

DESCRIPTION OF APPROACH FOR SCALING

We present 3 tools and approaches to improve RTB seed systems:

- **Multi-stakeholder framework for intervening in RTB seed systems:** A matrix contrasting the stakeholders (people, roles, or organizations) with the characteristics (availability, access, and quality) of the seed system (not shown).
- **Integrated seed health approach:** Describes the integration of tactics for managing seed health: host resistance, on-farm seed management and clean seed (Figure 1)
- **Impact network analysis (INA):** A modeling approach that integrates biophysical and socioeconomic information to identify key actors and mechanisms to improve seed system performance (Figure 2).

These tools and approaches can improve seed system interventions, which are a key component in scaling access to new varieties and approaches to improve seed health.

INTERMEDIATE USERS & STAKEHOLDERS

Scientists, practitioners and decision makers who design, implement and evaluate seed interventions are the main **users**. All beneficiaries of improved seed systems (e.g. farmers, seed producers, regulators, consumers) are **stakeholders**. They were not directly included in the design of the tools, but they participate in interventions where the tools are used and refined.

MAIN STAGES

These tools are being used at different stages in the project cycle. For example, the framework and INA are helping to describe the seed systems before and after the intervention, and the integrated seed health approach is being used to design interventions and allocate resources.

In the scaling process, the multi-stakeholder framework help to identify key partners and bottlenecks, while INA can help to define best strategies based on expected outcomes from different scenarios.

LOGOS



EVIDENCE OF EFFICACY

- Concepts, tools and approaches from the RTB seed work have been argued in several peer-reviewed articles; this indicates peer support at the theoretical level.
- On the ground, teams working on proposal valuing approximately \$40M have used at least one of the tools and approaches shown here (plus degeneration models, not described) to design new interventions.
- Studies have been designed in the aforementioned projects to assess the efficacy of these tools for improving seed systems; these will be reported in the future.

Figure 1. Integrated seed health approach

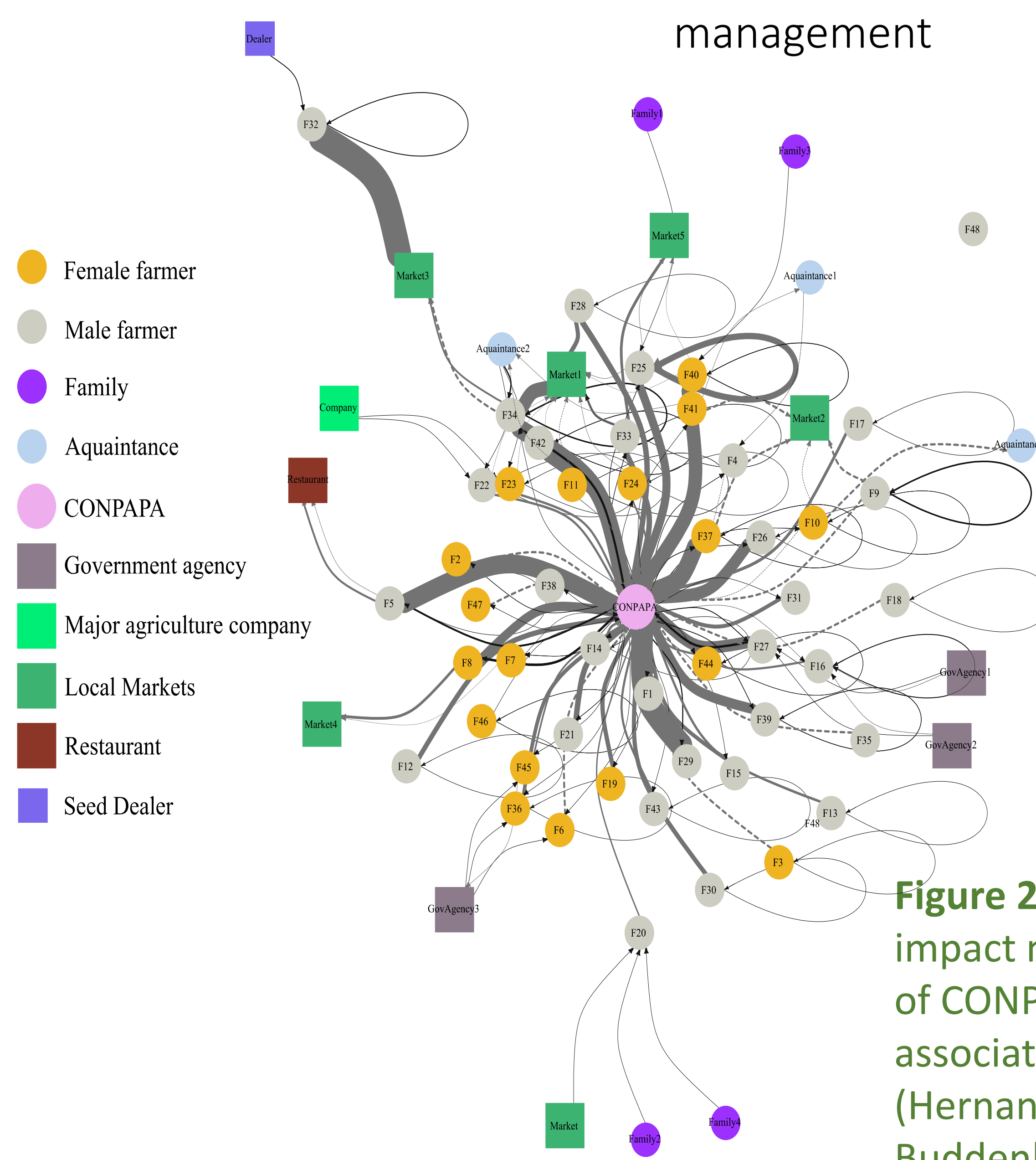


Figure 2. Component of impact network analysis of CONPAPA, a farmers' association in Ecuador (Hernandez Nopsa, Buddenhagen, et al. 2017)

NEXT STEPS AND CRITICAL GAPS

The tools are now being tested and refined in 13 bilateral projects implemented by RTB partners. Feedback from partners will lead to a new iteration of refinements. Critical knowledge gaps remain for both biophysical and socio-economic process underlying seed systems; we hope to bridge many of these in on-going and future research.