10 KEYS TO UNDERSTANDING AGROECOLOGY

AGRICULTURES
PRODUISONS
AUTREMENT

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AUTREMENT

Agroecology

« I want our agriculture to go down the road of high performance in terms of both economics and ecology, making the environment a key factor in our competitiveness. This is a dynamic founded on the strength of collective effort and the rich diversity of our regions, on innovation and on the spread of new know-how. We shall make France a leader in agroecology. »

Stéphane Le Foll, Minister of Agriculture, Agrifood and Forestry.

PRODUCING DIFFERENTLY MEANS the agroecology project

The agroecology project for France launched by Stéphane Le Foll on 18 December 2012 is a **project aimed at channelling the dynamism of French agriculture.**

WHY LAUNCH AN AGROECOLOGY PROJECT?

▸ Because agronomics and the optimum use of resources and natural mechanisms hold enormous possibilities for enhanced competitiveness.
▸ Because we must protect the resources on which we rely for our agricultural production.
▸ Because society is expressing a legitimate demand and we must respond by looking beyond oppositions between the different potential models of growth for our farming sector.

It is necessary, and absolutely possible, to make the ongoing development of our agriculture and the various agricultural and agrifood value chains part of a framework focused on the future and equipped for the many challenges that we need to overcome: economic performance, protection of the environment, responding to what society expects....

It is an approach that is all the more necessary because today there is no longer any single model for agriculture. Our agricultural holdings are highly diversified and increasingly dissimilar.

The challenges facing farmers are many: economic, environmental, social, to name but a few. They face agriculture both at the individual level – on each farm, in each enterprise – and collectively – sector organisation, support for farmers and regional dynamics.

AT WHAT AIMS THE AGROECOLOGY PROJECT ?

The agroecology project aims **to reconcile economic performance with environmental performance.** Both aspects must now be addressed by a holistic, coordinated approach.

The agroecology project is thus aiming at **producing differently by rethinking our systems of production.** This is not only a change in agricultural practice but also a change in mindset.

WHO IS INVOLVED IN THE PROJECT?

Everybody!

Farmers and growers first and foremost because the project is specifically based on projects developed at local level. But also economic operators, research and development bodies, vocational education (initial and continuous), all those involved in the development of agriculture, local authorities and, naturally, central government, which is implementing several strong initiatives to contribute to the process.

The goal of the project is to support farmers to help them produce differently. To that end, it brings to bear a range of resources and action plans. And it will help restore trust between agriculture and society.

EDUCATION

1. Producing differently means training the farmers of today and tomorrow

Agroecology means the development and dissemination of new agronomic and livestock farming practices. With the "Teaching to Produce Differently" action plan, agricultural training and education is equipping itself to prepare farmers for a more sustainable, more effective approach to production.

GOALS AND ISSUES

Forming its second largest educational system, France's agricultural colleges prepare pupils, students, apprentices and participants in continuous education for careers in farming, forestry, nature and the regions, from high school to doctorate. Agricultural production, personal services, landscape development, livestock care, agrifood: all these are careers for which agricultural teaching prepares students. Everywhere in France agricultural teaching establishments are fine-tuning their teaching resources to train pupils in alternative production methods that are more sustainable in terms of economics and ecology.

WHAT DOES THE ACTION PLAN "TEACHING TO PRODUCE DIFFERENTLY" INVOLVE?

Success in achieving agricultural production that offers high performance both economically and environmentally is a challenge that farmers must face up to in the future. Going down the road of agroecology requires major changes in the running of farms, as well as different ways of thinking about how we should work with the living environment. If this transition is to achieve large-scale success, agricultural education has a fundamental role to play as a system for training farmers.

Who is involved?

Many teaching establishments have been applying a more sustainable approach for a number of years now.

The network of 189 farms and 33 technical workshops in public-sector agricultural colleges are an outstanding resource for innovation, experimentation and dissemination of new methods among sector professionals in continuous vocational training, young people on introductory training courses and technical advisory bodies. The activities of 74% of farmers already include at least one project with an agroecology dimension.

The aim must be to develop initiatives of this type and increase the number of training farms and workshops that adopt them.

The Action Plan

The duration of the plan is four years and it has four key priorities to channel all the strengths of the agricultural education system.

The first is to overhaul the reference criteria for formal qualifications: those criteria will change to respond to the goals and issues for "producing differently". Changes are already planned for the 2014-2015 academic year in the BTSA "Farming System Analysis and Operation" technical diploma and for 2015-2016 in the high school "Farm Operation and Management" vocational *baccalauréat*.

