

Producing the Seeds of Change in Nepal—One Community at a Time

How can an insignificant handful of people hope to improve prospects in Nepal's mid-hills region, where armed insurrection compounds the suffering imposed by poverty, hunger, and isolation?

In Balefi, a tiny hamlet alongside the road in Sindhupalchok District, Nepal, the Hill Maize Research Project (HMRP), in collaboration with a local farmers' association, helps six farmers produce maize seed. The harvest should be good.

"I estimate that they'll produce four or five tons of quality maize seed," speculates Neeranjan Rajbhandari, CIMMYT adjunct scientist with the HMRP. "The average yield in this area is about one ton per hectare."

The project provided the farmers with source seed, plus training in seed production techniques, storage, and marketing. "We're counting on getting 50 to 100% more money for our seed than we get for maize grain," says one producer. "Other farmers want to buy our seed because it will produce up to three times more than their current varieties."

Nearly 80% of Nepal's maize is grown in the mid-hills (see map), where more than 10 million people depend on the crop for food, income, and animal feed. Shortages are chronic.

The HMRP ensures that there is sufficient seed of new maize varieties for farmers to replace old improved or local varieties, which yield very little. Community-based seed production accelerates seed replacement, disseminates new technologies, improves household food security, and raises incomes.

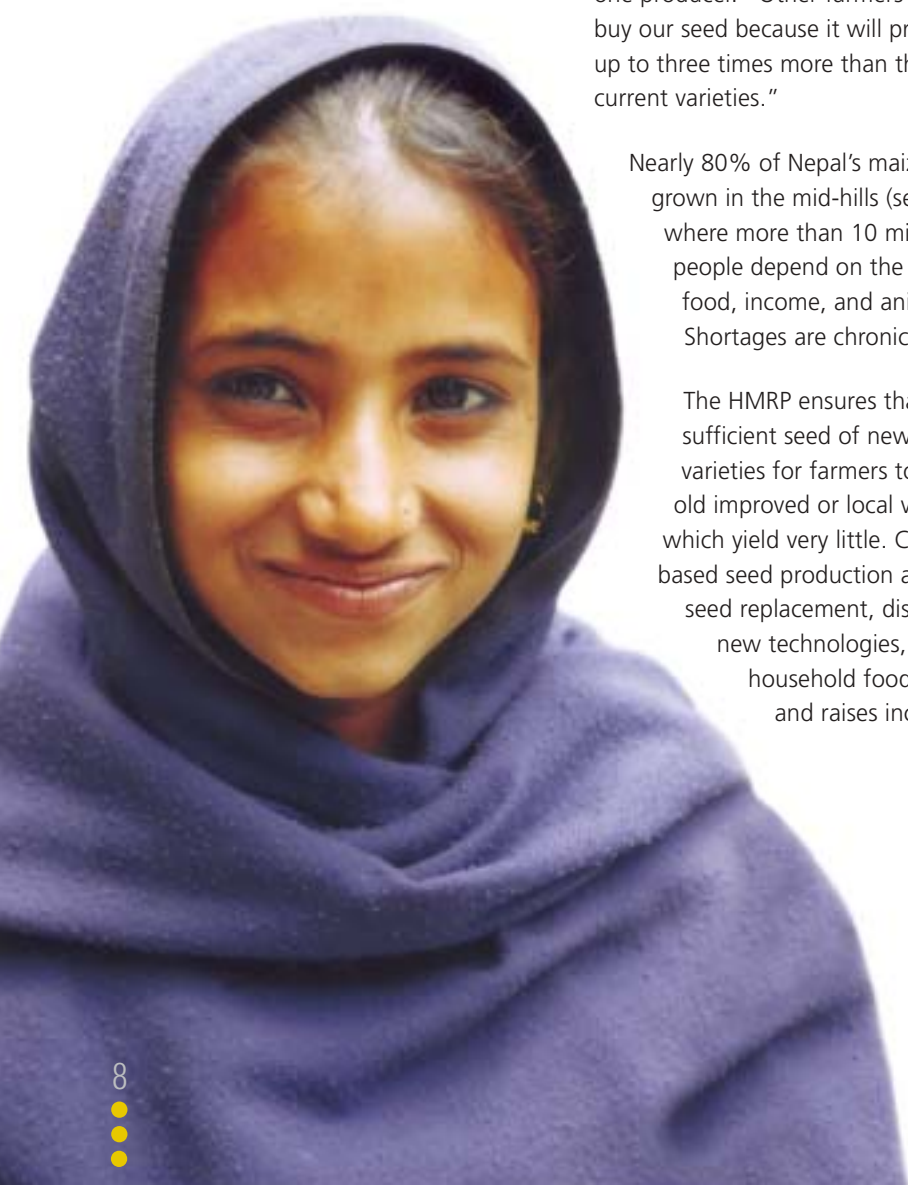
● Tuki lights the way

Just a few kilometers up the road is one of many farmers' groups called Tuki associations (*tuki* means "oil lamp" or "leader" in Nepal). These associations, established with funding from the Swiss Agency for Development and Cooperation, seek to improve farmers' yields and their welfare, a goal that meshes with CIMMYT's mission.

