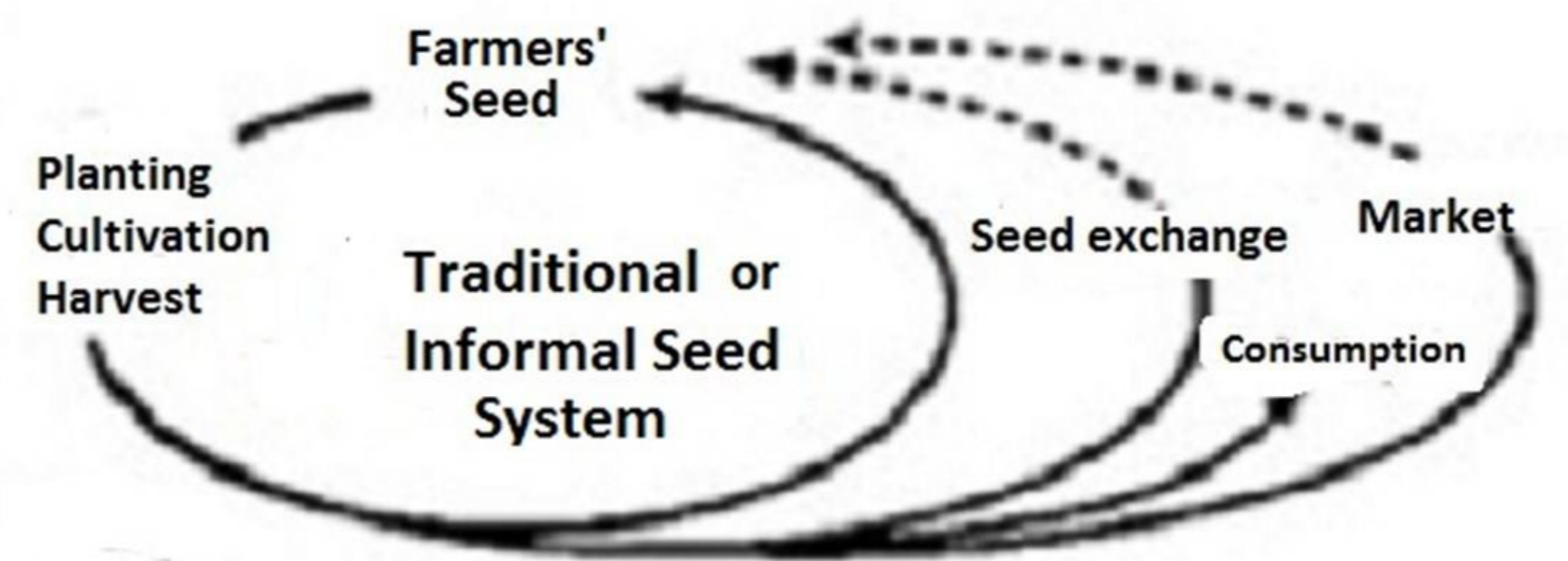


# Development of the Timor-Leste National Seed System

## Traditional Seed System

Traditional seed systems are typically found in developing countries with mostly small farmers and subsistence agriculture where they often produce the great majority of the food that is consumed.

- Farmers produce, store and re-use their own seed each year.
- Traditional seed systems produces 80% of food consumed.
- Before Seeds of Life (SoL) program, the traditional seed system was farmers' only source of seed.