The second is to redefine the role of college farms and reinforce their core task of building and disseminating new practice, by moving them towards systems of production that are genuinely agroecological. Several programmes are planned to ensure that teaching establishments set up projects for enhanced environmental performance, restore agronomics to its central role in farming practice, reduce the use of inputs and strengthen the sanitary performance of their herds.

It is out in the regions that the main progress will be made on the transition to agroecology. **The third priority for "Teaching to produce differently" is therefore to strengthen regional governance.**

And finally, learning to produce differently must involve **learning to teach differently,** which is the objective of the **fourth and final priority, which is focused on the training of teaching staff.** Their training will be overhauled in order to add to their knowledge of biological processes in functioning agrosystems and their ability to pass on the critical mentality needed for the transition to agroecology.

EEIG

2. Producing differently means encouraging the emergence of collective dynamics

Agroecology is an approach to farming that makes effective use of the resources provided by nature while at the same time preserving nature's capacity to renew itself. By maintaining a high level of production at reduced cost (less fuel and fertiliser, fewer crop treatments, for example), farmers can make their income more secure and improve the farm's economic performance. The condition? The need to stop looking at each field separately and to see the farm as a whole, adopting a holistic approach in which activities are mutually complementary and imbalances offset each other.

GOALS AND ISSUES

In order to drive collective projects, a structural tool is required if satisfactory performance is to be achieved at both levels, economic and environmental. That tool has now been put in place with the creation under the Law on the Future of Agriculture of the EEIG, the Economic and Environmental Interest Grouping.

WHAT IS AN EEIG?

An EEIG is a grouping of farmers who have come together to generate a collective dynamic with aims that are both economic and environmental. The initiative for this comes from the farmers themselves and the process unfolds at the local level. There is no readymade, single template to be followed.

Who is involved?

The new economic interest groupings will benefit from an intentionally flexible legislative framework. A pre-existing entity, or one created for the purpose, can be labelled as an EEIG if the multiyear project it is proposing matches the desired objectives. No framework is imposed for its form or legal status and all types of groupings of farmers and growers are encouraged.

In order to facilitate joint programmes, the law provides that initiatives undertaken by farmers who are EEIG members as part of the project will be classed as mutual assistance between farmers (and not as business or employment relationships).

Several networks of farmers have already set up collective organisations of this kind and their characteristics are likely to enable their future recognition as EEIGs. This is the case for the winners of the recent call for "Collective Mobilisation for Agroecology" projects.
To see the map locating the 103 selected projects, go to: agriculture.gouv.fr/carte-projets-agroecologie.

What are the scheme's core principles?

Initiatives in favour of agriculture aimed at both economic and environmental effectiveness and included in the project for an EEIG can be given increased aid allocations or preference for aid allocation.

The changes made to methods on the farms involved in an EEIG must be directed at enhanced economic performance: lowering farm costs by reducing consumption or pooling procurement (commodities, equipment, inputs, etc.), improved organisation of marketing channels, and so on.

It is the Prefecture for the region that grants EEIG recognition to applicant groupings that match the desired objectives.

CROPS

3. Producing differently means reducing pesticide use

Plant protection, or phytosanitary products, also called pesticides, can protect agricultural production against harmful insects, fungi or weeds that may interfere with the proper development of crops and possibly affect our food supplies (cereals, fruit, vegetables). These products can therefore guarantee regular harvests whose quantity and quality are satisfactory, but they do need to be used intelligently.

GOALS AND ISSUES

Reducing the use of plant protection products is not only important for public health but also environmentally and economically. Such reduction is justified by the improvement in management of health risks associated with crop production to include protection of users, local inhabitants and consumers.

WHAT IS THE ECOPHYTO PLAN?

The purpose of the Ecophyto Plan is to help farmers use less plant protection products while at the same time maintaining satisfactory levels of agricultural production to meet the needs of consumers, who expect products to be available in sufficient quality and quantity. It also enables objective evaluation of the level of exposure of products, and therefore consumers, to pesticides. These new low-pesticide farming methods are also conducive to biodiversity and more protective of soil structure.

ÉCOPHYTO
RÉDUIRE ET AMÉLIORER L'UTILISATION DES PHYTOS

What does the Ecophyto Plan involve?

The Ecophyto Plan provides tools to help reduce the dependence of farms on plant protection products, while at the same time maintaining the economic effectiveness of French agriculture.

