

# Better grain marketing with warehouse receipt systems

Grain markets in Africa suffer from a range of constraints. Smallholder farmers are particularly affected owing to their vulnerability to price fluctuations and their weak bargaining position. Many African governments as well as donors reckon with improvements through warehouse receipt systems. The article illustrates the theoretical potential of the WRS and some of the obstacles in setting them up in African countries.

Warehouse receipt systems (WRS) consist of a set of interrelated structures and procedures instituted to ensure that contractual obligations associated with a warehouse receipt are fulfilled. The receipt proves that a named person has transferred custody of a specified commodity (e.g. grains) to another party storing the commodity at a stated location (warehouse or silo).

The named depositor may be a farmer, farmer group, processor or a trader. The issuer of the warehouse receipt, who may be described as the warehouse operator, holds the stored commodity by way of safe custody – meaning that the operator does not own the deposited goods and so, in case of liquidation, his/her creditors will not be able to seek recourse to the commodities stored. This is because legal title to the commodity remains with the depositor or, where existing legislation recognises the warehouse receipt as a document of title (as is the case in Uganda), any other party to whom the receipt is properly transferred. The warehouse operator is legally liable to make good any loss of

value of the deposited commodity other than that resulting from price changes. The operator’s liability includes loss arising from deterioration in the quality of the commodity (e.g. maize grains growing mouldy and therefore losing value). Theft or damage by fire etc. may also cause losses. In paying the depositor for the loss of value, the warehouse operator is entitled to and can deduct any outstanding storage costs owed by the depositor.

Under the WRS it is possible not only to trade by transferring the receipt but also for the depositor to pledge the stored commodity as collateral for a loan. Usually, smallholder farmers and small-scale traders do not own assets which banks and other formal lenders accept as collateral. Hence, a warehouse

receipt can be an important means of borrowing. Large-scale enterprises, such as processors and exporters, can similarly benefit when they need to stockpile sizeable volumes of produce (e.g. for processing or export).

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## ■ Benefits of WRS

The guarantee that the quality and quantity of commodities stored in warehouses under a WRS will be preserved offers the following benefits:

**Improved crop marketing to the benefit of producers and other players:** The WRS facilitates aggregation

*Part of a warehouse receipt system in Uganda: The quality controller checks the moisture content of dried maize.*

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Photo: WFP/M. Hofer

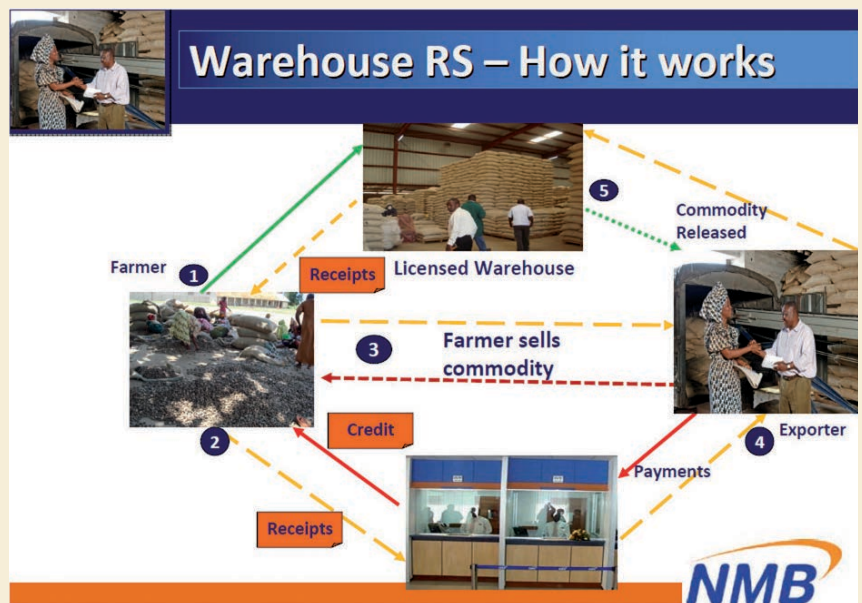
of grains and other commodities by smallholder farmers. In most African countries, grain production is dominated by small-sized farms of usually less than two hectares, which are also widely dispersed. Buyers there incur costs bulking produce from farmers which are often passed to the producer, whose margins are therefore reduced. Under WRS, it is possible for groups of smallholder farmers to deposit their grains at central warehouses, easing the cost of procurement. This cost is further lowered by buyers not having to physically sample the grains they intend to buy: the quality and quantity of the grain in the warehouse is specified in the warehouse receipt, and the operator guarantees delivery. So buyers can negotiate purchase on the basis of the description of the crop in the warehouse receipt and, after making payment, arrange the logistics of collection.

