



Gardeners in participatory farming experiments

Summary

Gardeners produce fruits and vegetables most often for their own consumption. When they are enlightened amateurs or retired farmers, they can concretely contribute to experimental processes approaching professional farmers' agroecological practices. Being involved in trials, with researchers who share clear objectives and simplified protocols, a gardener network enables the evaluation of a wide range of genetic resources (especially when few seeds are available). Such a network can thus enable the collection of a large amount of data with limited financial resources. Gardeners can also contribute to multiplying seeds before distributing them to farmers and they can contribute to participatory research approaches.

Issue

Farmers wishing to move towards more virtuous and agroecological practices often face a lack of suitable varieties. They have the possibility of making their own selection (seed saving) or of getting involved in participatory breeding processes to obtain "tailor-made" varieties adapted to their soil-climatic context but also to their cultural, social and economic context. When they begin this selection from genetic resources preserved in collections, the quantity of seeds provided to them is very small (few seeds). A significant multiplication work is then necessary, which requires a lot of time and meticulousness. One possibility is to work on this multiplication step with amateur gardeners who live in close geographic proximity to the farmers.

Practical recommendation for practitioners

In the French Bean-Cast Living Lab, farmers are looking for varieties that consume less water and meet the expectations of their main market (i.e., as an ingredient in the traditional cassoulet recipe). A participatory breeding program started with a range of bean varieties selected from various collections. The quantities provided by the conservatories ranged from 10 to 40 seeds per variety. It was therefore decided to call on an association of amateur gardeners so that each one "adopts" sows, and tends one or more varieties, so that the quantities of seeds collected is enough to be grown commercially by farmers.

Although the ultimate goal is to find varieties that are suitable for farmers who cultivate with different equipment and conditions than do gardeners, the non-professional gardeners contribute to the experimental process by multiplying and evaluating several varieties.

Participatory evaluations are regularly conducted among amateur gardeners with farmers and researchers. When sufficient seed is available, the seeds are given to farmers who evaluate them at the field level.

In order to have an inclusive collaboration with gardeners and to set up the process, the following recommendations are suggested:

- Raise awareness among gardeners about the challenges that farmers face. For this purpose: the organisation of joint meetings grouping farmers, gardeners, researchers, and citizens such as consumers or food manufacturing companies.
- Co-design together (gardeners, farmers, researchers, consumers) simple and clear trial protocols
- Be accompanied by a facilitator who frequently visits and monitors the trials and is available for any questions
- Involve gardeners in the analysis and interpretation of data/results

– Maintain the interest and participation of gardeners at a high level between growing seasons and until the end of the experimental process, by inviting them to farm visits, field evaluations or regular informational meetings

Be careful, however, not to be too ambitious in the objectives and in the technical protocol. Working with amateur gardeners does not technically allow for experiments requiring precise technologies.



Figure 1. Building the experimental protocol with gardeners (Axel Wurtz / BIOCIVAM11)

Benefits (and limits) for practitioners or stakeholders

One of the main benefits of involving gardeners is that they can start with a very small quantity of seeds, sow them manually, tend to them and after 2 or 3 years harvest enough seeds for sowing on a commercial farm with an agricultural seeder.

Another advantage is that gardeners are numerous enough to represent a diversity of pedo-climatic contexts, capable of reflecting the diversity existing in the farming area.

The time and the daily attention that gardeners dedicate to their plants can produce a large quantity of data. Sometimes new criteria for selection can emerge from the gardeners' attention to detail.

Involving people who are not used to working with researchers (e.g., consumers, gardeners) raises awareness of the scientific approach. In addition, they discover the constraints faced by farmers and the challenges of applying agroecological practices. This knowledge can impact consumer choices and guide consumption towards purchasing agroecological products.

Finally, gardeners are often involved as volunteers (since all materials and inputs are provided by the project), which allows for practical activities to be carried out with limited financial resources.

About this practice abstract and DIVINFOOD

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DIVINFOOD - Co-constructing interactive short and mid-tier food chains to value agrobioDiversity IN healthy plant-based FOOD, is running from **March 2022 to Feb 2027**.

The overall goal of DIVINFOOD (a multi-actor, participatory project) is to facilitate the use and increase the value of Neglected and Underutilised Crops (NUCs) in food chains to foster healthier diets and more sustainable food systems.

Project website: www.divinfood.eu

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