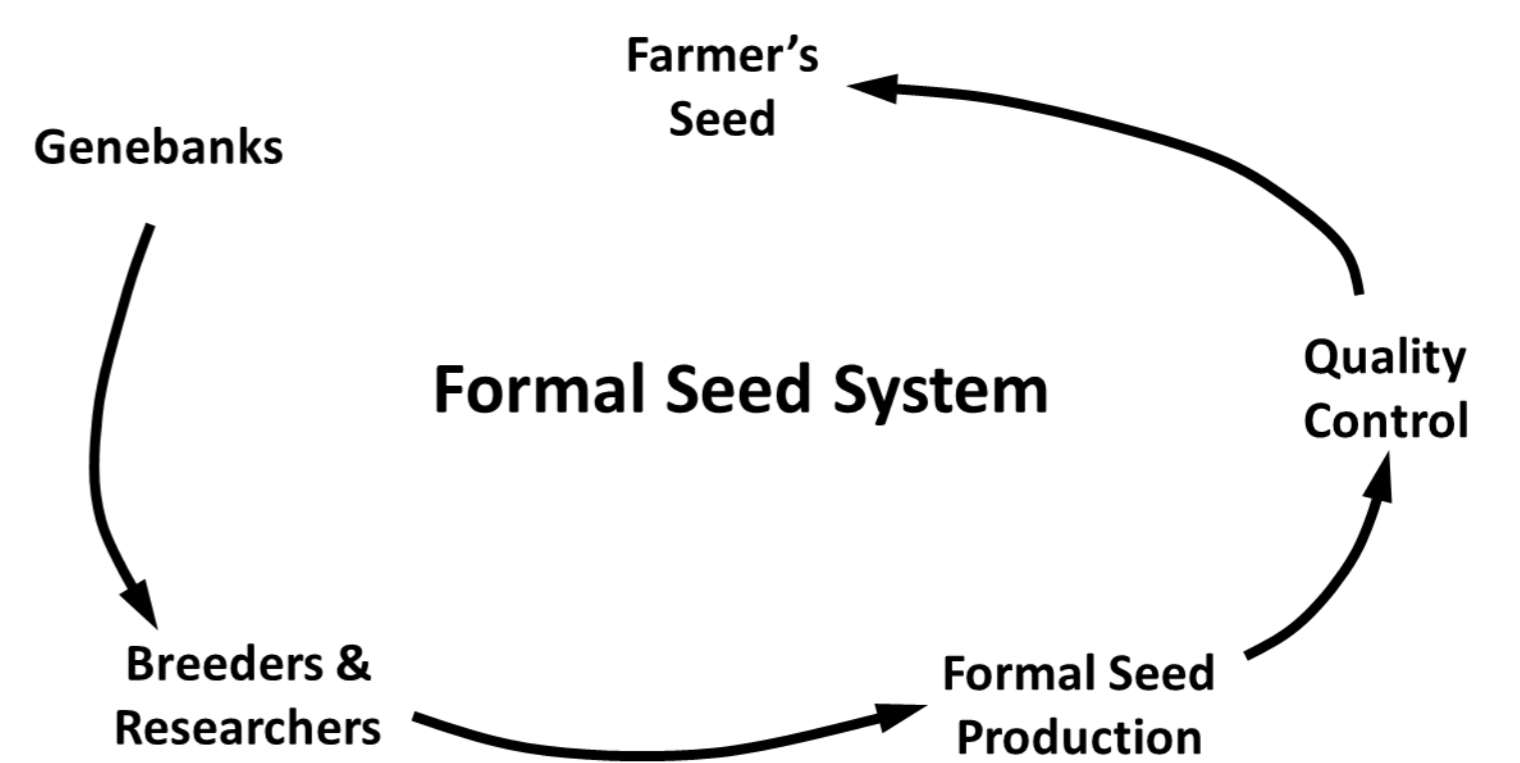


## Formal Seed System

Formal seed systems are typically found in more developed countries with commercial agriculture. They produce high quality seeds that farmers buy as new seed to plant each year.

Plant breeders and researchers are often in private or corporate sectors of large seed companies (like Monsanto in USA or Pioneer in Australia). The seeds they produce and sell to farmers are often hybrid.

Quality control is often regulated by Government but is also driven by competition. In Timor-Leste competition between registered commercial seed producers (CSPs) and agricultural input suppliers is likely to increase over time but both their national associations (ANAPROFIKO and ANSA) should collaborate to protect the reputation of their organisations AND the currently strong reputation of the *Fini ba Moris* brand of quality *commercial seed* of improved varieties that are produced under the Timor-Leste National Seed System.



