A National Campaign of Maize and Bean Seed Production in Small Rural Communities

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On of the forms to transfer technology to farmers is through the modification of the inputs that they normally use. In this perspective, each new crop variety is a new arrangement of genes that is put at the disposition of the farmers to substitute the combination of genes being used by them. As crop varieties are one of the most basic inputs in productive agriculture, a change in varieties has been one of most used instruments to begin the evolution of technology for the poorer farmers.

For Brazilian agriculture, the potential for increasing production by utilizing genetically improved seed is very great. In the case of maize, for example, the amount of seed sold is sufficient to plant only seven million hectares of the 12 million hectares planted each year. The farmers that still use the traditional seed saved from the last crop, are those farmers that do not have the financial resources to purchase improved seed from the private sector.

The maintenance of genetic purity of new maize varieties is difficult, requiring isolation either in space of time from other fields of different varieties. In the case that isolation is not achieved, the new improved variety is contaminated by older traditional varieties planted in nearly fields, reducing the yield potential. In the case of dry beans, the major difficulty in on farm seed production is maintaining phytosanitary quality. Consequently, the simple distribution of seed of new varieties

of maize and beans to farmers is not efficient to substitute the current cultivars with more productive ones. Several precautions need to be taken in the multiplication of new cultivars to insure that their production potential is maintained.

During the last several years, Embrapa has conducted, in collaboration with the extension service of the state of Minas Gerais, a program of maize seed production with approximately 200 rural communities. The results in terms of the number farmers benefited and the quality of seed produced have been very good.

This new campaign is an extension of the experience in Minas Gerais to other states in Brazil, including beans in the initial phase, multiplying the economic and social benefits of this initiative. The initial goal is to reach 5000 rural communities of poor farmers; composed of 20 farm families on the average, reaching a total of nearly 100.000 farmers.

The amount of seed produced from this initiative will be sufficient to plant 500.000 hectares. nearly 10% of the area planted with traditional unimproved cultivars in Brazil. As in the case of Minas Gerais, these units of seed production can also serve as demonstration units for other technology for the farmers of these communities.

The objectives of this campaign are:

1) to increase the awareness of the farmers to the difference between grain and seed;
2) to establish on farm seed production fields in the communities and use these fields as demonstration units with respect to a complete technology package;
3) distribute seed of improved varieties with a technology package to 5000 rural communities in the South, Southeast,

Central-West and Northeast regions of Brazil, with the aim to demonstrate that it is possible for the farmer to produce good quality seed of maize and beans, and

4) to orient farmers and their families to utilize maize efficiently for food, feed and family agribusiness.

The coordinators the campaign are Embrapa Maize and Sorghum and Embrapa Rice and Beans. The coordinators along with Embrapa Foundation Seeds are responsible for producing and providing the seeds. The coordinators are responsible to provide the campaign and technical information. The information will be aired by Global Rural, a TV program produced by Globo TV, and the Voice of Brazil under the responsibility of Embrapa. The state extension services and other technical assistance organizations will provide incentives to the rural communities to participate. The Brazilian Mail Service will distribute the seed and kits to the communities. This project is being funded by Embrapa, Correios, the Bank of Brazil, Comunidade Solidária, and PRONAF.