Bertrand Lassaigne: a pioneer in recognizing the value of farmers’ varieties

After receiving his agricultural diploma, Bertrand Lassaigne worked for several technical institutes and seed companies, evaluating and registering varieties, and assessing the effectiveness of several phytosanitary products. In the late 1980s, he decided to return to the land of his grandparents in Périgord and become a farmer. He attended a seminar on organic farming and resolved to adopt the practice of organic farming. He began selling his products locally, often directly to users who appreciated their local origin. Since most seed in the market is not organic, he also started to produce his own seed. Maize seed and varieties remained a problem because only hybrid varieties were available.

In 2000, he discovered that a particular company was selling genetically modified (GM) maize in south-west France, which was a shock to him. The production of organic maize was still in its infant stage in the region where his farm was situated. He considered the possibility that one of neighbours would start to cultivate GM maize as catastrophic, as he wanted to maintain his production absolutely free of genetically modified organisms (GMOs). Because of the absence of local or farmers’ maize varieties in France, Bertrand decided to return to the origin of maize, Guatemala, where he observed that small-scale farmers were still growing traditional and open-pollinated varieties. The voyage further motivated him to promote the use of local diversity in his region, and also more widely in France (Zaharia, 2009).

Initial steps: restoring the conservation and use of local maize varieties

An experimental project was set up in 2001 at AgroBio Périgord, the Association for the Development of Organic Agriculture in Périgord, in south-western France (Figure 1.7.1), with the aim of finding alternatives to hybrid maize seed. We evaluated 11 maize varieties that Bertrand had collected from farmers in Guatemala. As it turned out, the varieties were unfortunately not adapted to the French climate and production system. During this same period, small-scale farmers across France, as well as Italy and Spain, began to abandon the cultivation of hybrid maize and look for local or farmers’ varieties (varietés paysannes), following the introduction of...
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GM maize. In the second year of our project, we evaluated local maize varieties from several regions in France and neighbouring countries. But our first experience with the material from Guatemala, although unsuccessful, was crucial as it led us to the decision to carry out tests on local maize varieties on an annual basis.

In this chapter, we share the experiences of Agrobio Périgord with the diversity platform and Maison de la Semence Paysanne (or small-scale farmers’ seed bank), which have gradually become drivers for promoting farmers’ use, exchange and experimentation of local varieties in France. The chapter is complemented by that of Lassaigne and Kendall (Chapter 5.4), which details experiences working with farmer and participatory maize breeding in France.

We refer to small-scale farmers, throughout this chapter, using the French term paysans. These farmers, or paysans, use a diversity of crops and farm-saved seed, and primarily sell their produce at local, regional and, increasingly, organic markets. They operate parallel to the agro-industrial chain, which is dominated by large-scale farmers who use hardly any diversity in their production. In comparison with farmers in many developing countries, the scale of operation of paysans in France, in terms of area and economy, is by no means small. However, their mode of production and use of diversity is quite distinct from the mainstream agricultural sector.

**Diversity platform**

Following our decision to search for open-pollinated maize varieties, we focused on gathering varieties from farmers who maintain local varieties for their own personal

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**Figure 1.7.1** Map illustrating the location of Périgord in France.

Source: AgroBio Périgord, unpublished data.
The Maison de la Semence Paysanne and diversity platform in France

use. We searched in regions across France and beyond, where specific culinary traditions ensured the conservation of local varieties. The National Agricultural Research Institute of France (INRA) provided us with some accessions from its gene bank and we began to test their capacity to adapt to the climatic and growing conditions in our region. Little by little, we expanded the number of maize varieties, maintaining those that had interesting characteristics. This work evolved into a ‘diversity platform’, which is a space where farmers can experiment with, promote and learn about local varieties. Every year, the platform establishes five types of diversity blocks, each with a specific function (Bio d’Aquitaine/AgroBio Périgord, 2011):

1. **Introductory blocks** are used to evaluate varieties that have been newly introduced under common production and management conditions; the varieties are compared with those varieties that are well adapted, are included in demonstration blocks and are further multiplied.

2. **Multiplication blocks** are used to maintain varieties; the maintenance is conducted under controlled pollination.

