

GS Paper - 3 Agriculture – Sept'18

Pradhan Mantri Annadata Aay Sanrakshan Abhiyan

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

In News


- The Cabinet has allowed gradual entry of private companies in procurement of food grains and sanctioned Rs. 31603 crore for two schemes to ensure farmers are able to sell their produce at the minimum support price (MSP).
- These initiatives are part of the **Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PMAASHA)** to ensure higher income of farmers with the help of robust procurement in coordination with states.

Provisions of New Scheme

- Three components:** Under the PM-AASHA, states will be allowed to choose from three schemes existing **Price Support Scheme (PSS)**, newly designed **Price Deficiency Payment Scheme (PDPS)** and the new pilot **Private Procurement Stockist Scheme (PPSS)** to undertake procurement when prices of commodities fall below MSP level.
- Existing PSS to continue:** The existing Price Support Scheme (PSS) will continue for pulses and copra, with Central agencies including the NAFED and the Food Corporation of India physically procuring the produce whenever the market rates fall below MSP, up to a **maximum limit of 25%** of the total harvest. The Centre will bear the costs, as per existing guidelines.
- Private sector participation will be piloted:** The participation of private sector in procurement operation will be piloted so that on the basis of learning the ambit of private participation in procurement operations may be increased. Under it the selected private agencies will procure the commodity at the MSP, instead of the government. Maximum service charges up to **15% of the notified MSP** will be payable.
- Choices in case for oil seed:** For oilseeds alone, the States will be allowed to choose between the PSS or private procurement. The Price Deficiency Payment Scheme is modeled on the **Bhavantar experiment in Madhya Pradesh** last year, where there is no physical procurement at all. Instead, farmers will sell their produce in the market, and the government will directly pay them the difference between the MSP and the average market rate.

Govt launches Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA)

Unprecedented steps to protect & augment farmers' income



Price Support Scheme (PSS):

Physical procurement of pulses, oilseeds and copra to be done by Central Nodal Agencies along with state govts. Central Govt to bear procurement expenditure & losses due to procurement up to 25% of production.

Price Deficiency Payment Scheme (PDPS):

Will cover all oilseeds for which MSP is notified. Farmers will get direct payment of the difference between the MSP and the selling price.

Pilot of Private Procurement & Stockist Scheme (PPSS):

Participation of private sector in procurement operation to be piloted. For oilseeds, states have the option to roll out the scheme on pilot basis in selected district/ APMC(s) involving private stockist.

Benefits Of Private Sector Participation

- Overall benefits:** The direct procurement by private sector should help in improving transparency in price discovery for farmers, stabilizing and augmenting farmer's income by increasing competition for their produces and reducing inefficiency by curtailing role of the middlemen.

- **Attractive investment opportunity:** Once the farmer has better visibility on his income, agriculture will become attractive for entrepreneurs, thereby encouraging investments in all facets of agriculture like cultivation, storage, logistics, etc. resulting in enhanced productivity.
- **Holistic approach:** It shows the government's holistic approach as increasing MSP is not adequate and it is more important that farmers get the full benefit of the announced MSP. Thus, The scheme is expected to ensure that farmers get the MSP fixed by the Centre for crops grown this kharif season, to be marketed from next month.

Way Forward

- The question is again with regard to implementability. When market prices today are consistently ruling below MSPs, it only means that the latter do not reflect supply-demand fundamentals. That being so, the responsibility for making purchases at MSP and incurring both sale as well as storage losses would be solely on government agencies. Then question arises how much can these agencies buy and store? Moreover, how will they dispose of these stocks? NAFED is now struggling with the roughly 6.5 million tonnes of pulses and oilseeds it bought in 2017-18 and which is currently being offloaded back into the market at below MSPs.
- Thus, if farmers are to be paid remunerative rates, the best way to do it is not through distorting but by liberating the markets. Let the farmer grow any crop based on market signals and sell anytime at the going price that traders are willing to pay.
- Simultaneously, introduce competition by allowing anybody from anywhere to buy from any mandi within India, while doing away with all storage and movement restrictions. A truly national market for agricultural produce, coupled with a flat per acre government payment independent of the crop being grown is the need of the hour.
- Moreover, the success of the pilot scheme would depend on the mechanism to reimburse the difference between the support price and the market price to private agencies.

