

## HAFL Master's Thesis Abstract

*Year:* **2016**

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*English Title:*

Seed systems of rice and finger millet in Nepal, between formality and informality

Impacts of different seed systems on agrobiodiversity, seed value chains and livelihood of smallholder farmers in Ghanpokhara, Lamjung, in the mid-hills of Nepal

*English Summary:*

Although productivity in rice production has increased over the past decades, Nepal has become strongly dependent on food imports, mainly due to its population growth. The development and increase of agricultural production is of high importance and with that the need to optimise the organisation of the seed sector. Seed is one of the most vital inputs for agriculture and food security. The use of quality seed of high-yielding, stress-tolerant varieties is an important means to increase grain yields.

However, as in many developing countries, in Nepal the existing formal seed system is not able to meet the whole demand for seed. About 88% of cereal seed flows from informal systems and there are regions and groups of farmers that are not connected at all to any seed networks with external seed supply. Nepal's agricultural policies and formal institutions are promoting the development of the formal seed system. However, knowledge gaps exist on the opportunities and challenges for smallholder farmers when formal seed systems are becoming accessible. This study identified impacts of different seed systems on agrobiodiversity, seed value chains and livelihood of smallholder farmers in Ghanpokhara, Lamjung, a mid-hills ecological zone in the Western Region of Nepal.

A survey was conducted in 40 farm households (rice and finger millet), numerous key informants and experts involved in Nepal's seed systems were interviewed and extensive literature review was done. A *continuum of seed systems*, an original concept including four different seed systems was defined in this study. It distinguishes the *formal system*, the *intermediary system*, the *informal system* and the *no seed supply system (except local seeds)*. The latter was found in Ghanpokhara for rice and finger millet. Although (seed and crop) markets can be found not too far away, farmers in the study site appear to be locked off from the formal seed system. Their interest to purchase new seed seems to be high, but their awareness about potential benefits of quality seed is low, and they have limited access to information and new seed. The present research found that varietal diversity along the *continuum of seed systems* is highest in *informal seed systems* (as defined in this study). Besides numerous benefits, increasingly formal seed systems bear also disadvantages (and risks) for small-holder farmers: higher costs of input,



dependency from formal seed sources and changes in crop genetic diversity, among others.

The recommendations derived from this study are that extension service has potential to be promoted in remote areas, more resources should be made available for farmers' training on seed production, selection and storage techniques. Furthermore, the organisation in farmer groups for seed production should be facilitated (socially inclusive) in order to produce good quality seed of farmer preferred varieties locally and in sufficient quantity. Better organisation and support for site-specific seed production has to be encountered by policy makers and the Government of Nepal (GoN). More project activities and the promotion and use of extension services are seen as major potential factors influencing local seed systems.

*Keywords:* Agrobiodiversity, Food Security, Nepal, Seed Systems, Seed policy, Seed Security, Seed Value Chains

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