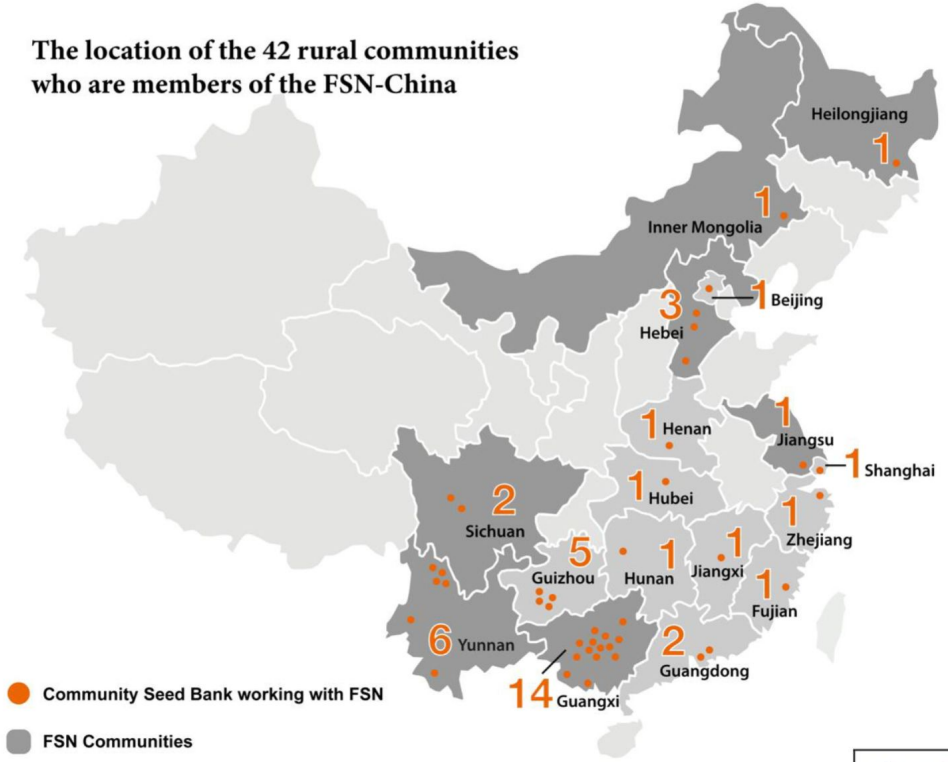
Farmers’ Seed Network – China

农民种子网络

FARMERS' SEED NETWORK(CHINA)



Introduction

Setup

- Research led PPB □ starting point of FSN
- Now: More than 10 registered Maize OPVs, one Hybrid, network of 45 communities across China
- Community seed banks
- Network is constantly growing □ new challenges arise
- Network has support and collaborates with public researchers, breeders, consumers groups in urban areas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Challenges

Social challenges

- Collaboration with urban communities certification necessary
- How to organize seed production

Breeding challenges

- Droughts drought tolerance breeding
- Hybrid breeding how to organize farmers' hybrid breeding and seed production/dissemination
- How to integrate commercial activities into existing social structures
- Formalization of the support/exchange with the formal breeding sector

Legal challenges

- Seed production under which legal regime?
- Specific legal recognition of farmers' seeds in official seed registration

Political challenges

- How to work together with public seed banks?
- Lack of governmental support

Challenges

Social challenges

- Collaboration with urban communities certification necessary, which certification system?
- **How to organize seed production and certification for CSA vegetable, rice, and millet production?**

Breeding challenges

- **Droughts drought tolerance breeding**
- Hybrid breeding how to organize farmers' hybrid breeding and seed production/dissemination
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Governance

- How to work together with public gene banks?
- **Lack of governmental support – recognition?**
- Seed production under which legal regime?
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Governance

Lack of governmental support – recognition?

