

# Growth in agriculture

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**E**conomic Survey 2002-03 states that, based on provisional estimates, agriculture grew at 4.15 percent in the year 2002-03. The main source of the growth was the 5.8 percent growth in the production of major crops, while minor crops grew by only 0.41 percent. Since agriculture contributes more than 23 percent to the overall GDP of the country, is the largest employer, can impact the rural economy the fastest, and therefore can have impact on poverty the quickest as well, healthy growth in agriculture becomes a very important goal for the government and people of Pakistan. Looked at from that perspective, the overall growth rate, though not bad at all, is not too good either.



It is interesting to note that countries that have been market economies for longer, have more developed market institutions and economies, like all of Europe and North America have continued to protect agriculture, provide subsidies as well as floors below prices, but Pakistan has made many markets 'free' and reduced the role of government there.

Also given the fact that agriculture grew, on average, at 5.4 percent over the 1980s, last year's growth of 4.15 percent is not very high. But even though we have to allow for the smaller base effect, relative to the last couple of years growth performance, 4.15 percent growth looks impressive. Over 2000-02 agriculture posted negative growth rates of 2.64 and 0.07 percent.

The growth figure of 4.15 percent should not be taken as the final figure though. This is a provisional figure and will be adjusted after the final information on output is in. The Government of Pakistan also has the very unhealthy habit of estimating figures to favour the argument that they want to make. In most years you will find that budget estimates of expenditure are underestimated and revenue estimates end up being an overstatement. The same is true of GDP and output figures. They tend to be overestimated. Since this is a pattern it should not be treated as an error. Last year's Economic Survey estimated agricultural growth at 1.4 percent, the adjusted figure given in this year's Survey puts last year's growth at -0.02 percent. Though the major crops did better than projected, production of minor crops had been overestimated by a significant amount. If this trend persists this year too, 4.15 might have to be adjusted downwards later.

The major variations in the growth performance of agriculture, over the last decade, have been due to variations in the production of major crops. The data in the Economic Survey 2002-03 clearly shows that there is a strong positive correlation between growth rates of major crops and overall growth in agriculture, while variations in the production of minor crops are not only of lesser magnitude, they have less importance for the overall growth rates as well. What is also interesting to note is that major crops have had a very volatile decade in terms of production. There have been three years in the decade of the 1990s when production has jumped, up or down, by more than 15 percent, and there have been six years in the last decade in which production has increased or shrunk by more than 8 percent. In five of the last 10 years major crops have posted negative growth.

Volatility of production seems to have increased in the last decade, compared to the decade of the 1980s. Commentators point out a number of reasons for this. It could be one of the effects of having introduced High Yield Varieties (HYV) over the last few decades. These varieties give higher production in good weather years, but depend more on timely and adequate inputs of water, fertilizer and pesticide. So in years when inputs are not available in the requisite amount or at the right time, the drop in production is high. HYV have also reduced bio-diversity in our agriculture. This might also make output more volatile as pest attacks can be more damaging. Water shortages have further exacerbated the problem. There has not been any definitive

research on this issue yet, but it needs to be done.

Whatever the cause or causes of the increase in volatility, the consequences have to be lived with. If the mainstay of the economy becomes more volatile so will the overall GDP of the country. If large numbers depend on agriculture for livelihood, as they do in Pakistan, they will require special instruments and institutions to protect them against the volatility and provide appropriate smoothing. Similarly if our exports as well as industry depend on agriculture for raw material and other inputs (cotton and rice), they too will face more uncertainty regarding prices and availability of material, and they too might need some institutions to provide cover for increased uncertainty.

These institutions are conspicuous by their absence in Pakistan. In fact, over the last decade Pakistan has been one of the few countries that have tried to make agricultural markets as 'free' as possible. Subsidies have been removed from pesticides and fertilizer, water and electricity prices have been adjusted upwards to a degree, and even on the output side the government has reduced its role in purchase and storage of produce, and in offering guaranteed floors below some major products.

It is interesting to note that countries that have been market economies for longer, have more developed market institutions and economies, and have higher literacy and education rates, like all of Europe and North America, have continued to protect agriculture, provide subsidies as well as floors below prices, but Pakistan has made many markets 'free' and reduced the role of government there. Furthermore, it is even more interesting to note that agriculture sectors in these developed nations do not provide livelihood to large numbers in the country, poverty levels do not crucially depend on agricultural production, and neither does industry, yet they have persisted with protecting the people in agriculture. Maybe there are lessons for us in these examples.

The executive summary of the third quarterly report on "The State of Pakistan's Economy", published by the State Bank of Pakistan recently, has an interesting paragraph on agriculture:

"The entire growth in the major crops seems to stem from the improvement in the yields. In particular, per hectare yield of gram rose by the unprecedented 58.5 percent, followed by rice (9.6 percent), cotton (7.3

percent), wheat (5.4 percent) and maize (2.6 percent)." Page 6 of the report.

This paragraph explains last year's growth in agriculture quite succinctly. Production has gone up while overall cultivated area did not change at all. Therefore yields, for most crops, have gone up. But this is a very misleading paragraph as well. If water shortage was the reason for poor production and yield in the last few years, or even pest attacks, and this year we have been lucky due to better weather, then of course the rise in production will show up as yield increases. This is just an accounting fact. There are no increases in yield because we have used better variety of seeds or have made our input management better. If next year the weather turns inclement again, we will have drops in yield if farmers decide to sow the same area. And this is exactly what we have seen in the last few years of bad agricultural growth.

What would have been more important to show, and neither the Economic Survey nor the State Bank Quarterly Report look into this, is if the poor water availability over the last few years has induced better water management techniques in the farmers. If we use our water more efficiently, and if less is wasted, compared to the past, then we can argue that the increase in yields is worth something and will persist over time.

This sums up the story of agriculture very well. We have not made significant gains in productivity in agriculture for a long time, but have depended, instead, on liberal use of water and land for our production. Water availability has become a binding constraint as a direct input and in our ability to increase area under cultivation as well. Weather thus plays a very important role in determining our agricultural output, and therefore incomes in rural areas as well.

Furthermore, since agriculture has very strong connections with industry in Pakistan, and our exports, volatility of weather and water availability, with suitable lags, significantly jolts the entire economy.

What is missing from government publications and pronouncements is both recognition of these issues and their importance, and a plan to address them and minimize their impact on the economy. This requires a deeper study of the reasons for the volatility, research into better varieties, research into better input management, dissemination of this research through better agricultural extension services, and design of institutions in capital and other markets for limiting the impact of volatility.

Well-being of agriculture is very important for us. It directly affects the GDP of the country, the incomes of most people in the rural areas, and a significant number in the urban areas as well, it directly affects our industrial output and export earning, and most importantly, it has the potential of impacting the poverty level in the country as well. But agriculture has not been doing to well in the 1990s. Growth rates have remained low, output has become more volatile and productivity increases have just not happened. It is all right to talk about weather or pest problems for a year, but if the problem persists we have to find some solutions for it. This is where we have been tardy. We have not only not worked out solutions, we have also taken some actions that are likely to exacerbate the problems of volatility. By reducing subsidies and removing floors, while not having addressed issues with missing markets in capital, insurance, labour and even agricultural land, and without designing institutions and instruments that deliver better outcomes, we have ensured that agriculture remains open to volatility in the future as well. The existing structure will continue to create havoc with incomes in the rural areas, and so this year's growth, whatever its level, should give little comfort to us.

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