

Quality-assured forages to feed Ethiopia's livestock better

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Summary

Cultivated forages, including grasses, herbaceous legumes and browse trees and shrubs are a promising way to properly and sustainably feed Ethiopia's livestock and contribute to food security, livelihoods, economic growth and environmental policy goals.

Wide uptake of these crops is held back by lack of affordable quality-assured seeds as well as low market demand, especially from subsistence producers. As the livestock sector becomes more commercial, demand for high quality feeds will increase in response to demand for forages and business opportunities in the sub-sector.

Introducing appropriate quality assurance mechanisms for forage seed is a key step in driving the uptake and use of forage crops and will ultimately help stimulate a thriving forage seed sub-sector.

Key messages

- The wider use of cultivated forages provides a significant opportunity to enhance Ethiopia's livestock productivity.
- Reliable supply of good quality forage seeds is necessary to achieve this.
- A quality declared seed (QDS) scheme for forages with strong institutional buy-in will help grow the livestock sector and motivate reputable small-scale producers to strengthen forage seed markets in Ethiopia.
- To create conditions for a thriving forage seed sector involving small-scale producers the free seed handout culture needs to be addressed potentially through a code of conduct for bulk buyers.
- As well as strengthening seed quality, small-scale producers require support in marketing arrangements for seed e.g. through branding and distribution through agri-business retail outlets.

In Ethiopia, seed certification standards and schemes are already used for food crops but a full scheme is too demanding and costly to extend to forages. Instead, a quality declared seed (QDS) approach offers a way to advance progress in the shorter term. It places more responsibility on producers for the quality of their products and is more flexible, provided the standards are respected.

Establishing such a scheme may give greater confidence to buyers but is unlikely to transform the market unless other steps are taken to link producers directly to users. For QDS to work, reputable producers must sign up to the scheme and agree to a code of conduct that helps maintain quality standards. Thus, the QDS approach can bring producers together in a way that also strengthens their marketing opportunities. The scheme is therefore as much about production and marketing as quality assurance.

This brief sets out how quality-assured forage seeds can directly address challenges of feed scarcity, feed quality and forage seed availability that hold back livestock productivity in Ethiopia. The findings and recommendations draw on a consultation exercise conducted in 2019 (Turner et al. 2019) and a stakeholder workshop also conducted in 2019 (Assefa et al. 2019).

Livestock feed systems in Ethiopia

Livestock production is central to the livelihoods of farmers in Ethiopia. It provides food for the family, supports crop production and makes a significant contribution to the national economy. Its importance as a key driver for change is recognized in policy documents such as the Livestock Master Plan (LMP), the Climate-resilient Green Economy Strategy (CRGE) and the Growth and Transformation Plan (GTP II). All these documents propose interventions to increase livestock productivity, including through better feeding.

In Ethiopia, as in many other countries, livestock productivity is constrained by insufficient year-round availability of good-quality feed. This leads to inefficient production, overgrazing, environmental degradation, high green house gas (GHG) emissions per kilo of product, low returns to producers and ultimately, a sector that is unable to feed the livestock needed to meet demands for livestock products.

Currently, the main sources of livestock feed are natural grazing pastures, poor-quality roughage and crop residues. A promising approach to improve livestock productivity is to increase the use of cultivated forages in livestock diets. These forages are highly nutritious; can be tailored to specific production systems and locations; and grown close to farms on small spaces, roadsides and remote hard-to-reach locations. They offer other side benefits in farming systems, such as soil improvement, and can create business opportunities for growers and other players in the value chain.

To capitalize on the opportunities that forages offer, Ethiopia needs efficient systems to produce, sell and distribute good quality and trustworthy seeds. A key component of such systems is a certification or other quality assurance scheme that ensures transparency and traceability and builds trust between seed purchasers and seed sellers, breeders and producers. 'Certified' seed provides a quality guarantee that increases confidence in the final product by all actors in the chain.

Certifying forage seeds in Ethiopia

Certification schemes are a key component of the formal seed sector in most countries. They provide comprehensive quality control mechanisms from the breeder to the farmer, based on the fundamental principle of traceability.

Ethiopia has comprehensive seed legislation at the federal level and certification is a routine procedure for major cereal crops such as wheat, barley and teff. The mechanics of certification are handled by regional authorities and regional enterprises are the main seed suppliers for most crops.



A special feature of the national seed system in Ethiopia is that the quality standards are prepared and published by the Ethiopian Standards Agency in consultation with the Ministry of Agriculture (MoA). A separate standard exists for almost every crop, including forages, and they are remarkably detailed. However, some aspects of these standards would be difficult or impossible to implement using the facilities at the disposal of the regional authorities.

In principle, all elements of a certification scheme for forage seeds already exist in the published standards and they could be implemented immediately if desired. However, in practice, very little forage seed is produced within the formal seed system and the certification system is not invoked for these crops, perhaps because the market demand is insufficient.

Despite recognising the need to improve feed supplies and the role cultivated forages could play in this, subsistence farmers on their own are unlikely to create a consistent demand for forage seeds because their commercial orientation is not strong. The breakthrough will happen when a more commercialised livestock sector emerges and creates the need for increased forage production, not only by livestock keepers, but also by arable farmers who could regard this as a cash crop. In some regions, the wider use of irrigation would also increase the productivity of forage crops and make them a more attractive component of the farming system.

