



Photo: A. Gurung

The sacred in grain storage

An unspoken controversy between farmers and scientists

Astrid Bjørnsen Gurung

Food insecurity is of growing concern in Nepal. Scientists, extension workers and farmers agree on the urgent need to support on-farm storage in marginal areas, but follow contradictory strategies. As these differences often remain unspoken, programmes dealing with the food security of farmers are prone to failure. This example of participatory action research with the Mewahang Rai ethnic group in eastern Nepal and the Tharu groups of western Nepal shows that it is possible to break the silence, and to find effective solutions that include the cultural notions of the people involved.

In Nepal, food shortage is a growing concern in rural as well as urban areas. Although the different stakeholders agree that there is a strong need to enhance food security, the strategies differ dramatically. The prevailing development policies, for instance, are to enhance rural people's food security mainly through imports and increased production. Decreasing storage losses are not a priority. Despite this negligence at the policy level, the agricultural extension service does support farmers in reducing their on-farm storage losses.

Air-tight metal bin

In general, post-harvest loss reduction is classified as a technical activity. Much of the research focuses largely, if not exclusively, on technology development, with little understanding of the socio-cultural system within which it operates. Although it is generally acknowledged that farmers' values, beliefs and cosmologies influence their actions, the spiritual dimension has not been considered in programmes dealing with grain storage.

The Rural Save Grain Program was launched two decades ago with the objective of reducing on-farm storage losses by introducing improved technologies, such as the air-tight metal bin. This did not yield the expected results, however. Farmers widely rejected the metal bin and were subse-

quently criticised of not being aware of grain losses, of having limited knowledge and lacking proper management. In my view, this criticism is not justified. Farmers follow different strategies to prevent storage losses and to secure sufficient food. And, apart from technical solutions, these strategies include social and spiritual means.

Storeroom: a sacred place

In countries like Nepal, where agricultural activities are embedded in a complex belief system, the understanding of this part of farmers' reality is crucial to the successful search for effective technologies. "You cannot enter my storeroom!" is the common response of a Nepalese farmer when somebody wants to have a look there, take grain samples or even pictures. To attempt further negotiation is useless. The storeroom is a private, secret and sacred place and outsiders are not allowed to enter. There is a widespread notion that the Goddess of Prosperity lives in the storage area, and that the intrusion of a stranger might frighten her away, which will trigger food scarcity and misfortune.

This example shows that the spiritual dimension of storage management might be invisible but, in farmers' life, it is a reality with perceptible consequences. As a divine residence, the storeroom is a central place in connecting the mundane with the sacred world.

This double meaning of the storeroom as a physical storage place and a connecting link to the supernatural world is reflected, for instance, in the houses of the Mewahang Rai of Eastern Nepal. The single-room ground floor, used as kitchen and living place, is divided into a semi-public half near the western entrance, and the private eastern half. Strangers do not normally enter the house, and, as the log stairway leading to the storeroom on the first floor is located in the private eastern part, they cannot even get close to the stairway.

The sacredness of the storeroom itself is again heterogeneous. The northern half is considered more pure than the south-facing part. Millet, the staple crop inherited from the ancestors, is compulsorily stored in the middle of the northern wall at the dwelling place of the malevolent house deity. Apart from the protective character of the architecture, social rules also maintain the sacredness of the storage place. Only women are allowed to enter the room, and when fetching grain, they must observe absolute silence. During menstruation they are prohibited from coming into contact with grain.

The grain soul

In Nepal, numerous rules, rituals and festivities reflect farmers' awe of nature and their gratefulness for food.



The idea that grain itself contains supernatural qualities is common, and most farmers speak of *saha*, the 'grain soul' or 'corn spirit'. *Saha* is generally invisible and must be acquired through ritual. It is only found in grain produced on one's own land. Sufficient *saha* acts as a multiplying and replenishing force in the storeroom. *Saha* is capable of leaving the commodity, and, once lost, even a large amount of grain will be finished within a short period.

One of the most common *saha*-conserving practices is called *dumo*, whereby some handfuls of grain are kept in the container, even during times of acute food deficit. The practice is based on the concept that each time grain is removed it takes away some of the substance where the grain soul is dwelling. When only a small amount remains, the farmer assumes that the grain soul is now dwelling in this last stock in higher concentration. If this is consumed, the grain soul would have no place to dwell and would thus disappear. In this context farmers want the new grain to get in touch with the last year's stock, so that the grain spirit can expand.