Tuki has a network of farmers involved in producing maize seed. (Where there are no networks, the HMRP starts producers' groups.) Ten years old, this particular Tuki association spans 30 village units and has a leader in each. Of the leaders, 35% are women. This excellent network extends to areas that can be reached only on foot.

Tuki not only provides farmers with seed but buys their production, which is usually 200-300% above the average maize yield in this region. It pays a premium (double what farmers would normally get) for excellent quality. The fact that Tuki buys the seed just after harvest is a great advantage: the money flows in, and farmers do not have to look for markets or risk storing the seed and having insects eat it. Because the sustainability of seed production depends on successful marketing, the HMRP is careful to coordinate production and avoid creating a glut that would affect the premium paid to producers.

Seed producers sow three CIMMYT-derived maize varieties: a Rampur composite, Arun 2, and Manakamana 1. Other activities to improve maize production, including the use of soil-conserving practices, have been initiated in 6 villages with 84 farmers. Tuki provides extensive community support in many other ways, such as teaching women to read, write, and keep accounts and instructing them about which crops to



sow off-season to make higher profits. An educational program ensures that all children go to school. Tuki also operates a savings and loan association.

● Braving the insurgency

Kabre Village in Dolkha District is the site of Kabre Experiment Station, which was destroyed not long ago by insurgents. “We have some trials there again,” comments Salendra Thapa, technical assistant assigned to Kabre, “but most of my time is spent interacting directly with farmers at the station’s outreach sites, providing training in many things, including maize seed production.” The HMRP has supported and collaborated on all maize-related activities in the area for four years.

Farmers’ holdings are small: 72% are less than one hectare. Women do most of the farming. Few men are left in these communities. In the village of Kiratichap, 10 women produce maize seed on 1.4 hectares. The quality of the seed is so good that the extension agents use their field as a demonstration plot and buy the seed to distribute to other producers.

“We never had enough to eat until we started producing seed,” recalls Debaki Karki, leader of the women’s group. “Our maize harvests were so small that the grain provided enough food for only three or four months. Then Mr. Thapa came and taught us to produce seed. We started harvesting three tons of seed per hectare, and the difference was like night and day!” Soon the women were doing so well that they initiated a savings and loan service for their group.

The number of people involved in seed production is rising steadily. “When other farmers see seed producers increasing their yields and earning a lot of money, they are very interested in joining,” says B.N. Adhikari, technical officer at Kabre. With support from the HMRP, he and

Thapa constantly form new groups in the extensive area they cover. They have not let the destruction of their base station discourage them, nor are they letting fear of the insurgents keep them from reaching out to farmers.

“Mr. Thapa is like a member of our family,” points out Durga Devi Karki, a group member who is the head of her household. “He didn’t leave us when things got rough.”

The income from seed sales has improved the lives of the women and their families. Any leftover grain (only the best is used as seed) goes to the household, and the maize stover is fed to the livestock. Better-fed animals produce more milk, and the women sell the surplus on the local market. The additional income is spent on their children’s schooling, clothes, and shoes, as well as on food and other household expenses.

“Just three of the women in our group read and write. The rest can barely sign our names, but we’re sending our children—girls and boys—to school. They are even learning English!” Durga Devi says. Simple words, but they speak volumes about the success of the HMRP and its partners.

About the Hill Maize Research Project

Two-thirds of the maize produced in the hills of Nepal is consumed directly by farmers who nonetheless experience food shortages. It is imperative to increase production without placing undue stress on the environment. The Hill Maize Research Project (HMRP), a collaboration of CIMMYT and the Nepal Agricultural Research Council (NARC), is funded by the Swiss Agency for Development and Cooperation. Now in its second five-year phase, the HMRP supports all maize-related research in the hills of Nepal through five NARC agricultural research stations. It provides resource-conserving practices and more productive maize varieties suited to farmers’ circumstances in these fragile hill environments. The project also facilitates, organizes, and provides training to local researchers.



Maize production in Nepal is concentrated in the mid-hill districts.



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