices*

**In News**

- Public capital formation in agriculture has been declining from 3.9 % of agri-GDP in 1980-81 to 2.2 % in 2014-15 and recovered to 2.6 % in 2016-17, while input subsidies on fertilizers, water, power, crop insurance and agri-credit have risen from 2.8 % to 8 % of agricultural GDP during the same period.
- Most countries support agriculture to ensure food security and/or enhance farmer's income. India is no exception. The main policy instruments to support farmers in India include subsidized fertilizers, power, agri-credit and crop insurance on the input side and minimum support prices for major crops on the output front.

**Agricultural Subsidies vis-à-vis Investments**

- **Returns on subsidies are low:** The marginal returns on subsidies are far below those from investments. The results show that expenditure incurred on Agri-R&E (Research and Education), roads or education are **5-10 times more powerful** in alleviating poverty or increasing agri-GDP than a similar expenditure made on input subsidies.
- **Subsidies leading to inefficiencies:** It may be noted that excessive input subsidies have caused large-scale inefficiencies in the agriculture system. *For example*, fertilizer subsidies, especially on urea, have led to the imbalanced use of soil nutrients. The subsidy on irrigation water has resulted in an inefficient use of scarce water. Highly subsidized power has led to over-exploitation of groundwater. Subsidy on the interest rates on crop loans has diverted substantial amounts of agri-credit to non-agricultural use.

**POVERTY AND AGRI-GROWTH EFFECTS OF GOVT INVESTMENTS AND SUBSIDIES**

	Number of people brought out of poverty per million ₹ spent	Rank	Returns in GDP per ₹ spent	Rank
Agricultural R&E	328	1	11.2	1
Roads	130	2	1.10	2
Education	42	3	0.97	3
Fertiliser subsidy	26	4	0.88	4
Power subsidy	23	5	0.79	5
Public Irrigation (canal)	10	6	0.31	6
Irrigation subsidy	n.s	7	n.s	7

**Way forward**

- In the light of all this, the best blend of subsidies and investments must now give more weightage to the latter.
- But at the same time the investment in public irrigation is very expensive, as it involves long lags and the gap between the potential created and potential utilized has increased over time. To give higher returns, this leaky system must be fixed, it should be made more transparent and the gap between potential created and utilized bridged.
- *Second*, the present system of delivering subsidies through the pricing policy needs to be shifted to an income policy, which could be well targeted, and leakages minimized on the lines of JAM trinity.
- *Third*, investments need to be prioritized towards agricultural research and development, roads and education. Interestingly, at the global level, the private sector is leading in agri-R&D. India has a lesson to learn from China in this aspect as well. ChemChina, a PSU, has

taken over Syngenta Corporation a leading player in crop protection and seeds for \$43 billion. India can also make similar moves to give its farmers access to the best technologies in the world, which in turn can augment their productivity and incomes and give the nation long-term food security.

### **Promoting Agricultural Exports**

#### **In News**

- **New Agricultural Export Policy** has set an ambitious target of tripling annual agri exports to \$100 billion by 2025. A bigger historic success would be the new policy's ability to revolutionize the participation of 98 million smallholder farmers, especially from the poorest states, who have the biggest stake in the business.
- Though agriculture production has transformed under the *Green, Pink, Yellow, Blue and White Revolutions*, the economic disparities are wide. In 2015-16, small and marginal farmers (with less than 2 hectares of land) earned Rs. 29,132 annually from cultivation, while large farmers (with more than 5 hectares of land) earned 17 times more, according to the National Sample Survey Office's (NSSO) 70th Round data. Export could be the fastest way to reduce these disparities.

#### **Focus Areas In New Agricultural Policy**

The new export policy should, therefore, impact on three fronts.

- *One*, prioritize the digital infrastructure necessary for connecting smallholder farmers to exporters in the least developed states.
- *Second*, the policy should rope in state governments for accelerating technical and business expertise among small and medium enterprise (SME) trader exporters — 'the missing middle' through industry bodies and addressing the high cost of finance. SMEs in food and agriculture sector will grow annually only by 2% till 2020, compared to 20% in electronics, according to a 2014 KPMG study.
- *Finally*, the policy must encourage export from the **100 aspirational districts** identified by the NITI Aayog. This can be accomplished through public-private partnership (PPP) and incentives linked to business models that make it easier for smallholders and SMEs to become suppliers without raising transaction costs. Thus, they can become stronger negotiators through skills development, collective bargaining and access to market information and financial services. Value chain collaboration, transparency in pricing mechanisms and risk sharing should also be promoted.
- Moreover, there is also need for Policy reform in the form of contract farming, market yard sales, farmer collectives, microfinance, commercial arbitration, land lease *etc.* to improve ease of doing agri-business.

### **Draft Mariculture Policy**

*Syllabus: Economics of animal-rearing.*

#### **In News**

The Draft Policy was formulated by an expert committee formed by the National Fisheries Development Board (NFDB) with **A. Gopalakrishnan**, Director of Central Marine Fisheries Research Institute (CMFRI) as Chairman.

### Features

- **Aim and purpose:** The policy aims to enhance mariculture production in the country and increase income and employment opportunities in a sustainable way, in addition to promoting entrepreneurship by facilitating technical and financial inputs.
- **Mariculture zones:** A Draft National policy on mariculture has mooted mariculture zones by demarcating special areas in the sea for activities such as cage farming, bivalve farming, pen culture, seaweed culture, hatcheries and nurseries based on scientific criteria. Sea areas identified in this manner will be designated as mariculture technology parks by the respective states.
- **Offshore Technology Park:** In a bid to support fish breeding, culture, packaging and trade, the policy proposes encouraging the establishment of offshore technology parks and coastal embankment systems.
- **Farming of GM:** The policy allows farming exotic and genetically modified (GM) species in closed mariculture systems after stringent risk assessment and monitoring.
- **Use of technology:** Satellite remote sensing data and GIS will be used to identify potential zones for mariculture on the basis of scientific evaluation of environmental parameters suitable for various types of farming, avoiding conflict with other users and protecting the livelihoods of local fishing communities.
- **Financial incentives:** The Policy advises the government to formulate financial assistance programmes, including prioritized lending schemes, subsidized credit and investment subsidies, to promote mariculture.