Tool Description Sheet

1. **Purpose:** understand and describe how seed of a new variety or quality diffuses to farmer-users from its source i.e., from a project (donations, demonstration trial), or from a decentralized multiplier (DM) nursery.

2. **Level:** regional

3. **Users of the tool:** seed intervention designers, implementers, evaluators, analysts, people conducting an impact network analysis (INA).

4. **Output of the tool:** a quantitative understanding of the links between key actors of the seed system.

5. **Audience of the output:** the users mentioned above, and policy makers, lobbyists, donors.

6. **Minimum sample size:** the tool identifies links between actors in a seed system. A link can be established between a minimum of 2 actors. The more links are identified, the more accurate the overview of the seed system. Seed tracing studies which give meaningful results and are still feasible in terms of data collection involve 50 to 500 respondents. Small sample sizes can display a seed system at a small level (e.g., village or district) while large sample sizes are useful at the national level or even across borders.

7. **Resources**
   a. number of people: 1-2 people
   b. equipment: digital survey tool, transport, R or Excel software
   c. expertise: enumerators collecting the data must speak the local language and understand key agronomic terms such as variety types. The researchers who analyze the data should know how to process network data in R. Data from small sample sizes can be analyzed with other software such as Excel, but this might be challenging with large data sets. If the seed tracing study forms the bases of an impact network analysis, data should be entered in R.

8. **Timing:** in theory a seed tracing study can be done at any time. Avoid conducting the survey in the middle of sourcing time, because some farmers will have already acquired seed while others will still be looking for it. The farmers should be able to remember where they sourced the seed, so asking about acquisitions from too long ago can yield unreliable results. Seed tracing studies are useful at the start of a project to give an overview of the seed system. They can also be conducted after an...
intervention e.g., to see how a new variety has diffused, how training measures affected farmer behavior, the impact of seed certification, or how subsidies impacted access

9. **Duration:** the time needed to collect the data depends on the sample size, number of questions, sampling strategy and number of enumerators. Snowball sampling and random sampling may identify distant farmers, requiring more travelling. A relatively simple survey can be conducted over the phone. To give an indication: a face-to-face survey, in one province, sampling about 50 to 70 farmers, done by one enumerator, might take 2 weeks (assuming the farmers are close together, with little travel time)

10. **Steps**
   a. Make a proper study design to decide on e.g., the sample size, sampling strategy and which type of planting material will be traced
   b. Data collection via surveys on seed sourcing
   c. Data processing, preferably using R software

11. **Which methods can be used in combination with the tool:** many methods can be used in a seed tracing study. For example, the snowball method is one possible sampling strategy, data can be collected through a household survey, and data can be analyzed with Excel or R software

12. **Gender:** when individual farmers are sampled, the gender of the respondents can be differentiated in the results to answer gender-related questions such as: Do men and women have equal access to improved varieties? Do men and women access the same seed sources or different ones? Gender responsiveness level 1: gender is a significant factor in this tool, but it is not the main reason for using it


15. **Applications**
   


16. Communication materials: not available

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