

Traditional Support Systems in a Mountain Environment

Production Systems in a Subsistence Economy

The production system in a mountain economy is characterised by certain special features which require special treatment. Among these special features one can enumerate the following.

Mountain environments represent vertical, rather than horizontal farming systems. This fact draws attention to the agro-ecological variation in mountain regions and the range of farming systems possible at different altitudes. The high altitudinal range in the Karakorum, Hindu Kush, and the Himalayan region allows both single and double cropping farming systems. The first is liable to follow a more land intensive cultivation regime and the second a more labour intensive regime. Thus, in one area land will be the more scarce resource and in the other, labour. The farmers' cropping decisions and the decision on the dominant farming system (livestock production vs crop production, perennial crops vs annual crops) will be guided by these factors and the whole range of extension, input, and marketing services will need to be oriented towards these varying needs.

The isolation, poor communication, and the marketing infrastructure in mountain regions often persuade farming communities to disregard considerations of comparative advantage in favour of food security considerations. In such farming systems, farmers consume what they produce. When security considerations are overriding, the government subsidisation of staple crops has a minimal affect and is likely to bring down the price of the major crops even further as the farmers continue to grow the subsidized crop, fearing that the fragile communication link may cut off supply lines indefinitely.

The rapid development of communication leads to an immediate change in production orientation; from a system of subsistence production to market exchange production. Comparative advantage considerations then take precedence over food security concerns. This transformation is often a difficult one due to the deficient nature of the supply system for new inputs required, lack of new skills required in high mountain valleys in transition, and lack of concurrent development in complementary facilities required for effective development.

Traditional Marketing Systems

The traditional marketing systems in high mountain valleys are underdeveloped due to the home

consumption oriented production system. The unplanned surpluses that are generated, are also used internally at a high cost because of the lack of a marketing system. The traditional marketing systems are limited to the management of local surpluses and shortages as well as regulation of internal marketing between the valleys. A valley, surplus in fuelwood, exchanges its surpluses with another which is surplus in forage crops or livestock. These traditional systems are highly dependent on personal and informal interaction and, the exchange of information relies on personal contact.

The only marketing functions that are performed at the village-level are limited to inter-valley trading and storage, using very traditional techniques. Storage techniques consist almost entirely of digging pits in the ground and storing fruits, butter, and potatoes. Processing of farm products is limited to household level processing of dairy products and the dehydration of fruits and vegetables using traditional methods which do not contribute to the shelf-life of the processed products. The stored and processed products are for family - consumption during the severe winter months when very little grows and when communication is cut off both between valleys and with down- country markets.

Traditional Input Supply Sources

In the absence of markets, an informal system of input supply develops in these isolated communities. The village shopkeeper becomes a source of informal credit for the villagers. He is often unable to charge a premium for his services due to the close social interaction which accompanies his transactions. The exchange, often does not involve any money changing hands. Farm families "borrow" grain or other items of daily use and pay it back after the harvest. Similar exchange is conducted between households for seeds, saplings, grains etc.

The system is resilient and reliable, but has drawbacks. For example, in the absence of an extensive system for seed production and marketing, new variety seeds, over time, become mixed with local varieties and, very soon there is no significant difference in yields between old and new varieties. The traditional exchange systems, often do not put the required premium on new variety seeds of good quality.

The mountain walls are an effective barrier against the introduction of new technologies and techniques. There is very little exchange of information on new technologies. Dissemination that does take place, is at an informal level and is passed on from farmer to farmer and from one generation to another. In the Northern Areas a lot of the information on new varieties and new innovations was introduced during the construction of the Karakorum Highway by the Chinese.