It aims to:

- **disseminate low-pesticide methods** as widely as possible among farmers,
- **drive agronomic research** on low-pesticide crops, with the results being communicated to the widest possible audience,
- **guarantee the competence** of everybody involved in the value chain (distributors, advisers and pesticide users),
- **improve the information given to farmers** in real time on the presence of diseases and pests in crops in order to target treatment more effectively, so that treatments are applied only when really necessary.

Who is involved?

The Ecophyto Plan mobilises the entire sector: firms, wholesalers, cooperatives, agricultural advisers and farmers are participants, along with other stakeholders such as non-profit environmental protection and consumer associations.

The tools provided

✓ CERTIPHYTO FOR THE TRAINING OF FARMERS

Reducing pesticide use and making pesticide use safer require effective training, empowerment and certification for all actors in the sector: distributors, advisers, users. These professionals receive two or three days' training in better pesticide use for the award of the Certiphyto certificate validating their acquired knowledge.

✓ PLANT HEALTH BULLETINS FOR SURVEILLANCE AND PRECISION TREATMENT

A regional epidemiological surveillance network with 4,000 observers monitors crops to produce plant health bulletins. These bulletins, freely available on the websites of the regional directorates for food, agriculture and forests (DRAAF), allow farmers to fine-tune their pesticide dosage to match crop health status. They cover both farming and non-farming areas (e.g. public parks and gardens).

✓ PILOT FARMS TO SPREAD BEST PRACTICE

« DEPHY Farms » are a pilot network of farmers who have chosen to adopt an approach focused on reducing pesticide use. They try out low-pesticide crop systems, share best practice and provide mutual support.

BIOLOGICAL CONTROL

4. Producing differently means preferring natural plant protection

Biological control covers a range of plant protection methods based on the use of natural mechanisms. Used alone or in association with other means of crop protection, these techniques exploit the mechanisms and interactions that govern inter-species relationships in the natural setting. The core principle of biological control is therefore to manage the balances between pest populations rather than eradicate them.

WHY CHOOSE THIS APPROACH?

Biological control techniques are part of the Ecophyto Plan and can protect crops with reduced use of phytosanitary products. These alternatives can in this way help reduce the risks to human health and the environment.

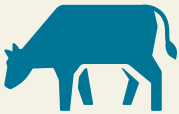
There are four families of biological control products:

- **Auxiliary macroorganisms:** the integrated use of invertebrates, insects, mites and nematodes to protect crops against bioagressors (for example, lady beetles to combat invasive aphids).
- **Microorganisms:** the use of fungi, bacteria and viruses to protect crops against pests and diseases or to stimulate plant vitality.
- **Chemical mediators:** these include insect pheromones and kairomones. They allow flights to be monitored and insect pest populations to be controlled using trapping and mating disruption techniques.
- **Natural substances** used as biological control products include those present in the natural environment. They can be of plant, animal or mineral origin.

Who can use biological control methods?

Arboriculture, arable crops, horticulture: every sector can benefit from the use of biological control products. Currently, these techniques are particularly effective when used on leguminous crops, fruit trees and grapevines. Today in France, 75% of the total area of tomatoes and cucumbers under glass is protected by auxiliary insects and 50% of the total area of apple and pear orchards is protected using pheromones and mating disruption techniques. Biological control requires new techniques to be learned and farmers need support from advisers, research bodies, experimentation networks and chambers of agriculture. Biological control is also used outside farmland, especially in parks and gardens. This is a dynamic that requires an effective French biological control sector to be developed on the basis of the results of research and a network of enterprises active and innovative in the field.

LIVESTOCK FARMING



5. Producing differently means reducing the use of veterinary antibiotics

Antibiotics are widely used today to treat bacterial infections in both human and veterinary medicine. But they can also have negative effects for public health if they are used without thought for the consequences, when they can lead to the appearance of bacterial resistance to antibiotics.

GOALS AND ISSUES

Bacterial resistance to antibiotics is a phenomenon that has become apparent in recent years and has the effect of restricting the therapeutic arsenal available to treat certain medical conditions. It is now increasingly difficult to find new molecules that are effective, which is why it is imperative to preserve the antibiotics we still have available. In particular, it is necessary to limit the use of molecules that are especially effective against highly dangerous bacteria. These are known as “critical antibiotics” and should be used only as a last resort in veterinary and human medicine.

WHAT IS ANTIBIOTIC RESISTANCE?

Antibiotic resistance is a phenomenon whereby the action of an antibiotic on a population of bacteria to which it is exposed tends, due to natural section, to single out bacteria able to resist it. It ceases to destroy certain previously sensitive bacteria and the antibiotic can no longer stop them multiplying. In fact, it is the bacteria that become resistant, not the individual or the animal.

