

PILOTING OF INFORMAL POTATO SEED INSPECTION SCHEME: FIRST RESULTS FROM ETHIOPIA

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Background

An informal seed inspection scheme for the production of quality potato seed tubers is being piloted in Ethiopia since mid-2012. The scheme builds on the FAO/CIP concept of producing Quality Declared Planting Material (QDPM). The QDPM concept is recognized by the Ethiopian seed legislation as an option to increase the availability of quality seed potato. However, implementation procedures for vegetatively propagated crops have not yet been developed and tested. It is the purpose of this poster to summarize first findings of the piloted seed inspection scheme.

Materials and Methods

The QDPM scheme suggests that two inspection committees, (CoopCom and WerCom) carry out 2 field and 1 post-harvest inspection (Fig 1). The CoopCom consists of representatives of the concerned seed producer cooperative while the WerCom is composed of technical experts from the official, district-level R&D system. The crops in the field and the stored seed tubers are assessed visually against an agreed set of indicators (Table 1 and 2). The system is being piloted in 8 districts of 3 regional states, involving 14 seed producer cooperatives. In 2013, a survey was conducted among members of the two committees as well as district administrators to collect feedback on their perception of the inspection scheme.

Table 1: Tolerance levels for field inspection

REQUIREMENTS/DEFECTS/DISEASES	TOLERANCE
Rotation of at least	3 years
Incorrect variety (off-type)	1%
Bacterial wilt	Nil
Total viruses (leaf roll + mild mosaic + severe mosaic)	5%

Table 2: Tolerance levels for post-harvest inspection in Diffused Light Stores

DEFECTS/PESTS	RECOMMENDATIONS
Graded (40 to 70g)	> 10% over- or under-size tubers found, grading is needed
Off-type/mixture	If any varietal impurities found, sorting is needed
Tuber rots	If rotting tubers found, sorting is needed
Defective tubers	If defective tubers found, sorting is needed
Soil	If soil weight exceeds 2% of the total weight, the tubers need to be cleaned
Variety labeling & separation	Varieties clearly labeled and separated by physical barrier. If not, this needs to be done
Cleanness	Floor, unused benches and surroundings of DLS are free of rotten or dried up potato tubers and potato plants, if not, cleaning is needed
Tagging (1 tag / 100 kg bag)	Estimate quantity of clean seed tubers to provide the correct number of tags for each producer

Results and Discussion

135 fields were inspected, out of which 116 were accepted as seed plots and 19 were rejected. In addition, more than 80 seed stores were inspected.

Experiences to date indicated that:

- Participant farmers, technicians and district administrators view the scheme as useful and suggest institutionalization: Initially, inspections should be funded by incorporating this activity into the regular work program of government line agencies while the cooperatives buy the labels; at a later stage, the inspection could be funded entirely by cooperatives
- QDPM objectives and procedures need to be clearly communicated to both technical staff and district-level administrators as well as seed producer cooperatives to create confidence and ownership
- Peer control among cooperative members is an effective tool to maintain quality standards, however, cooperatives need to develop and agree on guidelines on how to deal with rejected seed lots to avoid internal conflict
- The currently used inspection procedures may need to be simplified / shortened to reduce staff / farmer time needed for the inspections.

