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## Constraints and Opportunities of Cassava Seed Systems in South India: An Exploratory Case Study

SEBASTIAN MENGEL, KARIN ZBINDEN GYSIN, ALESSANDRA GIULIANI

*Bern University of Applied Sciences (BFH), School of Agricultural, Forest and Food Sciences (HAFL),  
Switzerland*

### Abstract

In India, most cassava is produced in the federal states of Kerala and Tamil Nadu. While the crop is generally valued for being well adapted to marginal cropping conditions, the cassava mosaic disease (CMD) is widespread in India, resulting from the indiscriminate use of infected planting material, a lack of commercial interest, and the long-prevailing non-availability of improved cassava varieties. Under the Indo-Swiss Collaboration in Biotechnology (ISCB), Indian and Swiss research institutes have increasingly worked together on the development of improved CMD-resistant cassava varieties. Yet, as for many other tuber crops, cassava propagation generally follows a vegetative approach, resulting in a relatively slow seed dissemination. Hence, the pressing question is how new varieties can be effectively disseminated within reasonably short time, so that farmers, the ultimate beneficiaries, can access them.

In 2018, qualitative in-depth interviews and group discussions were conducted with cassava farmers, breeders, extension and agricultural scientists, agricultural economists, and cassava processing industry representatives in Kerala and Tamil Nadu to first, identify the main constraints and bottlenecks for the dissemination of new cassava varieties to farmers and second, develop recommendations to sustainably improve the dissemination process.

The research shows that cassava is generally of low and highly fluctuating economic value, which constitutes a key challenge for the development of a seed system driven by a larger demand of farmers. This is interrelated with a low willingness to pay (WTP) of farmers for new varieties, a perceived high opportunity cost (risk) of acquiring new planting material, inadequate rules and regulations for the re-use of infected seed and the legal status and support of cassava, as well as the absence of a clear mandate and adequate capacities for seed multiplication and dissemination. The study recommends a multi-perspective and multi-stakeholder approach to (i) formally clarify the mandate for planting material multiplication and dissemination, (ii) strengthen extension capacities for agricultural technology transfer, (iii) explore the potential of farmers' associations engaging as actors in an improved, functional cassava seed system, and (iv) consider changes at policy level for the re-use and replacement of planting material and the allocation of specific subsidies.

**Keywords:** Cassava, cassava mosaic disease (CMD), dissemination, India, manioc, multiplication, planting material, seed system