

Decision support system for potato growers

The Challenge

HZPC wished to support farmers to maximize the potential of its potatoes with advice for optimal crop care activities from pre-planting to post-harvest. Therefore, HZPC developed the concept of "HZPC Decision Support System" (HZPC DSS) as a digital tool to share its vast knowledge with potato growers, to improve yield and reduce farm inputs. HZPC looked for digital solutions that can be tailored to meet its unique requirements to differentiate its offering in the market.

The Solution

HZPC selected Agritask as a technological partner to turn HZPC DSS into reality. HZPC DSS contains best practices for growing potatoes - which vary according to variety, soil type, and other parameters. They are converted into an intuitive mobile app where farmers input a few parameters and receive individual recommendations. In addition, HZPC DSS contains several digitization tools developed specifically for potatoes, including pest scouting and yield estimation.

The Results

Agritask delivered HZPC DSS according to the unique requirements of HZPC, building on the robust, flexible platform. The first version of HZPC DSS was field-tested with selected growers in Europe and received very positive feedback. HZPC and Agritask continue to work together to address requirements from the fields, and expand the functionalities of HZPC DSS. In addition, they expect to expand the offering in other geographies such as India and Africa.

About HZPC

Global leader in innovative breeding, seed potato trading, and concept development

Founded in 1898, HZPC has been the pioneer and global leader in the potato industry. It offers innovative varieties that are optimized for local growing conditions. Today, HZPC has operations in nineteen countries and exports to more than 90 countries. This is achieved through strong emphasis on R&D programs and collaboration with stakeholders via the "local-for-local" production concept. HZPC is recognized for exploring new geographies, opening new market segments, and developing new business models by leveraging disruptive technologies. It champions important innovations in potato such as hybrid potato breeding. Through better potato breeds, HZPC contributes to promoting climate resilience and ensuring food security.

The Challenge

Supporting farmers to grow better via digital tools

Potato is a sensitive crop that requires specific growing protocols to achieve optimal yield and quality. As part of its mission to “share knowledge and serve solutions,” HZPC constantly thinks of ways to support farmers throughout the growing season. It came up with the idea of digital solutions to deliver high-quality agronomic advice and empower farmers to take timely and appropriate actions. The idea includes a mobile and web-based application serving potato growers, with relevant decision support tools that are easy to use. Such a system would be crucial for HZPC's ambition to expand in the small and medium grower segments, as well as in emerging markets where experts cannot easily meet with all of the farmers in person.

HZPC explored several technology companies to develop and implement the concept. The Agritask platform stood out in its high configurability and interoperability with 3rd party systems, allowing seamless integration of additional technologies. It also had a strong track record of collaborating with agronomists or other experts to deliver tailored digital tools for growers in target value chains and regions, supporting HZPC's ambition for global deployment.

The Solution

The Creation of HZPC Decision Support System

HZPC and Agritask worked together to implement HZPC DSS, a precision agriculture platform for potato farmers. From the beginning, the viable working product was defined and provided to selected farmers for testing. From that point on, HZPC used the feedback from farmers to define the next set of features and improvements, which Agritask implemented in a short period of time. Thus, HZPC DSS was able to respond quickly to requirements from the fields and deliver working functionalities in each step.

HZPC DSS contains several useful functions including:

- On-field recommendation tools for various activities, from planting and fertilization to yield estimation and optimal harvesting. The recommendations are generated based on specific plot characteristics from a mix of preset values and data input in the fields, such as variety, season timing, soil type, soil nutrients, and others;
- Farm management tools to digitize field data, with focus on parameters and measurements most relevant for potato farmers. These help document crop care activities, structure field scouting for pest and disease, and track phenological stages and crop characteristics;
- Centralized view of various plot status to facilitate the overall management and activity planning for users working with multiple plots or growers;
- Automatic processing of satellite data to indicate crop maturity and health;
- Optional sharing of agronomic data and photos from the fields with experts for trouble-shooting or other advice;
- Optional integration with other technologies such as virtual or physical weather stations, irrigation systems, field and storage sensors, machinery, and others.