ÉCOANTIBIO

RÉDUIRE L’UTILISATION DES ANTIBIOTIQUES VÉTÉRINAIRES

What does the EcoAntibio Plan involve?

This plan provides for prudent, rational use: only appropriate quantities strictly necessary to the livestock must be prescribed and administered. The aim is **to reduce antibiotic use by 25% in veterinary medicine in the space of five years.** In addition to this quantitative aspect, the plan also includes effort specifically to reduce veterinary use of critically important antibiotics (3rd and 4th generation cephalosporins and fluoroquinolones) in order to preserve their effectiveness in human and animal healthcare.

Who is involved?

Bacteria can spread and pass between human beings and animals. We are all involved because animal and human health are inextricably linked. **The plan mobilises the efforts of livestock farmers in the various sectors, along with veterinarians, pharmacists, scientists and risk assessors** (National Agency for Food, Environmental and Occupational Health & Safety - ANSES), **the pharmaceutical industry, government authorities and the general public, i.e. all animals owners.**

The tools provided

✓ SURVEILLANCE

Bacterial strains are closely monitored in both animals and the foodstuffs they produce.

✓ TRAINING IN THE CORRECT USE OF ANTIBIOTICS AND BIOSAFETY

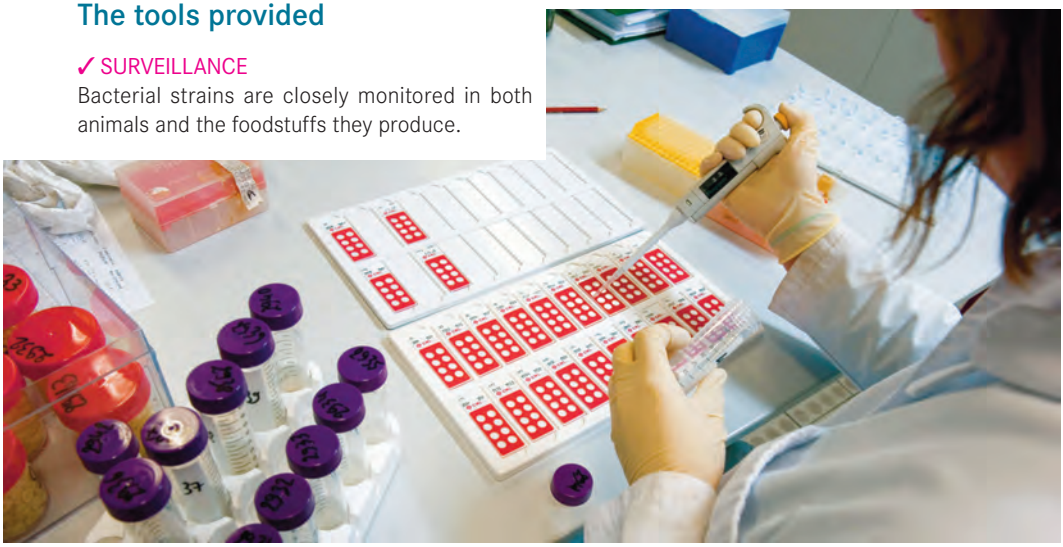
It is essential to raise awareness and train livestock farmers and technicians on farms if their habits are to be changed. Correct use of antibiotics and best practice will also be addressed right from the initial training of livestock professionals.

✓ A MONITORING TOOL TO MEASURE CHANGES IN PRACTICES

Reference indicators for the prescription and use of antibiotics and medicated feed on livestock farms will be made available to veterinarians and farmers. These tools will make it easier for them to evaluate their own use on a voluntary basis, to identify where they have room for improvement and to modify their habits.

✓ TOOLS TO PREVENT THE NEED FOR ANTIBIOTICS

Suitable information resources are provided to livestock farmers willing to participate in the plan. These consist of guides to good hygiene practice, explanatory articles in the specialist agricultural press, informative brochures distributed by organisations with an interest in health issues, and chambers of agriculture.



BEES

6. Producing differently means engaging in the sustainable development of beekeeping

Beekeeping is a key component of agriculture given that a third of everything we eat would not exist if bees were to disappear completely. In Europe, bees alone pollinate over 80% of flowering plants (wild and crops). Without bees, there would be no honey, but also no strawberries, aubergines, pears or almonds on market stalls ... France has everything it needs to be a major beekeeping country if it takes action simultaneously on protecting the health of these peerless pollinators, on the biodiversity essential to their habitat and on structuring the beekeeping sector.