- **Farmers are not considered as important players in agrobiodiversity conservation and development**
- **Agrobiodiversity is considered static, resource storage, and not to develop/evolve within the farming system**

    - More policy briefs, dialogues, and alliances with like-minded top scientists to lobby for consideration of farmers in policies and support *in situ* conservation
    - Lobbying the government to join international treaty (ITPGRFA) BUT NOT becoming a UPOV 91 party
    - CBD can be basis to lobby for farmer-seed systems
    - Take EU legislation about heterogeneous material as an example to legalize land races and heterogeneous material in China

Breeding

Droughts drought tolerance breeding

- Maize is a staple crop in the southern region but highly affected by more frequently occurring spring droughts
- Dryland rice landraces got lost with the replacement of slash/burn by industrial agriculture had to be re-established from genbank material

Maize in Guangxi is a staple food

Breeding

Water shortage - drought tolerance breeding

- Maize is a staple crop in the southern region but highly affected by more frequently occurring spring droughts

Maize in Guangxi is a staple food

Aspect	Option
Source of variation	Local varieties/landraces, local gene bank, international gene bank, other species
Cultivation system	½ season, 1/1 season, irrigated, high input, low input, intercropping
Drought tolerance mechanism	adaptation, escape
Socio-economic	High labour input, low labour input
Quality (nutrition, processing, taste)	Grain colour, taste, sugar content, protein content, dent, waxy corn . . .
Type of seeds	Population (OPV), Hybrid seeds, commercial, non-commercial
Cooperation	FSN, private breeding sector, public seed sector, public gene banks
Participation	PPB, PVT, Participatory seed production
Trial design	Decentralized, Semi-centralized, Centralized