Importantly, HZPC DSS speaks the “potato language” – using the terminology and interface that are intuitive to potato farmers, building on HZPC’s deep roots in the fields.

HZPC DSS will continue to improve and have new functionalities, reflecting developments in potato agronomy and changing needs of farmers. Leveraging on the scalable Agritask infrastructure, HZPC can easily add or adapt agronomic protocols in different soil and climatic conditions, and expand into new countries.

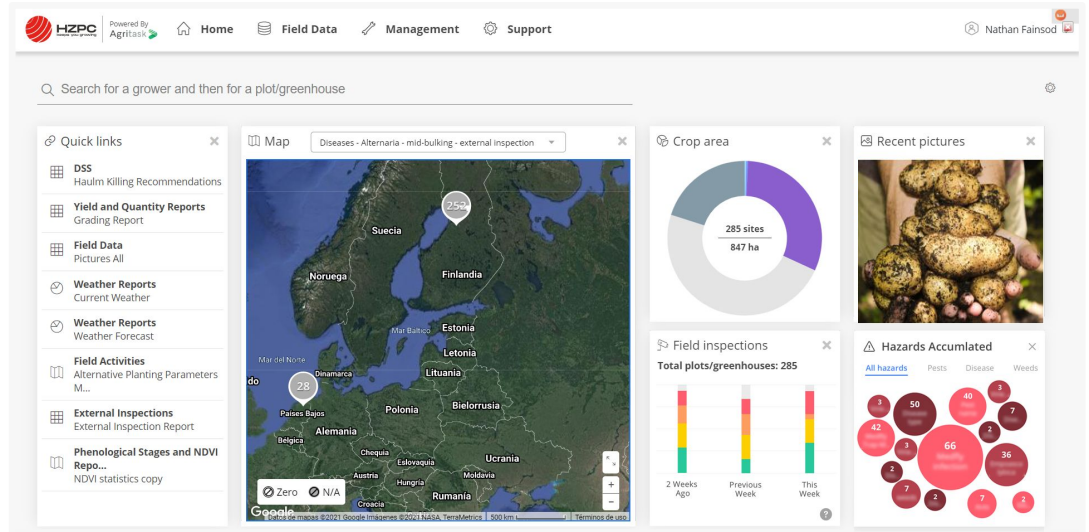
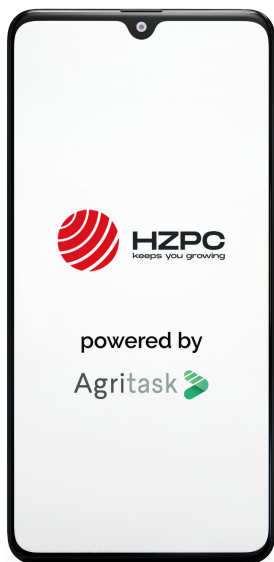
The Results

Successful launch and positive feedback by farmers

HZPC DSS saw high engagement from farmers, several of whom gave very positive feedback and requested more features. HZPC and Agritask have worked to incorporate such recommendations into the next versions of the application.

Antti Hintikka, Project Manager at HZPC (SBDA), commented: *“HZPC DSS is core to our strategy to stay connected and add value for our growers regardless of where they are located, especially those who would benefit the most from professional agronomic advice. We at HZPC take pride in sharing variety-specific knowledge with farmers through innovative means. Delivering HZPC DSS to farmers has been quite a journey for us, and Agritask has been a great partner and enabler.”*

Amit Noam, Chief Operating Officer at Agritask, commented *“We are proud to work alongside an industry leader and pioneer such as HZPC to deliver the solutions for growers in a way that’s most optimized for them. Leveraging on HZPC’s unmatched expertise and closeness to the farming communities, HZPC DSS empowers farmers to become their own agronomists. We look forward to seeing it grow to serve even more farmers globally.”*



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