Conclusions

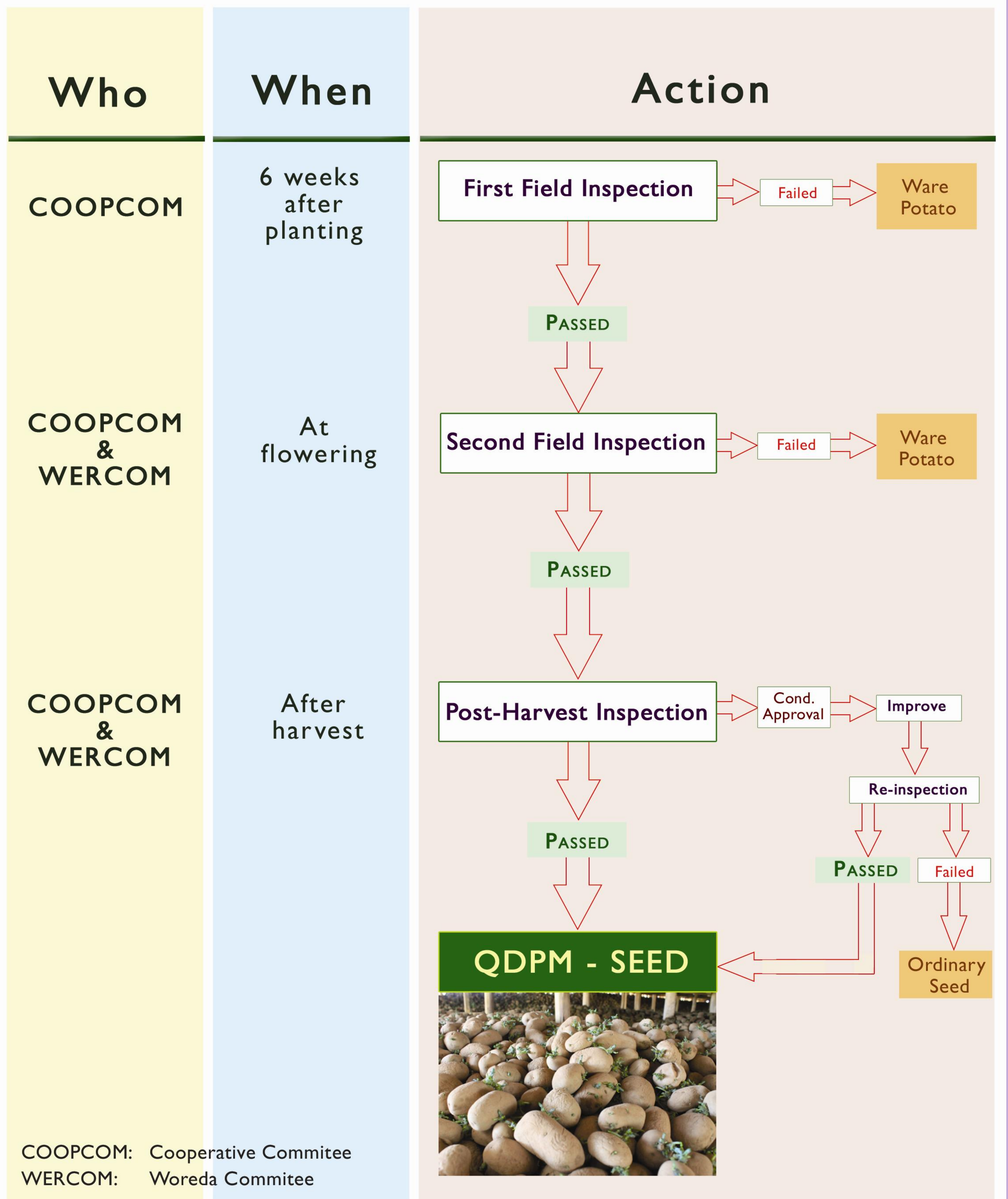
Overall feedback is positive. It is recommended to continue piloting and lobbying for at least two additional seasons while simultaneously addressing emerging bottlenecks such as institutionalization, funding and high government staff turnover. The ultimate aim being to operationalize the concept at national level.

Acknowledgments

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Figure 1: Illustration of the QDPM inspection scheme designed for potato in Ethiopia



Quality Potato Seed Tubers

Producer:

Contact:

Location:

Variety:

Harvest Date:

Quantity:

® Recognized seed producer group that is supported by the BoA, EIAR and TARI or SARI.

Label for potato seed bags



QDPM field inspection

Citations

FAO, 2010. Quality declared planting material. Protocols and standards for vegetatively propagated crops. FAO plant production and protection paper 195
S. Schulz, G. Woldegiorgis, G. Hailemariam, A. Aliyi, J. van de Haar, and W. Shiferaw, 2013. Sustainable Seed Potato Production in Ethiopia: From Farm-saved Seed to Quality Declared Planting Material. In: *Seed Potato Tuber Production and Dissemination – Experiences, Challenges and Prospects* (Eds G. Woldegiorgis, S. Schulz, B. Berihun). EIAR, Addis Ababa, Ethiopia (in press).