The *saha* potential is also embodied in ancestral spirits and divine figures. In some parts of Nepal we find, for instance, the belief in the Corn Mother, an old, grey-haired woman residing in the storage chamber. The Mewahang Rai call her *budreni* and routinely appease her with sacrifices. As she encompasses both benevolence and danger, house owners follow strict rules of silence and avoid encountering her. In her wrath, she might trigger disease, sickness or even death. Therefore, the storeroom is only entered during her absence, at certain times in the morning and the evening.

Controversial implications

Many of the storage-related rituals and practices have no direct effect on crop production or storability. A few, however, stand in conflict with scientific recommendations. The sacredness of the storeroom, for example, and the rules of non-disturbance and restricted entering times contribute to a condition that promotes storage pests. This is not only true for rats that avoid busy places, but also for insect pests, some of which can be controlled by simple physical disturbance. Sacred places within the storeroom are also favoured by insect pests. Keeping a commodity in the same spot to appease a deity provides insect pests easy access to their favourite grain when coming out of their hiding places.

The *dumo* practice described above

is another example of the adverse effect of certain rituals. When a small, mostly heavily infested stock of old grain remains in the container to conserve *saha*, it represents a potential source of infestation. This practice can render new technologies, such as metal bins, totally ineffective. Moreover, the privacy surrounding storage management has an impact on the information exchange among households. Grain storage and the means to control stored products are rarely discussed. Storing the harvested grain hidden on the upper floor prevents the inspection of technologies and practices, as well as comparisons between households. Consequently, the generation of new knowledge is slow.

Paradoxical beliefs?

Most of the beliefs of farmers have an internal logic, and make sense in the context of their livelihood system. In this view, it is curious that Nepalese farmers have developed and perpetuated practices that are obviously detrimental to storability and food security. Why did this happen? A possible explanation is that certain traditional practices were rendered obsolete by the introduction of improved varieties. In the old system, for instance, the *dumo* practice of keeping a handful of grain in the container, served as a periodic renewal of the sacredness. As such, it provided mental peace and the confidence that the stock would last for the entire season. As old varieties were less susceptible to storage pests than improved ones cultivated today, it had no major adverse effect on storability. With the new, more susceptible varieties and crops, farmers need to adjust their traditional practices.

The rule that prevents access to the storeroom hampers the collection of accurate data as well as extension work. However, it is wrong to simply criticise farmers, and to try to convince them to abandon their old belief patterns. Instead, development agents should take up the challenge to develop means to work with farmers, and not merely with pests and grains. This involves not only the acknowledgement of traditional knowledge, but also respect for local beliefs as an important and implicit part of farmers' reality. In this process, we should pay attention to the attitude of scientists and extension-

ists, who often consider traditional customs as old fashioned and obsolete, rather than to farmers' attitudes.

A bin with a view

One example of successfully dealing with controversial views in storage management is given by the Participatory Action Research in Gobardiha, Western Nepal. During the first year, participating women farmers had been told that the traditional clay-bins used for wheat storage should be opened and checked after 140 days of storage, at the end of the rainy season. Drying the wheat at this time would preserve the seed until the end of the storage period. However, although this scientific finding was well visualised and had been explained to the farmers, they did not follow the recommendation, due to the belief that opening the vessels is harmful, as the air entering triggers pest infestation and spoilage. Thus, most of the bins remained sealed for the entire storage period.

The challenge then was how to monitor the saved grains without opening the bin. The answer was simple, yet required the close collaboration between scientists and farmers: with a window. A piece of glass inserted at the foot of the bin allowed monitoring from



Woman proudly showing a 'bin with a view', which allows insects in stored grain to be detected

outside. Once insects were detected, the farmers did not hesitate to remove the grain for sun-drying. If no insect activity was observed, opening was unnecessary. This 'improved bin with a view' was highly successful. Windows are now also incorporated in larger vessels containing food grain.

Astrid Björnsen Gurung
Talwiesenstrasse 38
CH 8404, Winterthur, Switzerland
abgurung@freesurf.ch