3. **Breeding blocks** involve farmer and participatory breeding, through a number of steps, which are described by Lassaigne and Kendall (Chapter 5.4).

4. **Variety demonstration blocks** are used to compare the selected local varieties. During regular field days, farmers evaluate the varieties, thereby contributing to awareness raising and enhancing farmers’ skills.

5. **Crop diversity demonstration blocks** aim to raise awareness among visitors on new crops that may be interesting to include in their production system.

The diversity of varieties and crops included in the diversity platform in 2010 are illustrated in Figure 1.7.2.

**Maison de la Semence Paysanne**

The idea to establish a seed bank began to take shape in the mind of Bertrand during a trip to Brazil in 2003. In southern Brazil, the concept of community seed banks has been adopted as a means to enhance the autonomy and seed security of farmers. Maison de la Semence Paysanne literally means ‘house of small-scale farmers’ seed’; and it has become an integral part of our dynamic management of agrobiodiversity. Its members are from the Périgord region and beyond, and as such we cannot really call it a community seed bank, unless the term ‘community’ can be understood in this context as a network of farmers or group of people that share a common interest.

**Objectives, collection and members**

The objectives of the Maison de la Semence Paysanne are to contribute to the revitalization of local varieties, and ensure the maintenance of farm-saved seed that is free from GMO contamination. Furthermore, we aim to enhance farmers’ autonomy; strengthen their capacity to develop and select varieties that are adapted to organic farming and for low-input agriculture; and maintain agrobiodiversity and associated
knowledge for future generations. We began with a collection of composite maize varieties that had almost disappeared from farmers’ fields in France. Today, we have over 100 maize varieties, more than ten sunflower varieties, and several varieties of soybean, buckwheat, moha (Hungarian grass), lupine, and a number of vegetable and fodder crops. The Maison de la Semence Paysanne has evolved from regional to national coverage. In 2010, more than 250 farmers from all over France were associated with this seed bank. By 2010, it was active in more than 12 regions of France, with more than five farmers from each region participating in the mainte-
The Maison de la Semence Paysanne and diversity platform in France

The Maison de la Semence Paysanne and diversity platform in France shows its gradual expansion in members and its coverage of farmers across regions of France. In 2011, although the Maison de la Semence Paysanne had about 100 maize varieties in stock, farmers were only cultivating about 25 varieties. Although it can be assumed that, in addition to the 25 varieties formally registered as being cultivated, some farmers continued to cultivate another dozen or so, on a more informal basis. We disseminated seed to more than 60 new farmers as a way of motivating the farmers to cultivate a greater diversity of varieties.

Farmers formally join the Maison de la Semence Paysanne for only a couple of years, but many of them continue to cultivate and exchange local varieties after their formal membership.

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**Figure 1.7.3** Number of member farmers and number of regions with more than five member farmers associated with the Maison de la Semence Paysanne of AgroBio Périgord, 2001–2010.

Source: AgroBio Périgord (2010).
membership ends. In addition, more than 30 farmers and amateur gardeners contribute to the conservation, experimentation and exchange of seed of several vegetable varieties in the seed bank.

We do not have large quantities of seed for many local varieties, because formal gene banks supply much of the seed and they only provide us with small user samples. Another reason why we do not maintain large quantities of seed of local varieties is because farmers are put off from using them due to their low productivity. However, such local varieties may have other interesting traits like taste, flavour, colour, historical or cultural values, or else they may be considered farmers’ patrimony. Moreover, they are still a source for the future creation of composite varieties. Maize and sunflower are, however, allogamous species, and cannot be conserved in a multiplication platform. They need to be isolated to avoid hybridization; with a minimal distance of isolation of 300 m for maize, and 700 m for sunflower. Amateur gardeners multiply the seed of rare maize and/or sunflower varieties in their gardens and return all the seed to the Maison de la Semence Paysanne. This shows the importance of this kind of partnership between farmers and gardeners for conserving and using agrobiodiversity.

