

Innovative methods for measuring adoption of agricultural technologies: Establishing proof of concept and thinking about scaling-up

By

D Kumara Charyulu,
ICRISAT, Patancheru, India

At

Marriott Copley Place Hotel,
Boston, 3-4th August, 2016

Coverage of ICRISAT crops in SIAC 2.1 project

Crop	Country to be covered	Province/ state-1	Province/ state-2	Province/ state-3	Province/ state-4	No. of CCC
Chickpea	Myanmar	Myanmar				1
Pigeonpea	Myanmar	Myanmar				1
Groundnut	China	Henan	Shandong			2
Groundnut	Vietnam	Vietnam				1
Groundnut	Indonesia	Indonesia				1
Groundnut	Myanmar	Myanmar				1
Lentils	India	UP	Madhya Pradesh	Bihar	West Bengal	4
Barley	India	Rajasthan	Uttar Pradesh	Madhya Pradesh	Haryana	4
Grand total						15

How the method was improvised

- The method used in SIAC 2.1 project was improvised significantly than ways and methods earlier used both in TRIVSA or DIIVA
 - ✓ Specifically harmonized guidelines and common understanding about terminology
 - ✓ Templates for databases (1 & 2)
 - ✓ Linkage between dataset-1 and 2
 - ✓ Built-in monitoring by both SPIA and MSU
 - ✓ Details about experts and their feedback survey
- Further, the SIAC 2.1 suggested method was improved by adding more regional-specific EEs, field reconnaissance surveys and few samples of DNA finger printing in specific selected cases (Lentils in UP and MP)
- This activity was integrated with other on-going projects in different CCCs

What worked

- Method was quicker, cost-effective, less time-consuming and quite reliable provided the experts has good knowledge.
- It is good in a sizeable geographical area with limited crop domains/AEZs
- Good in case of limited diversity of improved cultivars
- A self-pollinated crop with dominance of public sector seed system works well
- More dis-aggregation EEs enhanced precision in estimates

What didn't

- Some times experts does not have good comprehension about farm-level adoption of improved cultivars
- Insufficient information about improved cultivars and its seed chains
- Heterogeneity in crop domains/AEZs
- High varietal diversity cases may not work
- A cross-pollinated crop with dominance of private sector seed systems may not work well
- Aggregated EEs leads to bias ness

Challenges of using this method

- Application of this method needs **prior deeper understanding** about crop in a given CCCs, its distribution, varietal preferences and nature of seed systems etc.
- **Right composition/identification** of experts and stakeholders
- Availability of **good facilitator** or moderator of EE (presence of CGIAR crop improvement scientists/office makes lots of difference)
- Question of **mixture of improved cultivars usage** ?
- Organizing expert elicitations on drylands crops is always **challenging** (low priority for concerned officials)
- Accessing secondary sources of information – sometimes **challenging** in some CCCs (Myanmar/China etc.)
- Some times could not able to convenience the stakeholders/NARS about the **whole purpose/importance** of this exercise

Confidence in results

- Put our **best efforts** in all selected cases/CCCs
- Between **80 to 90 per cent** confidence in results
- **Additional efforts** like dis-aggregated expert elicitations, field-level reconnaissance surveys and DNA finger printing of seed samples from farmers enhanced our confidence levels and reliability of information
- Stakeholders/NARS partners together should **own the outcome** - which enhances more visibility and confidence levels

Cost vs. benefit

- Not doubt, expert elicitation is a **cost-effective method**
- A more **systematic and participatory** effort from NARS enhances its benefits
- Integrating with other **innovative approaches** may (like DNA finger printing) overcome the existing challenges if any and increase the confidence levels
- SIAC 2.1 project provided **good opportunity to ICRISAT/NARS** to enhance the databases/information about extent of adoption of improved cultivars across selected crops

Thoughts on sustainability

- ICRISAT would continue to use this method beyond SIAC project
- Under scarce resource /limited funded projects – it is the only way to go forward
- NARS and stakeholders are realizing the process and importance of this method
- SIAC project has paved the way for sensitization and capacity building of NARS partners in different CCCs
- However, institutionalization of these approaches needs further push at higher level
- New innovations/methods can be piloted further under upcoming SPIA/CRP-PIM initiative across crops and regions

Thank You