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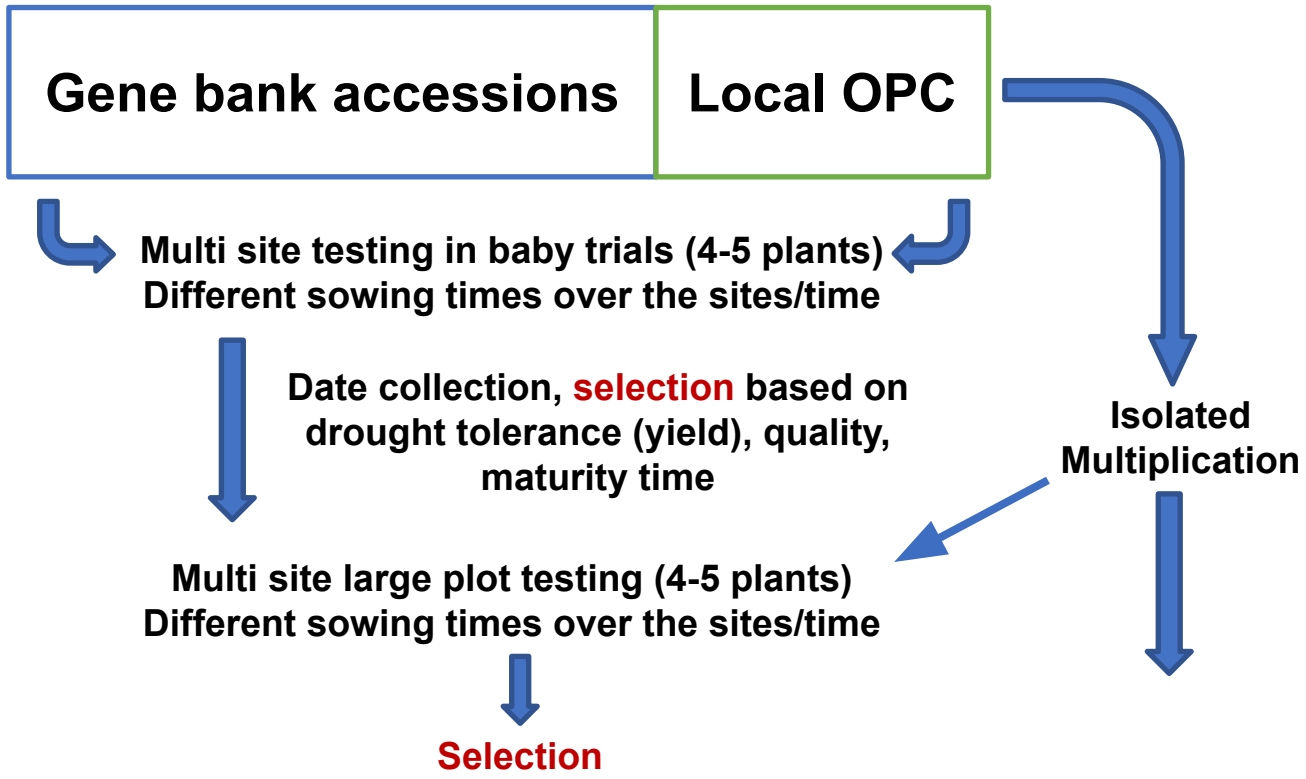