The marketing system for seeds and other inputs in Ethiopia has traditionally been administered through official channels which does not allow for direct connection between producers and users. The official nature of seed marketing has also been an impediment to the distribution of seeds of crops such as forages, which are currently uncertified. A direct seed marketing initiative is being rolled out and this model will facilitate the development of a real market for forage seeds by linking producers and farmers more closely in a supply chain.

Discussion about certification schemes relates entirely to the formal seed sector, which still accounts for a small part of the total seed supply/requirement in all crops, except hybrid maize. Although cultivated forages were not part of the traditional farming system, there is a significant informal trade in these seeds. This is handled directly by farmers and traders who operate without regulation and sell directly to NGOs and other buyers. While this parallel production system does provide seeds to smallholder farmers who are clients of NGO projects, it inhibits the development of a more organized market because farmers are conditioned to receive free or subsidized seed. Furthermore, there are serious concerns about seed quality in this informal sector. This issue requires attention at the policy level if a sustainable and financially viable production model is to emerge.

In these circumstances, preparing the technical and administrative details of a certification scheme is unlikely to energize the existing system sufficiently in the short term. It will require a strong commitment by key participants and stakeholders to provide the technical services for certification and to follow through with the delivery of seeds to end users. Such an initiative should probably be piloted at a regional level, where most of the seed system is now organized. Policy support from the regional bureaux of agriculture, and at national level from the Agricultural Transformation Agency (ATA), would be helpful. The Seed Policy and Seed Proclamation are currently under review and, if possible, these key documents should reflect the importance of improving the forage seed supply, given that this has been a matter of concern for many years.

Box 1: What is seed certification?

Seed certification is a quality assurance system in which seed intended for market is subject to official control and inspection. At its simplest, the system certifies that a sack, packet or box of seed contains what it says on the label and that the seed was produced, inspected and processed in accordance with the requirements of a certification scheme.

The immediate objective of seed certification is to supply to farmers and other growers high quality seeds true to identity, high in purity and germination capacity and free from certain pests and diseases.

Key elements are:

- All seed must be of a known variety registered with certain identity tests.
- Each seed crop is inspected to confirm its identity and to ensure it meets standards.
- Each variety must be kept separate from other varieties at all stages.
- Seed lots must be clearly identified to facilitate subsequent traceability to allow post-planting monitoring.
- Each container of seed is officially sealed to ensure that any tampering with the seed is evident. Containers are labelled to confirm the standard and identity of the seed and provide traceability.
- All certified seeds are subject to official visual examination to ensure compliance with standards.

A quality declared seed approach

Quality declared seed (QDS) could serve as an alternative to a full certification scheme; it places more responsibility on producers for the quality of their products and is therefore, more flexible, provided the standards are respected. QDS is recognized under the Seed Proclamation and should be considered as an alternative to certification as an intermediate step.

A QDS approach would be an easier first step because it would allow more flexibility than full certification and enable reputable producers to do much of the work themselves in a more timely and efficient way. QDS can be regarded either as the optimal solution, or as a step on the road to certification because the technical procedures are very similar. The key difference is the allocation of responsibilities between various parties.

For QDS to work, there must be a strong commitment by a group of reputable producers to sign up to the scheme and agree to a code of conduct that will maintain quality standards for their own benefit. This should be carried through the marketing chain with a system of packaging and labelling that makes this seed more widely available at the networks of sales outlets that are being developed by various projects and agencies. Traceability of the product will be an essential element and the move towards direct seed marketing will support this process. In fact, the system of administered allocation and distribution that has been used for major cereal crops simply does not work for a more specialised product like forage seeds. This has probably been one of the constraints to wider adoption.

Recommendations

Four key steps to make such a QDS scheme happen are:

- 1. Identify the scope and operations of a scheme:** a draft guideline for a forage seed QDS should set out the key procedures, standards and obligations so that all parties can see what is involved. The precise conditions and requirement should be confirmed with the MoA and regional authorities since they must validate the scheme and its participants. General QDS guidelines already exist in Ethiopia and a scheme for forages could take the form of an addendum setting out the specific requirements for forages.
- 2. Establish appropriate institutional arrangements:** such a scheme requires an association of some kind be established to provide coordination and focus to make it work in practice.

The arrangements needed to achieve this key step will require careful consideration by the parties and, if possible, policy support to encourage participation by the main public sector actors, especially the regulatory authorities. Given that the key physical activities of the seed supply chain now take place in the regions, it would be logical to organize this scheme at a regional level initially and use one region as a pilot to commission the system.

- 3. Define regulatory requirements:** beyond the technical elements, suitable regulatory aspects are necessary to ensure smooth implementation. The newly formed National Seed Advisory Group is a key point of contact as it brings together a wide range of knowledge and expertise. Moreover, its recent document on transformation of the seed sector provides a comprehensive framework that can accommodate the special needs of forage seeds.
- 4. Upgrade the informal forage seed trade:** the scale and mechanisms of the informal seed trade used by NGOs should be investigated to assess its merits and limitations. Continued bulk purchase of forage seed from unregistered producers without any formal quality checks will weaken the business model for a formal QDS scheme. Ideally, the quality of seeds traded this way should be regulated and enhanced so producers and buyers become part of the new arrangements, boosting the availability of good quality seeds and improving the reliability of forages grown by producers and farmers.

References

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