Maharashtra MSP

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In News

- The Maharashtra government has taken a decision to make purchase of any farm commodity at below MSP even by private players, be it traders or processors, a punishable offence attracting cancellation of licence of trader, **one-year prison term** and a fine of **Rs 50,000**.
- The government has fixed MSP for **24 crops** but is influential primarily in rice and wheat. Even in the case of these two cereals the extent of influence can be gauged from the quantity of production, which is procured at MSP by government agencies. At best, about **32-33%** of production is procured. Procurement is far lower in the case of other MSP crops. This means most of the production is sold to private traders at a price which is determined by the demand-supply dynamics of the relevant crop. Therefore, there may be situations when market price is below MSP. However, the government now wants to ban this by fiat.

Negative Impact

- **Shifting the burden of MSP implementation:** If the Maharashtra government has its way, the onus for implementing the Centre's historic decision to fix minimum support prices (MSP) for crops at **1.5 times their average production costs** will not lie with state procurement agencies. Instead, that responsibility shall be with private trade.

- **Price determination should be by market forces:** If market prices for crops are below the MSPs, it only means that the latter do not reflect supply-demand fundamentals. No rational trader would obviously buy at the MSP to sell at a lower rate.
- **The question of compensation to private trader:** The National Agricultural Cooperative Marketing Federation is now offloading tur, moong (green gram), urad (black gram) and groundnut that it procured at MSPs last year at market prices, which are far lower than MSP. The apex state procurement agency is able to do this only because its losses will be borne by the government. Thus, there is a question who will compensate private trade's losses for purchases at government determined MSPs.
- **Ultimate sufferer will be farmers:** If they are going to risk being jailed for not paying the MSP, the safest option is not to buy at all. Thus, ultimate sufferer will be farmers because traders will desert the market and there will be no buyers for produce.

Way Forward

- If the government in Maharashtra or at the Centre wants farmers to receive the MSP, it should be done without distorting the market. Farmers could be paid the difference between the MSP and the market determined prices through direct benefit transfer for the quantity of produce sold by them, which is what **Madhya Pradesh** has attempted to do.
- Even better is **Telangana formula** of making a flat per-acre payment, which is decoupled from production. Let the farmer grow any crop based on market signals and sell at the price that traders are willing to pay. Simultaneously, introduce competition by allowing anybody from anywhere in India to buy from any mandi within the country, to create a truly national agricultural market.
- Thus, the best way to help the farmer realise a better price is by ensuring more buyers not by threatening them.

Soil Health Card Scheme

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In News

- The Soil Health Card (SHC) scheme, that was introduced in 2015 intended that every farmer receive a health card for their soils that tells them the status of the nutrients in it and as a result, guides them about the fertilizers they should apply to maximize their yields.
- The soil is analyzed for **12 soil chemical parameters** and thereafter the soil is recommended for fertilizer dosages and the same is printed on the SHCs, which were given to farmers.
- As of June 2018, 2.53 crore samples had been collected and SHCs have been distributed to 10.74 crore farmers.

Lacunas in SHC Scheme

- **Operational challenges:** The current census approach, where soil samples are collected from every 2x2 hectare parcel of land in irrigated areas (10x10 hectare in dry areas) and transported en masse for analysis in a dated network of wet chemistry labs has put tremendous strain on the system and the quality of soil analysis has suffered.
- **Difference in result:** Studies conducted have shown a low correlation between the results generated by the SHC scheme and those generated by gold standard labs. For instance, a Harvard study in Gujarat last year found accuracy issues in 300 of the 800 plots tested.
- **Over simplistic solution:** The scheme's current design oversimplifies the nutrient recommendations. For example, if the health card shows that a farmer's soil is deficient in zinc, it recommends topping up zinc. However, increasingly, research is showing that a crop's yield response to a nutrient is far more complex than this. It is determined not only by the deficiency of that nutrient, but also other variables such as rainfall, production practices, the presence of other nutrients, soil acidity, and temperature to name a few. The correct yield response can be predicted from a model with data on the above parameters, a system that the scheme currently does not use. The simplistic recommendation based on deficiency of that nutrient alone is often sub-optimal and can exacerbate the farmer's problem rather than solve it.
- **Underestimation of own potential:** The large scale collection of soil data sees little use outside of filling out a physical card. This vast repository of data, painstakingly aggregated from millions of samples remains largely isolated from researchers, start-ups and even state governments.