Farmers can transact directly with larger-scale buyers such as wholesalers, processors and exporters, without going through multiple layers of middlemen. This enhances the bargaining position of farmers and also shortens the marketing chain, improving producer margins. In addition, as trade is based not only on volumes but also on quality, producers will be able to enjoy quality premiums rarely obtained by smallholder grain farmers in most African countries. Standard weights have to be adopted under WRS and the receipted grains are weighed using properly calibrated scales. This minimises the risk of cheating on quantity which is quite common in the grain trade in Africa where weights and measures are rarely standardised.

Currently, most smallholder farmers are compelled by various factors to sell the bulk of their produce during the harvest season, when prices are very low. They cannot delay the sale of their crop in order to benefit from seasonal price increase because they lack suitable storage facilities and cannot meet

## How the warehouse receipt system works

- Smallholder farmers deliver their crop to their group (which can be a primary-level cooperative or association).
- The group, on receiving the deposit from the individual farmer, checks to ensure compliance with minimum quality standards; then
- Issues a receipt to the farmer, documenting the volume delivered and can make a “first payment” to the farmer.
- When the minimum lot size stipulated by the operator has been accumulated, the group deposits with the designated warehouse operator; who
- Issues a warehouse receipt, documenting the volume and quality of the crop deposited by the group at the designated warehouse.
- The group, on the basis of the warehouse receipt, can obtain inventory finance, which allows it to purchase more of the crop from its members. The receipt is transferred to the financing bank.
- Later in the marketing season when the group feels they can get the best offer, they sell the crop to a buyer offering the best price.
- The buyer makes payment directly to the financing bank, receives the warehouse receipt in return and takes delivery of the crop.
- After deducting the loan amount and the cost of financing (including interest) the bank credits the accounts of the group with the balance.
- The group then deducts all marketing costs and pays the balance to members as “second payment” based on the volume of crop each member deposited.



Source: WRS Experience of NMB Bank PLC Tanzania (presentation by Robert Pascal) June, 2010.

household consumption needs without selling their crop, as they have little or no access to consumption credit. Also, farmers wanting to buy inputs for the next planting season a couple of months after harvest sometimes cannot delay the sale to their advantage. But with the WRS, farmers are able to access inventory credit and therefore match their crop marketing strategy with price movements.

Warehouse operators can only release deposited stocks on presentation of the receipts and farmers and other depositors are only to transfer the receipts to parties who have paid for them. This ensures that farmers get paid for the stocks sold. In most farming communities where such a system does not exist, farmers trade only on cash basis or only with traders with whom they have long-term trust-based relations. These situa-

tions tend to create liquidity problems in the trade and reduce the number of traders competing to buy up the crop at harvest – competition can improve producer prices. Some farmers can also take advantage of the WRS to market value-added commodities. For instance, instead of rice farmers selling paddy rice, they can deposit the paddy with designated millers who process it for a fee. Farmers who use the WRS in this way can obtain financing against the stored paddy to meet household consumption and other needs while waiting for the crop to be processed and the milled rice sold, creating an opportunity to increase household income. This has occurred e.g. in the coffee and cotton sub-sectors in Tanzania and Uganda respectively.