GOALS AND ISSUES

Bees play an important role in maintaining biodiversity and they are also key agricultural auxiliaries. By foraging for nectar from flower to flower, they pollinate plants, enabling them to produce the fruit and seeds in our daily diets. They also produce honey. Every year the French population consumes 40,000 tonnes of honey, whereas France in fact produces only 18,500 tonnes... which means that we would need a million hives and 3,000 more beekeepers to meet French consumer demand. However, the health of bees is in dangerous decline. Harmful chemicals, parasites, infections, lack of food resources, predators such as the Asian Hornet: all these are factors currently threatening their survival.

WHAT IS THE SUSTAINABLE DEVELOPMENT PLAN FOR BEEKEEPING?

This three-year plan, with a budget of €40m, proposes a holistic approach covering bee health, the environment and biodiversity, in addition to support for beekeeping research, development of the French bee population, training new beekeepers and helping them set up in the industry, organisation of the sector value chain and the market for products from French hives.

Who is involved in the development of sustainable beekeeping in France?

Beekeepers, both amateur and professional, plus the farming world in the widest sense (farmers, young people and agricultural teaching staff, agricultural advisers, companies and suppliers of farming equipment, etc.), researchers, government authorities and institutions, not forgetting the general public, who can take action at the day-to-day level as proactive consumers or doing straightforward things that help the environment (e.g. planting flowers in their gardens, using alternatives to pesticides when gardening).

What are the initiatives?

✓ **Bee health:** implementation of an epidemiological surveillance plan focused on contamination in bee colonies in France, a guide to best practice in agriculture/beekeeping, especially in the area of pesticide use (e.g. information on alternatives to pesticides, warnings and precautions on treatments before and after flowering), combating diseases and parasites (varroa, American foulbrood, etc.) and bee predators (official classification of the Asian Hornet as an "exotic, invasive pest species" at the end of 2012), and so on. Concern for bee health has also involved action taken by France which led to an EU moratorium on the use of neonicotinoids.

✓ **Research:** a call for research projects has been launched (2013-2015) with the French national research agency with the aim of adding to our knowledge of bee biology, honey production, bee pathology, product safety for health, and so on.

✓ **Biodiversity:** ensuring that the pollination service provided by bees is maintained, in particular by aiding pollination in vulnerable geographical areas and ensuring national coverage by farmers, promoting and learning more about bees' role as sentinels in the environment.

✓ **Training beekeepers/helping them set up in the industry:** the target is 3,000 new beekeepers by 2016, with the introduction of special courses in agricultural colleges on issues relevant to bees, beekeeping and biodiversity.

✓ **Development of bee populations in France:** encouragement for beekeepers to develop the farming of queens and swarms, to improve the identification and location of hives across the country, application of more stringent controls on bee imports and highlighting French expertise in beekeeping internationally, especially with regard to genetic research (creation of regional genetic conservatoires and dissemination of bee varieties suited to local ecosystems, etc.).

✓ **Hive produce:** diversification of production (honey, royal jelly, beeswax, processed products – gingerbread, nougat, etc.), encouragement of the production of special (single-flower) honey and improvements in the labelling of honey in France (production, imports, processing).

METHANISATION

7. Producing differently means putting farm effluent to good use

Liquid and semi-liquid manure, plant waste... these are co-products from agricultural activity that contain nitrogen and carbon and which can be sources of pollution. They can be recycled on the farm as fertiliser as well as being used to produce heat and electricity by methanisation. In addition to adding to the farm's income, this technique ensures that the nitrogen is easier to assimilate for crops and limits the greenhouse gas emissions that contribute to global warming.

GOALS AND ISSUES

Nitrogen is essential to agriculture for crop fertilisation and animal nutrition. But it can also be a source of pollution (greenhouse gases, degraded air and water quality). On-farm methanisation is one of the solutions to this environmental issue: it allows the nitrogen in certain farm by-products to be conserved for production on site or on another farm. It also produces renewable energy, thus making an effective contribution to meeting the challenge of energy transition.

WHAT IS THE PURPOSE OF THE EMAA PLAN?

The EMAA Plan (Énergie Méthanisation Autonomie Azote / Energy, Methanisation, Self-Sufficiency, Nitrogen) aims to improve the treatment and management of nitrogen and speed the development of on-farm methanisation. On-farm methanisation offers major opportunities – production of renewable energy, reduction of input costs, impetus for regional development – all of which are possible avenues to solutions to the economic, environmental and energy issues facing our country.

Who is involved?