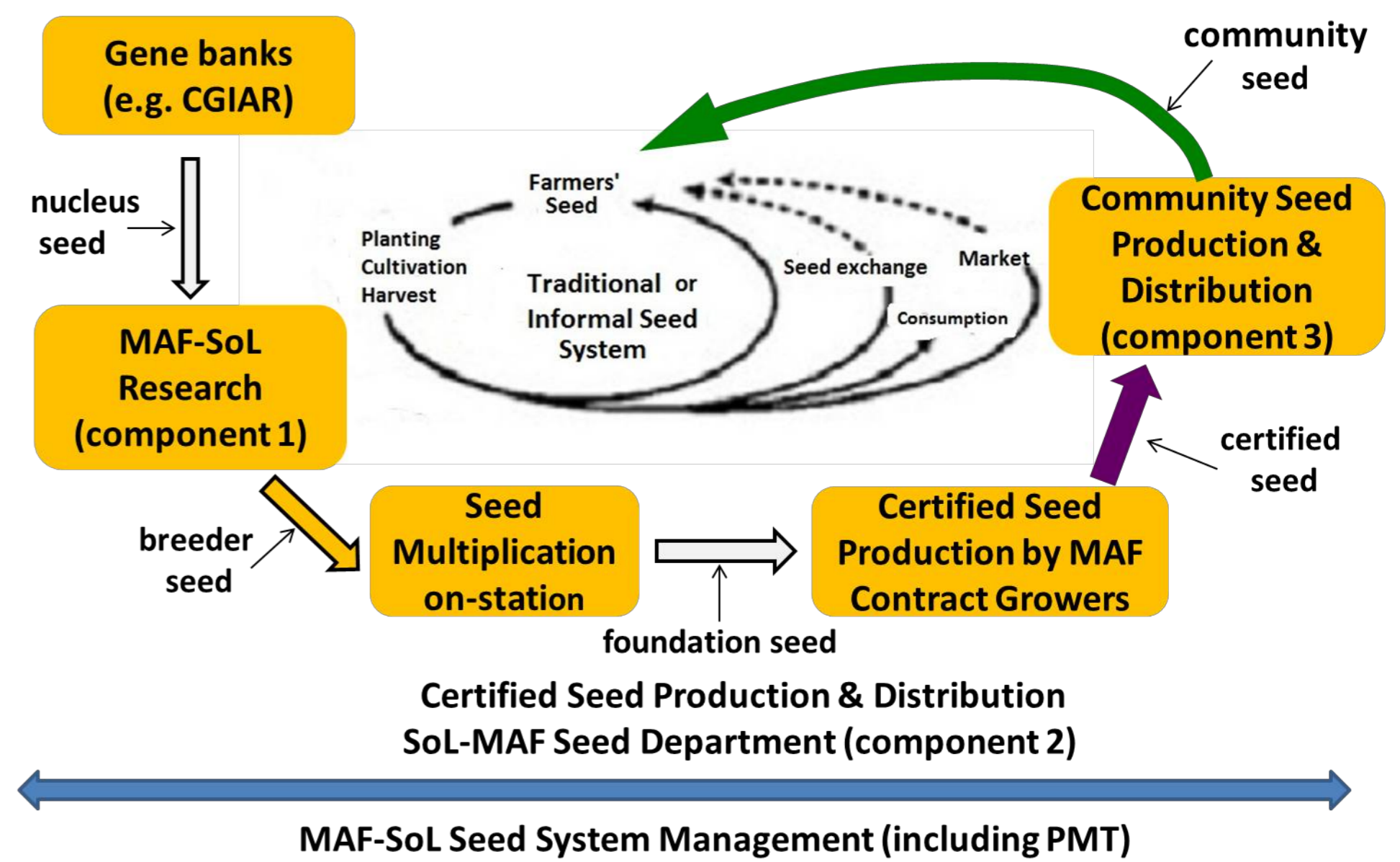
- Farmers are provided or buy new seed to plant each year.
- SoL 1 & 2 worked with MAF and established a formal seed system.

## Integrated Seed System

SoL1 began in 2000 as a formal seed system. Over the next three phases (15 years) SoL worked within MAF and with other MAF development partners to develop into the highly *integrated* Timor-Leste National Seed System (NSS).

Design of SoL Phase 3 involved enabling MAF Seed Department's contract growers to annually produce large quantities of *certified seed* of improved varieties (175 metric tons) for on-farm demonstration trials (OFDTs), distribution to farmers and for MAF-SoL and Municipal Office extension staff to establish community seed production groups (CSPGs). CSPG members produce and store *community seed* of improved varieties for their own use and for barter and sale to others in their local community, thereby introducing improved varieties into the traditional seed system. *Community seed* cannot be quality-assured and under the Guidelines of the Timor-Leste National Seed Policy (NSP) cannot be sold as commercial seed.

Each of the 1,000 CSPGs planned by SoL3 design can annually produce about 150kg of *community seed* of improved varieties (i.e. 150 metric ton/year). To plant the total area of maize, rice, peanut and beans planted each year, T-L farming families require a total of about 1,500 metric tons of these seeds each year. CSPGs can only supply 10% of this annual seed requirement (a 10% seed replacement rate, SRR).



## The Timor-Leste National Seed System

MAF-SoL studies in 2012 found it cost >\$3.50/kg for MAF Seed Dep't to produce *certified seed* of improved varieties and the cost of imported seed was about \$7.00/kg. Hence reliance on certified seed and imported seed was NOT meeting:

- farmers' requirements for timely access to good quality seed of improved varieties, OR
- the Ministry and Government's objective to attain national seed security and seed sovereignty.

Following a study visit by MAF national and municipal directors and SoL advisors to Nepal in 2012 to investigate the lessons that country had learnt in developing its national seed system, it was decided a Timor-Leste National Seed Policy (NSP) should be developed AND to pilot local commercial seed production. The latter aimed to enable farmer groups to produce large quantities of quality-assured *commercial seed* of improved varieties for use by local farmers; re-direct some of the costs of seed imports to support development of commercial agriculture in Timor-Leste; and achieve national seed security and seed sovereignty.

In the 2014-15 crop season 58 CSP produced about 300 metric tons of good quality commercial seed of improved varieties of rice ('Nakroma') and maize ('Sele', 'Noi Mutin' and 'Nai'). The 200 metric tons of *community seed* produced annually by the current 1,200 CSPGs PLUS the 300 metric tons of quality-assured *commercial seed* produced by the current 70 CSP enables a total of 500 Mt of seed of improved varieties to be produced each year. This is sufficient to supply a third of the country's annual total seed requirement. This seed replacement rate of 33% is considered optimal for Timor-Leste's 130,000 smallholder farming families.

A National Seed Council (NSC) has been established composed of representatives of all stakeholders in the National Seed System to assist and support MAF manage implementation of the National Seed Policy and its evolution into the National Seed Law.