The collection: accessing, evaluating and including new varieties

Our first sources of varieties are the farmers themselves, who send us materials with the aim of contributing to conservation. In addition, we are sometimes able to identify varieties that we do not yet have in our collection during diversity fairs in France or other European countries. In these cases, we approach the farmers and ask them to share some seed. We also look for specific materials, approaching the national gene bank at INRA, or research organizations, to complement our collection. Before including materials in our collection, we conduct observation trials. We look for local varieties in a manner that balances agronomic, economic, environmental and nutritional qualities, including adapted varieties and/or those that have interesting traits. Once we decide to include a variety in our collection, we insert the relevant passport data into our database, providing the ethnobotanical description, including name, origin, place, name of the farmer or institution providing the materials, and the number of years the variety has been cultivated by the farmer. Before any seed is included in the Maison de la Semence Paysanne, we test it to detect the presence of any GMOs using leaf analysis. In this manner, we keep our collection GMO-free. Figure 1.7.4 illustrates the flows of varieties within our network, the diversity platform and Maison de la Semence Paysanne.

Membership: facilitating the exchange of seed

The farmers and gardeners who wish to participate in the Maison de la Semence Paysanne, by contributing seed and multiplying varieties, sign a contract for experimentation and multiplication. Above all, they adopt a moral stance in contributing through use to the maintenance and improvement of the local variety. Members return part of the seed they produce to restock our collection, in a process that echoes that of the community seed banks in many developing countries, or of the seed net-
works in northern America and other European countries, as described by Shrestha et al. (Chapter 2.8). Through the contract, the Maison de la Semence Paysanne and its members engage themselves in a type of experimentation that enables them to bypass the restrictive variety and seed legislation in France, which considers the exchange and sale of non-certified seed and non-registered varieties illegal, as described in more detail by Kastler (Chapter 6.8). The varieties that are cultivated by each member are registered, as well as their production data. A database records this information and allows us to closely monitor the use of local varieties, acting as a kind of variety register similar to the community biodiversity register, as described by Subedi et al. (Chapter 2.4).

**A local group with national dynamics**

As AgroBio Périgord is a local farmer organization, the first goal was at local and not national level. However, we were the first and only organization to work on local maize varieties and, consequently, many farmers from different regions of France approached us to participate in the Maison de la Semence Paysanne. So, now the organization is structured in two levels, one with the local group of farmers and amateur gardeners in Périgord, and the other with a national network of farmers’ groups (Bio d’Aquitaine/AgroBio Périgord, 2011). In 2010, one of these groups, which is based in the Poitou-Charentes region, established the organization Cultivons la Biodiversité en Poitou-Charentes (‘we cultivate biodiversity in Poitou-Charentes’).
Organizational structure

The Maison de la Semence Paysanne of AgroBio Périgord is an institutionally, politically and morally independent organization. It depends on public funding, primarily in the form of subsidies from the regional government, for 70% of its budget. We therefore consider it vital that a structure for the collective and dynamic transfer of knowledge and material is developed, to ensure that the social relations that make the Maison de la Semence Paysanne work do not disappear when funding is no longer be available. Our aim is to embed what we do in existing farmers’ networks and practices.

Practices contributing to CBM in France

The diversity platform, the Maison de la Semence Paysanne, and farmer and participatory breeding of local varieties are intrinsically linked. The Maison de la Semence Paysanne has a role in conceptualizing and institutionalizing the collective management of local varieties. It provides a structure for the legal exchange and distribution of seed of local varieties. The diversity platform motivates, capacitates and unites farmers for using diversity. We realize that in our context, a community is not the same as those in developing countries. Our activities in AgroBio Périgord are organized at a regional and national level, through our linkage with the Réseau Semences Paysannes (National Seed Network). Our community has become a national network of farmers who approach diversity in a common and collective manner. In our efforts towards achieving the conservation and cultivation of agrobiodiversity, we use similar approaches to those used by the farmers who originally inspired us in Guatemala, Brazil and other countries. We hope that by sharing our experiences, we can demonstrate that cultivating agrobiodiversity is a matter that concerns us all, whether we are small-scale farmers in the North or the South. We are all farmers who need and use the diversity of our local varieties in a dynamic manner to sustain our livelihoods, thereby providing our services to society in producing good and healthy food. Moreover, we work to guarantee food sovereignty and conserve biodiversity for future generations.