The farmers involved are first and foremost **livestock farmers, either individual or organised in groups, with farm effluent suitable for methanisation.**

At the close of 2013, there were approximately 140 methanisation plants on farms in France, an increase of more than 50% on the previous year. Since 2011, there have been around 70 new plant projects every year. The target for France is 1,000 farms with plants by 2020, which means the development of approximately 130 new projects every year between now and 2020.

What are the objectives of the EMAA Plan?

The plan has **two mutually complementary focuses:** "Nitrogen" and "Methanisation". Its objectives are:

- **More holistic management of nitrogen** across local areas, making use of organic nitrogen, nitrogen in farm effluent in particular, and reducing French farmers' dependence on mineral nitrogen.
- **The development of medium-sized collective methanisation** schemes.

The plan is also a response to **the strategic goals of France's new policy on renewable energy** as determined at the Environmental Conference:

- simplification of official rules;
- Istabilisation of aid, fiscal schemes and grid purchase tariffs;
- strong government support for innovation.

ORGANIC

8. Producing differently means encouraging organic farming

Organic farming is a mode of production protective of the environment with high animal welfare standards, contributing to the preservation of water quality and maintaining soil fertility, as well as conserving, restoring, reinforcing and adding value to biodiversity. Organic farming reflects the diversity of French agriculture and forms a dynamic sector of the economy that is a rich source of employment. It contributes to regional development and the strengthening of social ties between farmers, actors in the agrifood industry, the general public and consumers.

GOALS AND ISSUES

In addition to protecting the quality of the soil, biodiversity, air and water, the benefits for society of organic farming are numerous: it is a source of activities and jobs, it promotes agricultural innovation, it helps develop rural areas and it strengthens ties between farmers and consumers.

WHAT IS THE PURPOSE OF THE "AMBITION BIO 2017" ORGANIC PLAN?

With over 37,000 organic operators, more than a million hectares farmed organically in France and a national market worth €4.5bn in 2013, France's organic sector is buoyant, dynamic and increasingly appreciated by French consumers.

Who is involved in the Ambition Bio 2017 organic plan?

- **Everybody involved in the world of agriculture:** farmers, both organic and non-organic (producers of fruit and vegetables, cereal growers, livestock farmers, winegrowers, producers of aromatic, perfume and medicinal plants, among others), manufacturers and suppliers of agricultural equipment and products: machinery, tools and innovative technology (e.g. mechanical weeding systems, biological control products) and agricultural advisers.
- **The educational world,** through awareness-raising and training in organic methods for young audiences and agricultural teaching staff and the mainstream educational system.
- **The world of research and development.**
- **Everybody involved in the food supply chain:** processors, distributors, caterers (institutional and commercial catering) and consumers, both in France and around the world (export strategy).
- **Government authorities and institutions.**

What does the national "Ambition Bio 2017" plan involve?

✓ **Developing production,** especially through incentive schemes dedicated to land conversion and ensuring that converted land stays organic (€160m annually on average over the period 2014-2020).

✓ **Structuring value chains** – providing incentives for the maintenance and further development of major field crops and oilseed crops (rapeseed, soybean, sunflower, etc.), to ensure France's self-sufficiency in protein crops for feed and food by 2017.

✓ **Developing consumption** and winning new markets – achieving a 20% share for organic products in institutional catering and raising the awareness of the general public (national information campaigns, French export strategy), with an emphasis on the youngest audiences (joint initiatives with the Ministry of National Education: visits to organic farms, taste education classes, gardening activities, etc.).

✓ **Strengthening research and development** – notably by consolidating R&D projects focused on organic farming over the period 2014-2020.

✓ **Training agricultural and agrifood professionals** – strengthening in particular the link between formal agricultural education and professional networks (internships, contributions to training courses by sector professionals, field visits, etc.) and developing continuous vocational education for organic and non-organic farmers.

✓ **Adjusting the regulations** – to improve the regulations specific to organic farming and ensuring that generally applied regulations take the specific features of organic farming more effectively into consideration.

SEEDS

9. Producing differently means choosing and breeding for the right seeds

Seeds and seed stocks have been shaping farming systems ever since plants were first domesticated. Choosing the right crops for the prevailing climate, the soil and the needs of the first agrarian communities enabled agriculture to develop from the Himalayas to the Sahel. French agricultural systems are no exception to this general rule and today's wide variety of crop plants in France testifies to an ongoing concern to define and find species and varieties ever more precisely suited to the demands and constraints of production.

