

Agricultural Growth in the Aftermath of Demonetization

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Agriculture sector this year was expected to witness high growth, about 6 per cent, in output and farmers' income, after two years of poor performance due to back to back droughts. Already, kharif season, which accounts for about half of the annual crop output, showed moderate to very high increase in output of various crops. However, doubts have been raised about significant revival of agriculture growth this year due to effect of demonetization. As about 90 per cent of rabi season area is put under cultivation by the end of December, some clear indications have become available to decipher the likely effect of demonetization on agriculture and prospects of achieving anticipated growth.

Demonetization can affect agriculture directly in four ways. These include area sown, crop pattern, productivity and market. The trend and pattern in sowing and marketing of crops during the seven weeks following the announcement of demonetization provide useful indications to discern effect of demonetization on agriculture sector.

Effect on Sown Area

Tentative estimates of area sown are provided by Ministry of Agriculture each Friday of the week. This data shows that upto November 11, which can be considered as start of demonetization, rabi sowing was completed on 14.6 million hectare area which was 5.7 per cent lower than the normal crop coverage. The gap between area sown this year and normal area steadily declined almost every week since the announcement of demonetization. During the week ending 30th December, 2016, net sown area under rabi crops exceeded the normal area by 2.77 per cent and area sown last year by 6.86 per cent. The data on progress of sowing of rabi crops clearly indicate that, at country level, there is absolutely no adverse effect of demonetization as far as sowing of major crops is concerned. There was a delay of 1-2 weeks in sowing this year in the beginning of rabi season but it picked up pace subsequently. Normally rabi sowing is completed on 88 per cent area by 30th December. This year it has been completed on more than 91 per cent area.

Crop-wise effect

The progress in area sown remained uneven across regions and crops. Wheat, which accounts for 47 per cent of total area under reported rabi crops, showed a big

shortfall of 41 per cent in area at the time of demonetization. The gap declined to less than 1 per cent by mid December, 2016 and crossed normal area by 2.12 per cent by the end of December. Compared to the corresponding period last year wheat is sown on 7.7 per cent higher area. Area under pulses and oilseeds is higher than normal for the corresponding period by 11.2 and 1.7 per cent respectively. The shortfall in area is reported for rabi rice and coarse cereals. This shortfall is much smaller (6.6 lakh hectare) compared to the gain in area under wheat, pulses and oilseeds (22.3 lakh hectare) resulting in net increase in area under rabi by 15.7 lakh hectare over normal area and 37.4 lakh hectare over last year.

Among major rabi crops growing states, overall shortfall in sown area is about 20 per cent in Tamil Nadu and Karnataka and 8 per cent in Gujarat and Andhra Pradesh. Similarly, J&K and Himachal Pradesh also show major deficit in rabi sowing. Largest shortfall is seen in Kerala. All other major states indicate small to large increase in crop sown area this year over normal area. Even Uttar Pradesh, which was persistently showing shortfall in area, has reached higher than normal figure.

Effect on Productivity

Farmers use cash to buy quality seed, fertilizers, chemicals and diesel and to hire labour and machinery. As rabi season crops are mainly self pollinated, farmers need not buy fresh seed in rabi season every year. More than 70 per cent seed used in rabi crops is self produced and rest is purchased from public sector agencies, research institutes and private sources. Sale of seed this year by public institutions is reported to be much lower than normal sales. This can have small impact on productivity.

The major impact on productivity is going to happen due to change in use of fertilizer. Representative data on fertilizer use/consumption by farmers comes with a time gap. However, Ministry of Agriculture maintain Fertiliser Monitoring System which indicate first point sale of fertilizer. According to this source, fertilizer offtake during the current rabi season (till 21 December 2016) was lower than the fertilizer offtake in the corresponding period during 2014-15 and 2015-16 by 7.47 per cent and 7.0 per cent. These are very raw statistics and subject to correction as per the sale figures reported by various fertilizer companies. Also, as on date, fertilizer takeoff statistics are not inconsistent with the area statistics.

If fertilizer use at farm level faces the similar shortfall as reported in fertilizer sales at first point, it will affect productivity. According to a study by Ramesh Chand a 1 per cent increase/decrease in fertilizer use result in 0.1 per cent increase/decrease in GDP agriculture and about 0.14 per cent increase/decrease in crop output. Based on this, it is estimated that current shortfall in fertilizer consumption if it persist till the end of

rabi season, which constitutes half of annual agricultural output, can result in 1.05 per cent decline in crop output and 0.75 per cent decline in agricultural output.

