McCain’s Pilot Farms Europe — Investigating sustainable agriculture solutions in France and Belgium

Between 2016 and 2020, McCain implemented pilot farms in France and Belgium to demonstrate the feasibility of innovative practices and technology in reimagining a more sustainable way to grow potatoes and support the journey to more planet-friendly food. McCain’s strategy was structured around four pillars:

- Fertilizers
- Irrigation
- Biodiversity
- Pesticides

The impetus

In 2010, a customer approached McCain to produce sustainably sourced potatoes. Building on the work already underway, McCain further strengthened their expertise in sustainable agriculture and adapted its own sustainability strategy in 2015, covering additional farms and potato varieties to meet their wider goals.

The solution

McCain selected the pilot farms through their network of 800 trusted potato growers and provided the shortlisted farms with an action plan for testing sustainable and innovative practices on a section of their fields. Their goals were to introduce better crop covering techniques, to control insect pests, reduce the consumption of synthetic nitrogen fertilizer, manage water more efficiently and test flower strips. Flower strips were especially useful when sowed alongside the potato crops, as they encouraged a diversity of insects that could control the prevalence of aphids, a major pest for potatoes.

As part of the technology transfer, the McCain team tested several decision support systems (DSS) with farmers. For smarter irrigation, one testing tool consisted of a series of connected probes that measured the soil humidity in the field. Another DSS, called Mileos, was offered as a tool to control late blight. This is especially important for potatoes as they have a heavy need for plant protective products. This is especially important for potatoes as late blight is the major threat for this crop, both on foliage and tubers.

The DSS modeled the disease evolution, helping the grower protect the crop only when necessary. This led to substantial reduction in plant protective products, especially during dry years. Lastly, McCain tested a DSS that calculated the nitrogen level in plants. This technology was quite difficult to operate, preventing wider deployment.

All of these activities not only increased the deployment of sustainable practices but also in some instances, increased the yield of potatoes.

Three key learnings

1. Identify the ‘early adopters’; This project demonstrated that the mindset of growers is key to the success of regenerative agriculture projects. The participants shared core values, namely to invest in sustainable agriculture, and were willing to test a variety of practices. It is important to identify the ‘early adopters’ and demonstrate their success. McCain hopes they act as models and help lead and educate other growers.

2. Involve farmers in the project development process; Even though the farmers who were selected for the projects were open to changing their practices, it was still important to involve them in the process of developing action plans. Companies need to be willing to adapt their programs based on feedback to ensure farmers are fully onboard.
It is also important to recognize the extra work farmers take on to adapt the practices they have used for many years. As part of the pilot, farmers were offered financial compensation for participating.

3. Technology is critical to project success: The farmers who began using the DSS as a part of this pilot have now found it to be critical to their farming. Continued use of the technology will ensure the farmers embed regenerative agriculture into their methods, moving the project beyond pilot to fixed practice.

OP2B Pillar 1: Scaling up regenerative agriculture
This pillar defines specific actions within the value chains of OP2B members on regenerative agriculture. Scaling up regenerative farming practices will leverage the power of plants to keep carbon in the soil (carbon sequestration) and increase the capacity of soils to hold water. It will further enhance the resilience of their crops, support the livelihoods of their farmers, and regain the nutrient density of food while decreasing reliance on synthetic inputs. OP2B has carried out a series of case studies of regenerative agriculture initiatives by member companies. This case study falls under pillar 1.

Impacts as of 2021
- Seven potato growers participating in France and Belgium
- All growers are cultivating a minimum of four different types of crops
- Four to five species of green cover being tested
- Mileos Late blight DSS deployed and widely used
- Connected irrigation probes promoted
- Low tillage potato crop tested

What's next?
McCain was founded in 1957 in Florenceville, New Brunswick by a family with a strong potato heritage. Co-founder Harrison McCain once said, “if you don’t get the agronomy right, nothing else matters” and the company’s values still very much align with this sentiment. As part of its purpose to create planet-friendly food, in 2021, McCain made the following commitments to regenerative agriculture:

- Implement regenerative agricultural practices across 100% of McCain potato acres by 2030
- Operating three Farms of the Future by 2025, dedicated to developing regenerative agriculture practices
- Develop research partnerships and leverage collective action to advance regenerative agriculture

This will be a collaborative journey as other food companies, financial institutions and governments develop the policies, practices and technologies that will help accelerate the transition to regenerative agriculture.

“The transition will take three, five, maybe 10 years, but these are the critical years to make progress that protects the resilience of our farms. We must all contribute to growing food that will help feed the planet sustainably for the generations to come, and will protect and sustain the livelihood of those that grow that food.

We have to start today, if the planet is going to be better tomorrow.”

Max Koeune, President and Chief Executive Officer of McCain Foods.