GOALS AND ISSUES

Continuous improvement in plant genetics made it possible to achieve food self-sufficiency in the last century, followed by substantial excess production for export. The breeding of suitable plants gradually evolved in this way from empirical methods with vaguely formalised objectives to today's techniques, which take full account of the requirements of value chains and consumers. While such breeding has been made possible by the progress made in knowledge and techniques, the varieties currently grown in France are also the outcome of political will and regulatory control over the acquisition and marketing of seeds. These two factors go hand in hand, a combination that guarantees the high standards of food security and safety for health that prevail in French farming.

WHAT IS THE PURPOSE OF THE SUSTAINABLE SEED PLAN?

This plan will help the seed industry enhance the sustainability of its modes of production, the protection of the environment, adaptation to climate change and development of crop biodiversity.

Who is involved?

France has 72 seed distribution companies, 240 seed production companies and some 17,800 seed growers.

At EU level, France is both the leading market and the leading seed producer. Globally, it is the third largest market after the United States and China. France is now the number one exporter of seeds worldwide (it is in first place for major field crops, in third for vegetables).

This ranking, a guarantee of food security and security of supply for France's farms, ensures access to seeds and seed stocks suited to the agronomic, soil and climatic conditions in our regions as well as to consumer demand.

What are the scheme's core principles?

The plan has seven main focuses that translate into specific initiatives:

- conservation and distribution of genetic resources,
- information on intellectual property rights attaching to varieties,
- changes in the conditions for access to the Official Catalogue, especially for the varieties suited to organic farming,
- application of environmental criteria for the evaluation of varieties,
- contribution of seed and seed stock production and certification controls to the objectives of the Ecophyto Plan,
- more broadly-based governance of the system for directing seed policy,
- promotion of national efforts in the context of the review of the EU framework.

A range of measures have already been adopted and finalised such as the transposition into domestic law of international agreements on the protection of intellectual property rights over varieties and wider governance.

Other initiatives have made significant progress and are still ongoing, such as the reinforcement of the environmental dimension of the rules for the evaluation of varieties, in order to promote the objectives of the Ecophyto Plan, and the adaptation of the scheme to cover varieties intended for special and niche markets (e.g. organic farming, historical varieties).

AGROFORESTRY

10. Producing differently means using trees to improve production

Making the most effective, but not excessive, use of natural resources means adopting agroforestry, combining the usual types of production (crops, livestock) with trees on farmed land. By using all the space and all the resources available, this technique can improve the yields from agricultural land.

GOALS AND ISSUES

By helping improve and diversify agricultural production, while at the same time restoring soil fertility and water quality, agroforestry is a tool available to farmers for the achievement of high performance on both fronts: economic and environmental.

WHAT IS AGROFORESTRY?

Using farmland for the usual types of production (crops, livestock) in combination with trees, agroforestry is based on the mutually complementary agronomic relationship between trees and field crops. This offers numerous benefits: it preserves biodiversity, combats erosion, mitigates climate shock, enhances soil productivity and brings in additional income.

Why choose this approach?

The presence of trees reduces the impact of wind on crops and their deep roots also reduce erosion risk, especially in winter during periods of abundant participation, but without competing with the crops in the field.

The other major advantage of agroforestry is the improvement in production capacity it can offer: he French national agricultural research institute (INRA) has demonstrated that it is possible to produce more by combining trees and crops than by keeping them apart. In addition to conventional agricultural crops, this technique provides harvests of timber, energy wood and fruit, all sources of added value. In terms of agronomics, the presence of trees in farmed fields strengthens microbial life in the soil, notably due to fallen leaves and the input of organic material they represent.

The agroforestry currently being developed offers a diverse range of configurations, techniques and tree species that can provide holistic responses to the various issues with which agriculture is faced.

Tree plantations in every possible form (lines, hedges, copses, etc.), assisted natural regeneration, plant cover for the soil and soil conservation techniques are all tools that can provide a wide diversity of habitats particularly conducive to the preservation of biodiversity and landscape.

Who can use agroforestry methods?

All farmers can plant trees in their fields, subject to certain conditions, and they would then be using agroforestry methods. Due to their agricultural status, agroforestry plots are covered by the agricultural land use and taxation system if tree density does not exceed 200 per hectare. Their agricultural status makes agroforestry plots eligible for support payments under the CAP's first and second pillars. The second pillar (rural development) provides for support measures that relate to agroforestry and whose detailed application is defined by the regions.