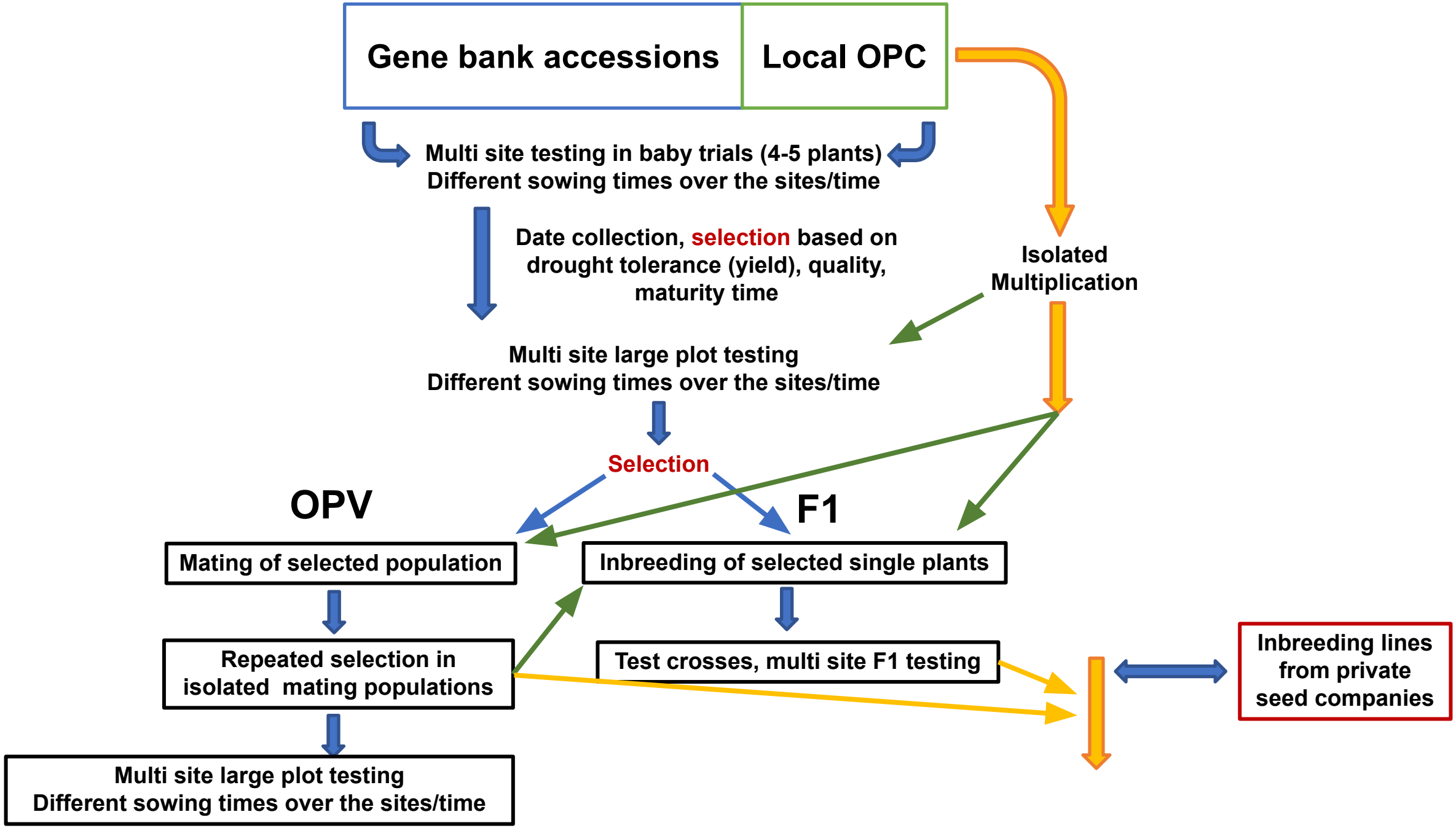
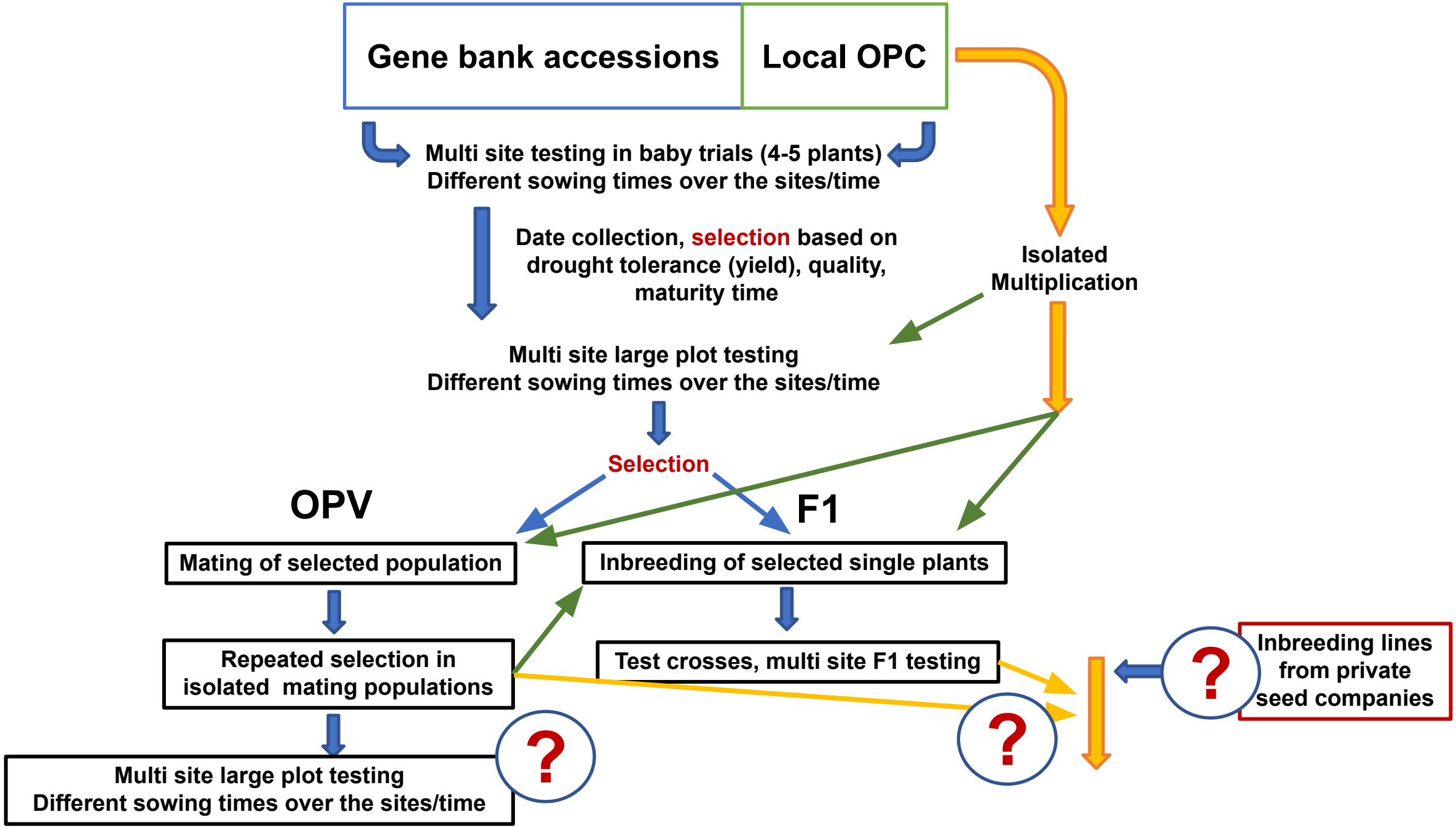



