Remote Participatory Data Collection

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COLLABORATIVE CROP RESEARCH PROGRAM

Stats4SD

Introduction

Data Collection in a Time of COVID-19 (or Other Events)

The Problem:

Farmers in farmer research networks (FRNs) and other projects are doing trials of various types. Data collection to assess and learn from these trials was planned to involve outsiders (field officers, researchers, etc) and/or meetings. Neither of those can happen now, so what are the options for data collection?

Genesis of this piece:

The COVID-19 pandemic has forced projects and FRNs to change plans. Two project teams of the CCRP ES Africa COP asked us for help with the problem, prompting the research and thinking that has led to this guide.

While put together rapidly in response to the pandemic and requirements not to travel or hold meetings, some of the principles and suggestions could be useful in other situations that require a change of plan, such as insecurity, transport difficulties or a budget crisis.

Ethics and Priorities

Before planning changes to data collection protocols, stop and think carefully about two points which have ethical and practical aspects:

1. In times of crisis, whether an epidemic or something else, completing previously negotiated and agreed research might not be everyone's priority. **Respect that**.

   Examples:

   - If a farmer is worried about food for the family today or how to sell the harvest, asking about their favourite variety is unethical.
   - If a community has just lost members due to flooding and many are homeless, holding an FGD to discuss soil fertility management is unethical.

2. If directives from governments, expectations of communities or understanding of what is sensible change, then **respect them.**

   Examples:

   - Government restrictions prohibit travel to rural areas – don't go, even if you believe it to be safe.
   - A rural community does not want visitors from outside – don't go, even if earlier they welcomed you.

- A field officer is fearful of infection when visiting farms – don't require them to do it.
- Another is happy to go to collect data but your understanding is that it would be unwise – don't let them do it.
- You know that social distancing, hand washing and face masks are wise – make sure field staff understand, are equipped and use them.

Three Bases for Solutions

1. Principles

We have principles for research with farmers which still apply. Particularly relevant here are:

- **Negotiation.**
  Methods should be discussed and agreed. If possible, re-negotiate with farmers rather than having researchers take decisions on their own. For example, you might be able to phone some farmer representatives to discuss and agree changed plans.
- **Objectives**. Methods used depend on objectives. You might need to update those. For example, a variety trial might have two objectives:
  1. Farmers make assessments and selections for themselves
  2. Researchers generate quantitative data for variety registration

  The second might have to be dropped but the first can still be achieved. On the other hand, farmers might find the first irrelevant at this time.
- **Adaptation and fit-for-purpose**.
  There is no single right way to collect data. What is useful or effective in one situation might be hopeless somewhere else. You need judgement as well as understanding and experience to find appropriate methods.
- **Protocols and piloting.**
  It's still important to write down the plan (protocol) and test out critical parts of it (piloting).

2. The Data Need

Who is it for?

- **Farmers** – learning, making choices.
- **Researchers** – understanding, testing hypotheses.

Ideally, interests and data needs coincide, but if the data is primarily for the farmers then 'collecting' it is not a priority. Farmers need to observe and understand, but the data does not need to end up in the researcher's notebook or computer.

Type of data

- **Qualitative or quantitative**
  - Quantitative assessments mean something is objectively measured. It also includes ratings on scales such as "1=far worse than usual….. 5=far better than usual"
  - Qualitative data include verbal descriptions and photographs
- **Formal or informal**
  - The distinction here is whether you are using a predetermined set of criteria or open ended exploration to collect data. The former might involve a data collection form, the latter requires a notebook or voice recorder.

Data generated individually or in groups?

There are advantages and disadvantages with collecting data from individuals independently or from groups of farmers who discuss and give joint responses. The two approaches are suitable for different objectives – individual data reveals variation, group data provides consensus opinions (which can be more informative than averages) and the discussion can provide insights missing from individual data. Objectives will determine whether individual or group data are needed, but one may be more feasible than another. For example:

- If any gathering of farmers is not possible then group data cannot be collected.
- If data have to be collected by a lead farmer who cannot visit very farm, group data might be the only feasible method.

3. The Resources Available

The resources that determine choice of data collection method are not simply budget. Levels of training and experience, communication channels, social capital and organisation, etc, determine what is feasible in the changed circumstances.

Some examples:

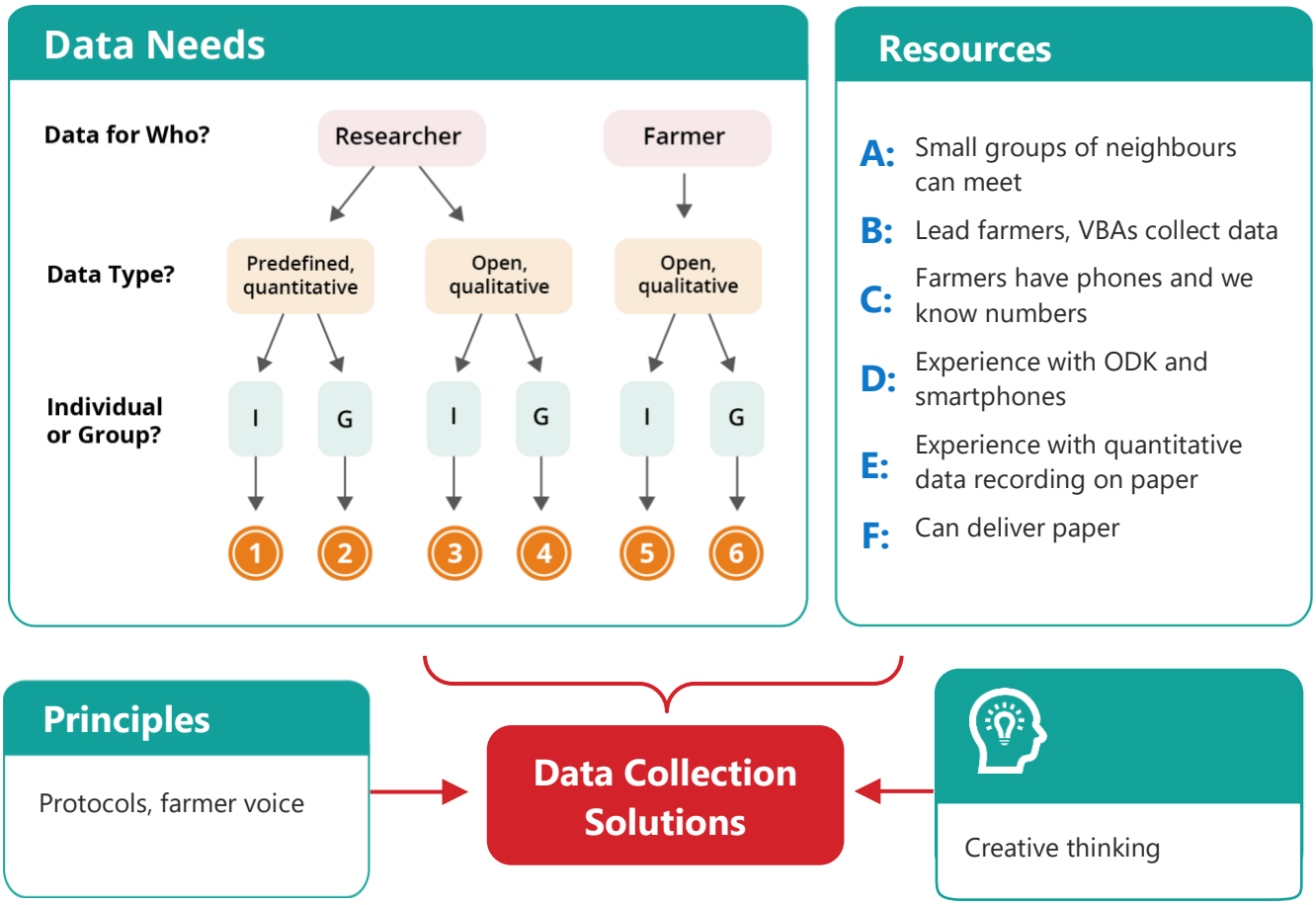
A. Small groups of neighbours can meet but large meetings are not possible
B. Lead farmers, VBAs are located in villages and experienced with collecting data
C. Farmers have phones and we know their numbers
D. VBAs are experienced with ODK and smartphones
E. Group leaders have experience with quantitative data recording on paper
F. Researchers cannot visit farms but can deliver paper forms.

G. Research teams have experience with SMS data collection
H. Farmers have previously recorded data in record books

…and so on. The resources that might be relevant to your new situation are limitless, but you need to know what is available and build on it.

These are things that you cannot put in place now – you can probably not now start training field officers in the use of ODK or train farmers to record observations in notebooks. **These resources can only be exploited for data collection if they are already there.**

Finding Data Collection Solutions



Examples

1 with **B** + **D**: Setup ODK forms, discuss collection protocol by phone with each user.

1 or **3** with **C**: Call farmers and explain approach, then phone calls (using a standard script) with farmers as they stand in the experiment and give ratings + comments.

2 or **4** with **A** + **C**: Call farmers, discuss plan for small group discussion about trials. Arrange time to call for results.

1 with **E** + **F**: Well-designed forms for farmers to record own data.

1, **2** with **C**: SMS data collection for non-smart phones.

3, **4**, **6** + **smartphone**: Smartphones and photos using WhatsApp.

6 with **C**: Call lead farmers to discuss plan to discuss plans for their meetings. Collect feedback later.

1 - **6** with **none**: Use recall later. Farmers record thoughts and observations in any way they want (paper better than head)

Important: Data collection might simply have to be postponed. That means you need to rely on recall methods once data collection becomes possible. At that time, think carefully about what recall data will be feasible and useful

Once you have thought through the principles, data required and resources available you can design a data collection plan.

You will need to iterate to a feasible plan. For example, you may have to update objectives and data required when you think about the limited resources.

Example of an Adapted Data Collection Plan

Farmers working with a project are doing bean variety and management trials. They have worked with the project for a long time but have not collected data themselves before. They have phones and the project team knows the numbers. Hence the data collection plan involves:

- Phone calls with farmers **in their field**
  - A standard script is used for the phone calls
  - Data recording remotely
- Quantitative objective measurement replaced by farmer assessments
- Data collected at several growth stages

Building Robust Research Networks

A Final Thought

The resources or capacities in place **before** the crisis, whatever its nature, determine how you can respond to the crisis. There will be more options open to a research network that is better prepared, making it robust and resilient. Investing in building this resilience is an insurance against shocks and crises in the future. Examples include:

- Farmers' capacity to set up experiments without research present
- Farmers' capacity to observe and record data

- Farmer leaders' capacity to organise and take notes from research discussion meetings
- Equipment, skill and experience in using data collection technology
- Alternate communication channels between different network members

Those leading and facilitating networks need to decide how much effort to put into building such capacity during good times to provide resilience during problem times. Much of this residence building would at the same time contribute to empowering farmers, farmer organisations and their communities. We can achieve multiple aims by building this sort of capacity in research networks.

Other Documents, Acknowledgements

Other guides in our collection that might be useful:

- Using Photography in Research
- Guide to Measuring Farm input and output data

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