**Improving access to credit by providing suitable collateral.** The WRS eases access to credit for farm households. Applying for the inventory credit tends to be simpler as it often does not require elaborate applications with cashflow statements that most smallholders are unable to produce. Apart from easing problems with financing household consumption needs, this system makes it possible for farmers to enter into forward contracts with suppliers for timely delivery of farm inputs. They can do this without having to sell their crop and therefore sacrificing potential gains from normal seasonal price movement. Evidence from the maize sub-sectors in Ghana and Zambia demonstrate that the profitability of using fertiliser improves significantly if the grain produced is marketed using the WRS. For instance, in Ghana, the value-cost ratio (VCR), which can be used to measure the profitability of applying fertiliser, rises from 1.4 when the grain is marketed without the WRS to 2.05 when farmers use the system to market their output. This is largely because farmers can better time the sale of their crop to benefit from seasonal price increase and/or sell to market players further down the marketing chain (e.g. larger-scale traders and processors) for better prices. The system

can, therefore, enhance the capacity of smallholder farmers to utilise inputs which can improve farm productivity and grain output.

**Improved storage, leading to lower post-harvest losses.** The WRS, by creating incentives that encourage smallholder farmers to store grains in better storage facilities, can contribute to lower post-harvest losses. With most smallholder farmers storing grains in inefficient facilities, post-harvest losses in most African countries are very high, and are estimated at between 11 per cent for rice and 19 per cent for maize, the value of which would equal or exceed the value of annual grain imports (see also Rural 21, No 1/2013). Reducing post-harvest losses will therefore not only benefit the farm households but also improve food security in countries where grains constitute the main staple food.

### ■ Limiting factors

Despite these benefits, progress in promoting these institutions in Africa has been frustratingly slow, as shown in the box. Factors involved here include:

**Legal issues affecting transfer of rights.** Banks often cite uncertainty about the rights of parties to whom warehouse receipts are transferred as the main reason why they are reluctant to provide inventory financing under WRS. Basically, banks are unwilling to take on the risk of lengthy and costly litigation in the courts in order to exercise their right to sell the pledged stocks in the event of default by the borrower. Some countries, such as Tanzania, Uganda and Zambia, have tried to resolve this problem by enacting enabling warehouse legislation. However, concerns about the capacity of regulatory agencies to effectively enforce the laws and applicable warehouse industry standards have undermined confidence in the regulatory framework and therefore uptake of inventory financ-

ing opportunities created as a result of the WRS.

**Missing or under-developed complementary institutions.** When WRS is developed without complementary structures such as reliable trading platforms to facilitate sale of the stored commodities, it is difficult to assure significant utilisation of the system. Banks, for instance, are particularly nervous about lending against stored commodities when there is no structured trading system in place as this creates difficulties in liquidating the collateral when the borrower defaults. This also applies to the absence of reliable market information systems, which makes it difficult for lenders to properly estimate and track the value of grains which they have financed.

### ■ Balancing apparent trade-off between welfare goals and sustainability of WRS.

The fact that smallholder farmers dominate agricultural production in most African countries tends to motivate donors and governments to focus on setting up systems which exclusively target these farmers. As stated in the Box, such systems often have considerable difficulty in achieving sustainability. The option is therefore to set up commercially viable WRS which are open to larger-scale depositors including large-scale farmers, traders and processors. Lessons which have emerged e.g. from Tanzania and Zambia show that smallholder farmers can still be enabled to access such a system if effective primary-level farmers groups are promoted and their capacity is built to undertake aggregation of grains and in collective marketing. What sometimes hinders active involvement of such groups is lack of clarity about the legal status as entities which can engage in commercial transactions involving contracts. Here, in most African countries, existing legislation only recognises registered companies and co-operatives as legal entities. With the rather chequered history of co-operatives in Africa, most smallholder farmers are reluctant to join

