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Crop Insurance

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The need to provide some kind of insurance cover to protect the incomes and outputs of farmers from the vagaries of the weather, natural calamities (like pest attacks) and price volatility, despite modernization and technological improvements, has often been raised as a concern, but without being subjected to any serious debate.

Across the border in India crop insurance, essentially covering yields/output (and not crop income directly) delivered by rural finance institutions, is being used to provide protection to farmers. The instrument of crop insurance is linked to crop loans and its cost is partly financed through government subsidies (especially to cover small and marginal farmers). It is, however, intriguing that despite the high claims to premium ratio (more than 400%) only 10% of the cropped area in India is covered, whereas the above mentioned high ratio should have attracted more farmers to the scheme.

It is time to give this issue a serious thought, also because it will strengthen the argument that farmers should pay taxes on their agricultural incomes with the volatility and smoothness of income flows being covered and protected by this mechanism of crop insurance. This article makes recommendations on how best to introduce such an instrument by highlighting the major factors that, in view of the highly risky nature of agricultural activity, will have to be taken into consideration for its development.

The foremost problem is that risk in agriculture is largely systemic in nature (resulting in an entire area or crop being affected due to drought, pest attack, etc.) and cannot be reduced through “pooling of risk” by covering the entire range of economic actors—a heterogeneous mix rather than a homogenous mix—a critical condition for making any activity insurable. Consequently, in agriculture, the assessment of the risk, and thereby the level of the insurance premium, is likely to require coverage on an area basis (for a crop like wheat or cotton or a combination of major crops) as opposed to an individual farmer basis, since the estimates would have to be based on average risk and loss aspects of this specific area as a whole.

Farmers of a specific/identified homogenous geographical area will all have to be viewed as identical in terms of the degree of risk and loss and hence will be required to pay the same premium and also be entitled to a claim of the same value (on a per acre basis). Such an approach would not only be an administratively more convenient approach but would also help minimize manipulation and the incentive to be reckless. Moreover, it

would also be mandatory on all farmers in the area to participate in the scheme (or for the ones wanting to participate the premiums would have to be higher).

Insuring the income of the farmer from a particular crop will require that he be covered for the difference between guaranteed income (to be determined by multiplying the lowest acceptable yield per acre with the crop support price, if any, announced by government) and the actual income (which would be a function of the actual yield and the prevailing market price). To minimize the incentive to manipulate income, the “actual” market price will have to be accepted as being within a range of say 90% and 125% of the relevant support price. However, the amount to be paid to a claimant need not be based on an estimation of the loss and could be pre-determined.

Tying a crop loan to its insurance would strengthen the scheme and also reduce the risk for the financial institution, thereby helping to lower the interest rate on the loan. To minimize administration costs the premium could be deducted at source from the disbursement of the loan.

However, for the scheme to get off the ground we would require adequate historical data over a number of years on crop yields, extent and impact of rainfall and pest attacks, in such a defined “area”. Since there is little background information on crop yields, rainfall and history of pest attacks, etc by area the prospects of diluting risk through re-insurance abroad are likely to be limited. It appears, therefore, that, at least for the foreseeable future, risk (concerning the nature of the business and of changes in the market-resulting from supply and demand factors) would have to be shared between the insurance company and the government, with the government’s contribution being in the form of a subsidy initially until it acquires a degree of maturity. Luckily any crop insurance subsidies of this nature that may be required to operationalize the scheme in the initial period will not run foul of WTO regulations. Over time the quality of the crop insurance scheme can be further developed with better crop estimation techniques arising from the use of new technologies, improved forecasting and superior methods of prediction about weather conditions.

With a phased approach that clearly sets out the direction in terms of how and when (a ‘sunset’ clause) the subsidy scheme can be withdrawn. The success of a well-designed and implemented scheme (a tough ask given our poor history of policy formulation and

its execution) will facilitate the government's exit as the farmers step up to bear the costs-based on their experience of how well the scheme accomplished its objectives to protect their incomes.