GUIDE FOR FARMERS

- Card to carry crop-wise recommendations of nutrients/fertilizers for different soil types
- Details will be displayed on the basis of soil tests
- Help farmers in judicious use of fertilizers, organic manures and water
- Cards to be issued for all 14 crore farmland holdings in three years
- Three crore cards to be given in 2015; 5.5 crore in 2016 and 5.5 crore in 2017
- Soil samples for testing to be drawn in a grid of



- 2.5 hectare in irrigated areas
- Soil samples for testing to be drawn in a grid of 10 hectare in rain-fed areas
- 248 lakh samples to be tested to generate 14 crore 'soil health cards'

Way forward

- These shortcomings, however present a remarkable opportunity for Indian agriculture. The solution is moving toward a sampling based soil information system that reduces the need for the tens of millions of samples that strain our lab capacity and produces better results four times faster at half the cost.
- There is also need to develop predictive models using big data to provide recommendations to farmers that account for all the factors that affect a crop's yield response. For example, a recommendation that encourages the use of a custom fertilizer blend in addition to asking the farmer to reduce sowing depth.
- Moreover, the datasets collected should be made available through an open platform. This could help start ups to combine soil health card data with rainfall and irrigation data and deliver precision irrigation advisories to our farmers on their mobile phones. Moreover, Fertilizer companies building upon such a platform, leveraging soils data, weather data and farmer demand patterns can shape the distribution of fertilizer blends in different districts. Such a platform can catalyze a wave of innovations in agriculture.

- Andhra Pradesh for example is currently bringing together years worth of cropping pattern data, precipitation data, temperature readings, irrigation information and SHC data and combining them with farmer production practices to determine what impact different nutrients have on yield. As a first step, this will act as a decision support system to do more targeted extension and produce more customized fertilizer blends. Eventually, it can be used to offer recommendations to farmers to help improve yields.

Technology Initiatives for Coffee Stakeholders

Syllabus: Technology missions

In News

- The Coffee Board, under the **Ministry of Commerce and Industry**, launched **Coffee Connect** - India coffee field force app and Coffee Krishi Tharanga - digital mobile extension services for all relevant stakeholders across the ecosystem.
- One of the key reasons for launching the apps was to **ensure better information exchange** between the Coffee Board personnel and those on the ground growing and selling the coffee.
- The applications launched are one of the first in the country to use technologies like **blockchain across the value chain** as well as **IVR based back end operations** to give timely and precise advisory to coffee farmers.
- Farmers being the end user the technologies have been built on certain critical principles like ease of use, wider participation, maximization of reach and benefit.

Coffee Connect

- Coffee Connect has been developed by Coffee Board in association with **National Institute for Smart Government (NISG)** to ease the work of field functionaries & improve their work efficiency.
- The application provides solution by harnessing the power of mobility comprising the latest technology in easing the whole process of the field activities like digitization of coffee growers & estates with geo tagging and collecting the plantation details.
- It will also help in transparency in the activities of the extension officers and officials, transparency in subsidy disbursement and real time report generation.

Coffee Krishi Tharanga

- It has been jointly developed by Coffee Board and **Precision Agriculture for Development India Foundation (PADIF)**.
- Its services are aimed at **providing customized information and services** to increase productivity, profitability, and environmental sustainability. The customised services are two ways, 24*7 service supports.
- **NABARD** has partly funded the pilot project.
- Coffee Board in collaboration with EKA Analytics, a global leader in the data analytics and artificial intelligence has also developed the **hyper local weather forecast**, pest (white stem borer) identification and leaf rust disease forecast applications for pilot testing.

Coffee Plantation

- Coffee is cultivated in India in about 4.54 lakh hectares by 3.66 lakh coffee farmers and 98% of them are small farmers.
- Coffee plantations are spread across undulating terrains in hilly regions with most of the cultivation mainly confined to Karnataka (54%), Kerala (19%) and Tamil Nadu (8%) which form traditional coffee tracts.

Conclusion

Technology has a distinctive characteristic of bringing positive and disruptive change and it is always evolving. The initiatives will ensure efficiency and ensure long term sustainable livelihoods to lakhs of farmers involved in coffee industry across the country.