### Promoting WRS in Africa: a difficult task

From the 1990s many governments in Africa and donors made efforts to promote accessible WRS to farmers with the primary aim of improving access to finance. Large commercial enterprises could access inventory finance through a system under which international inspection companies were willing to secure the interests of lenders by providing collateral management services. The high cost of these services virtually excluded access by smallholder farmers and small-scale traders and the financing available was predominantly for the import/export trade. There was little or no benefit to the domestic trade in agricultural commodities. Furthermore, the typical bespoke agreements underpinning these transactions also made transferability of the receipts issued impossible, so that they could not be used to facilitate trade contracts. To ensure wider access, NGOs promoted inventory credit systems which exclusively targeted smallholder farmers. The promoters were often required to provide intensive supervision as well as loan guarantees (which could be as high as 100 % of the credit advanced to farmers). The scale diseconomies and high oversight costs associated with these systems limited efforts to scale them up, and they were often unsustainable. A more widely-accessible WRS that is open to all parties was subsequently promoted in West, Eastern and Southern Africa.

A recent review revealed that Tanzania has the most advanced WRS north of South Africa. Warehousing services are largely provided by private operators licensed by the Tanzania Warehouse Licensing Board (TWLB). Inventory financing is provided by commercial banks, and smallholder farmers are able to access these facilities as groups mobilised by the primary-level co-operatives and farmers associations. However, it is in export commodity sub-sectors (cashew, coffee and to some extent cotton) that the system has been most successful. Efforts to extend the WRS to grains in Tanzania have not yet gained sufficient traction. As in many other countries, the grain WRS centres around surplus-producing communities are lacking appropriate storage infrastructure, implying provision of storage services in low-capacity warehouses (between 100 and 200 tonnes storage capacity). The viability of such an operation is quite a challenge. In addition, the review clearly demonstrated that success depends not so much on enacting enabling legislation but on strengthening the capacity of regulatory agencies to robustly enforce adopted rules and standards. Even more crucially, it is important to remove or at least reduce policy-related uncertainties such as ad hoc imposition of export bans or waiver of import duties which undermine private storage incentives. This, for instance, appears to be a defining factor in explaining the differences in outcome in Tanzania (between the WRS for the grains sub-sectors and for export commodities). The same conclusion appears to apply in most African countries.

Source: AGRA's African Agriculture Status Report (forthcoming).

them. Broadening legal recognition to include other forms of farmers' organisations will therefore foster more active engagement of smallholder groups in trading and financing activities related to the WRS.

**Limited access to suitable physical infrastructure.** Private investment in commercial warehousing tends to be concentrated around the ports in most African countries. Warehousing capacity is often limited in rural communities where grain production is concentrated. Where such facilities exist,

the state tends to be the major owner. Attracting private sector investment in such areas has met with little success, largely because demand for commercial third-party warehousing remains low.

**Disabling policies.** Disabling policies have in many instances been the most fatal constraints which have undermined the development of WRS. Examples of these include ad hoc interventions in grain markets such as unpredictable imposition of export bans, waiver of import duties and setting of minimum prices in grain markets. Often, the

main justification for these interventions is concerns about food security (see also article on pages 16/17). There is little evidence to show that these interventions are able to significantly impact on consumer prices. On the contrary, uncertainty in grain markets is accentuated. As a result, traders and processors are unwilling to keep large inventories of grain or tie themselves to forward contracts involving fixed future prices. Smallholder farmers then end up with holding stocks and being exposed to price shocks that result from government interventions in the markets. Some governments have attempted to use strategic grain reserves to moderate grain price variability. However, emerging evidence suggests that by keeping the entire procurement, storage and release process outside of the market, governments end up crowding the private sector out of the market and therefore undermine the development of market institutions such as the WRS.

### ■ What is in store?

In particular, smallholder farmers stand to gain from improvements in grain marketing and finance which will occur as a result the development of viable warehouse receipt systems. African governments, therefore, need to make WRS and related trade and finance systems an integral part of strategies to promote agricultural output and productivity growth. To achieve this, it is important not only to aim to enact enabling legislation but also to address the other storage infrastructure constraints as well as disabling policies that undermine the development of this system. Furthermore, sustainability of the system does not need to be sacrificed in order to assure access to smallholder farmers as it has been demonstrated that promoting well-organised farmers' organisations at the primary level and empowering them to engage in aggregation and collective marketing can achieve the same objective even if the WRS is open to all players.