Gene bank accessions
Local OPC
Multi site testing in baby trials (4-5 plants)
Different sowing times over the sites/time
Date collection, selection based on drought tolerance (yield), quality, maturity time
Isolated Multiplication
Multi site large plot testing
Different sowing times over the sites/time
Selection
OPV
F1
Mating of selected population
Inbreeding of selected single plants
Repeated selection in isolated mating populations
Test crosses, multi site F1 testing
Inbreeding lines from private seed companies
Multi site large plot testing
Different sowing times over the sites/time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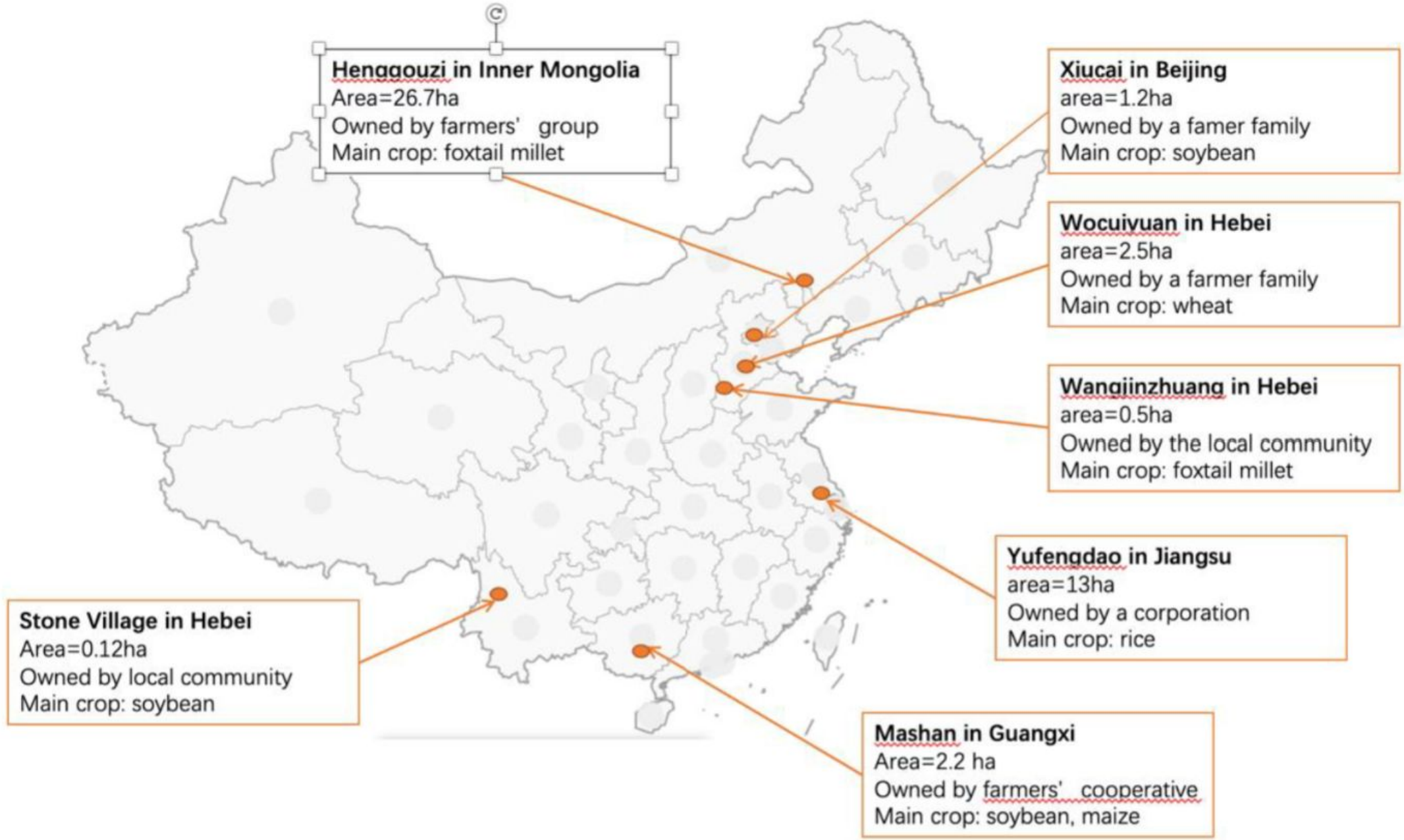

Figure 3. The distribution of ecological farms and communities

Social challenges

How to organize seed production and certification for CSA vegetable, rice, and millet production?

- Seeds from are demanded by organic CSA farms

 How produce seeds in sufficient quantities and how to certify them?

NEED: Certification of seeds multiplied on organic farms (farms are certified already)

Ideas

- Working with Ecocert no certification scheme for organic seeds yet developed
- Establishing an alternative system to the existing conventional seed certification
- *Participatory Guarantee System* instead of centralized certification agency?