The agroecology project - a project driven by farmers

COLLECTIVE MOBILISATION

The first 103 concrete, collective projects across the country

In May 2013, Stéphane Le Foll sent out a call for "Collective Mobilisation for Agroecology" projects funded by the special allocation account for agricultural and rural development (CASDAR). A notable purpose of that call was to prepare the way for economic and environmental interest groupings (EEIGs). It targeted projects proposed by collectives of farmers wishing to develop forms of agriculture offering high economic and environmental performance, matching the core principles of agroecology and adopting a systemic approach.

By the end of September 2013, 469 applications had been received. In early January 2014, 103 were chosen: 96 winners of the call for projects and 7 applications judged to be exemplary for their contribution to the development of agroecology despite failing to meet exactly the criteria of the call for projects.

The farmers behind those 103 projects are supported by various bodies involved in agricultural development (chambers of agriculture, agricultural development groups, cooperatives, agricultural equipment cooperatives (CUMA), centres for value-added initiatives for agriculture and rural areas (CIVAM), groups of organic farmers, associations for the development of agricultural and rural employment, among others) which have invested substantial effort in assisting collectives of farmers.

Feed self-sufficiency for herds, water quality, reduced input use, organic farming, soil conservation, energy savings, methanisation, agroforestry: the 103 projects testify to the diverse variety of the themes that can be addressed through agroecology. That diversity is also a characteristic of the areas where the initiatives are based: they come from every region, including France's overseas territories. Diversity is also the hallmark of the production involved: livestock, cereals, fruit and vegetables, wine... Every category is represented.

In light of the large number of applications received and their high quality, the initial budget of €2.5m has been increased to €6.7m. This will allow 3,300 agricultural holdings across France to spend two or three years trying out new processes that promote agroecology and to ensure greater awareness of them.

To find out more about these projects from everywhere in France, go to: agriculture.gouv.fr/carte-projets-agroecologie

HIGHLIGHTING VALUE

Sustainable Agriculture prizes

Agroecology also has its champions! Every year since 2009, the Sustainable Agriculture prizes are awarded, with the support of the Crédit Agricole bank, to a farmer and an agricultural support organisation for their activities in favour of agriculture that offers high economic performance while remaining protective of the environment.

In 2014, for the 6th year running, the Ministry of Agriculture, Agrifood and Forestry, with the support of the Crédit Agricole bank, will be organising the national "Sustainable Agriculture" competition. The aim is to reward, as part of the dynamic driving the agroecology project for France, those farmers, growers or organisations that practise or encourage forms of agriculture that are both economically effective and environmentally friendly. The first stage is the selection of regional winners by a local panel of judges. The initiatives they select will then be assessed in the spring by a national panel whose chair, since 2013, has been the specialist food journalist Périco Légasse.

Who can enter the competition?

The competition is intended for fully developed individual or collective initiatives rather than projects still in the process of development.

As is the case every year, the competition has a number of categories:

- **A prize in the "Farmer" category** (€8,000) for an individual farmer or grouping of farmers.
- **A prize in the "Organisation" category** (e.g. non-profit associations, cooperatives, chambers of agriculture), also worth €8,000, for bodies whose purpose is to provide support to farmers.
- **A special prize for a collective initiative,** worth €4,000, which will go to a project with collective action at its heart.
- **A "General Public" prize** for the initiative attracting most votes from the public on the "Alim'Agri" Facebook page.

What types of initiative are awarded prizes?

In 2013, the judges awarded prizes to a farmer and an organisation whose initiatives, relevant to agroecology, were thought to be particularly well thought-through.

The prize in the "Farmer" category:
Pierre Pujos, growing cereals on 87 hectares in the Midi-Pyrénées region.
Permanent soil cover, straw recycling and green manure crops, shallow tillage and direct seeding, extensive agroecological infrastructure... The methods used on this farm are exemplary in terms of the sustainable management of the soil and its fertility.

The prize in the "Organisation" category:
FRCIVAM Pays-de-Loire
The regional federation of centres for value-added initiatives for agriculture and rural areas (FRCIVAM) in the Loire valley won the prize for its programme leading to the definition of a measure to assist low-input cultivation of major field crops. The judges also congratulated the groups of volunteer farmers on their work to drive and support this initiative.

Producing differently notably means:

1. training the farmers of today and tomorrow,
2. encouraging the emergence of collective dynamics,
3. reducing pesticide use,
4. preferring natural plant protection,
5. reducing the use of veterinary antibiotics,
6. engaging in the sustainable development of beekeeping,
7. putting farm effluent to good use,
8. encouraging organic farming,
9. choosing and breeding for the right seeds,
10. using trees to improve production.

It also means mobilisation by farmers

✓ The first 103 concrete projects across the country
✓ The Sustainable Agriculture prizes

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