Effect on Prices

No effect of demonetization was seen on prices of major crops like paddy, soyabean, and maize in the month of November and their wholesale prices in APMC mandis of the country were around 3 per cent higher in November as compared to the month of October. However, prices of maize and soyabean fell in the month of December but paddy prices ruled higher than previous two months and also as compared to last year. There might be some delays in payment to the farmers due to cash crunch but that is a temporary phenomenon.

The perishables, vegetables and fruits, in most markets and states showed a drop in market arrival as well as prices post demonetization. Wholesale prices of banana, apple, tomato and cabbage in the month of November in APMC mandis of the country, taken together, were 3.80, 3.86, 8.47 and 5.6 per cent lower compared to the month of October, respectively. These changes indicate that incomes of producers of perishable commodities have suffered due to fall in prices in the month of November. Loss to total revenue of crop sector was estimated by multiplying monthly value of output of fruits and vegetables with the difference in the prices between October and November in APMC markets. This loss comes to 0.13 per cent of value of output of crop sector for one month and 0.26 per cent.

Prices of some of the perishables crashed in the month of December. The main reason for this was found to be the glut in market. According to the data available on Agmarknet website, daily arrival of tomatoes in mandis of Madhya Pradesh in December 2016 was 54 per cent higher than November 2016 and four times the market arrivals during December, 2015. Average daily arrival of tomatoes in mandis of Maharashtra was 48 per cent higher in the month of December and 51 per cent higher in the month of November 2016 as compared to the same months in year 2015. Thus, seasonal glut and bumper crops seem to be the major reasons for crash in vegetable prices in the month of December 2016 in some states.

It is difficult to ascertain how much fall in prices of perishables during the month of December 2016 was due to glut in arrival and how much could be due to any disruption due to demonetization. Because of this it is assumed that losses to farmers were similar to those of month of November which will raise the total loss during the months of November and December to 0.26 per cent.

Effect on Output Growth

The situation prevailing at the end of December 2016 implies that rabi crop output will increase by 6.02 per cent over last year due to higher area sown. Lower use of fertilizer, as observed from the first point sale, can cause 1.06 per cent decline in output of rabi season. These two factors put together imply that rabi output in 2016-17 could be 4.96 per cent higher than 2015-16. Lower sale of quality seeds due to cash crunch can also affect growth but this impact is expected to be small. Other variable that can affect productivity and output growth is temperature in the forthcoming months of February and March.

Area sown in kharif season in the current year was 3.5 per cent higher than previous year. Level of productivity this year is estimated to be much higher than last year due to normal N-W monsoon rainfall in year 2016. As a result production of kharif crops this year was substantially higher than 2015-16. According to the first advance estimate for year 2016-17 the increase was 57.0% in pulses, 40.8% in oilseeds, 19.4% in coarse cereals, 6.7% in cotton and 2.8 per cent in paddy. Sugarcane production in 2016-17 is estimated to be 13.3 percent lower than 2015-16. These changes sum up to 10 percent increase in kharif output over the last year.

Based on above changes the growth rate for crop sector, which constitutes 62.3 percent of value of output of total agriculture, for the whole year is projected to be 7.48 percent, if there is no severe shock to crops during Feb –April, 2017. Livestock, which constitutes 26 percent VAO is likely have normal growth of 5.6 per cent. Fishery is projected to have at least same growth (4.8%) as last year and forestry is assumed to have negative growth of 1 per cent like previous year. The growth rate in all the four sub sectors *ie* crop, livestock, fishery and forestry, add up to 6.04 per cent.

The growth rate in farmers' income is projected to be slightly lower due to drop in prices of perishables during the months of November and December. The net effect of fall in prices on farmers' income is estimated to be -0.26 per cent. Factoring this change, farmers' income in year 2016-17 is projected to witness increase of 5.8 percent in real terms.

The above discussion shows that growth story of agriculture is in-tact as demonetization is found to cause small and insignificant effect on growth of output as well as farmers' income. Agriculture, which is largest informal sector of Indian economy, has shown strong resilience to effect of demonetization.

Views are personal.