SOFTWARE IMPLEMENTATION PROPOSAL

PREPARED FOR

Penn State Fruit Research and Extension Center (FREC)

PREPARED BY

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January 7, 2019

Penn State Fruit Research and Extension Center

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To Penn State Fruit Research and Extension Center (FREC):

Please find enclosed our software implementation proposal for your kind consideration.

At Croptracker, Inc. we pair innovative crop management software solutions with a client-oriented company ethos. Since its inception in 2006, Croptracker has been built on a foundation of collaboration with growers and growers' associations. This is reflected in our team's tradition of augmenting the software to accommodate a wide variety of user needs.

We are confident Croptracker's comprehensive platform and its client centricity make it an ideal functional and conceptual fit as an institutional research tool. We would like to offer the Penn State Fruit Research and Extension Center free, unlimited use of Croptracker for implementation in research towards its 2019 SHAP Research Project, as well as the day-to-day study and maintenance of its research fields and orchards. A dedicated support team and first access to the upcoming Harvest Quality Vision™ module will also be provided. As recompense, Croptracker would request links to the software website be provided on FREC's website to assist in our US expansion.

We invite you to attend a live demo in which myself, Croptracker's CEO Matthew Deir, and a support team representative may introduce you to the software and its capabilities in greater detail.

Thank you in advance for your time spent reviewing our proposal. We look forward to discussing with you further how Croptracker can support the 2019 SHAP Project and further research initiatives of the Penn State Fruit Research and Extension Center.

Yours Truly,

Jeff Chemeres

Chief Strategic Officer, Croptracker, Inc.

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EXECUTIVE SUMMARY

Croptracker is an award-winning record-keeping and operations management software with functionality for research institutions. Croptracker proposes to provide the Penn State Fruit Research and Extension Center with free, unlimited use of its software for implementation in 2019 SHAP Research. Access will also be provided for day-to-day study and maintenance of its research fields and orchards, as well as a dedicated support team and first access to the upcoming Harvest Quality Vision™ module. As recompense, Croptracker would request links to the software website be provided on FREC's website.

Introduction to Croptracker

Croptracker began development in 2006 when our founder was asked by a fruit growers' association to create a digital traceability and record-keeping solution for its members. Now, 13 years and countless software enhancements later, Croptracker continues to be shaped by grower input as it expands around the world. As a result, our software reflects and combats today's most pertinent challenges facing growers. Our mission is to help users grow smarter, safer, and more efficiently.

Today growers, associations, and co-operations of all sizes in 41 countries use Croptracker's cloud-based desktop and mobile apps to execute and monitor their harvest, schedule and track their chemical usage, cut operational costs associated with supervision and auditing, enhance their traceability and food safety, and make more informed decisions for their operations.

Features & Functionalities

Today growers, associations, and co-operations of all produce commodities and sizes use Croptracker's desktop and mobile apps to:

• Digitize and securely store records

• Enhance traceability and food safety

• Execute and monitor harvests

• Schedule and track their chemical usage and inventory

• Conduct pest management

• Cut time and operational costs associated with labour supervision and auditing

• Keep workers safe by calculating and alerting growers of re-entry intervals

• Assess field and team productivity

• Make more informed operational decisions

Benefits to Growers

Croptracker relieves growers of the daily burdens of paperwork, manual calculations and scheduling, and record-keeping; allowing them to spend more time in the fields or orchards and less time in their offices. From a long-term perspective, Croptracker's suite of over 50 reports create a "bird's eye view" of the operation that enhances growers' decision-making

ability, allows them to identify trends and trend deviances, and lets them respond to issues before they become costly problems. Finally, Croptracker not only contributes to safe food production but also helps individual growers fulfill retailers' increasingly demanding traceability requirements. This allows them access to new and lucrative market opportunities.

Croptracker's comprehensive platform and innovative and reliable development team appeals itself to large operations. However, Croptracker is priced to be accessible to small growers. All users also enjoy 12-hour daily support and can access help via e-mail, instant message, phone, or screen-share.

Testimonials

Croptracker is a powerful, web-based record keeping system for growers. The integrated orchard mapping feature creates a highly visible, dynamic interface for spray records, harvest, etc. Eastern Growers will love the Knouse-format spray report!

- Brad Hollabaugh, Hollabaugh Bros., Inc. (Gettysburg, Pennsylvania)

After a global search, we selected Croptracker because it's a well-established and comprehensive solution that creates orchard operational efficiencies and is easy to use. We are looking forward to rolling it out across all our orchard operations. This is a significant step for Mr Apple and the 1,300 orchard staff that will rely on the Croptracker software.

- Andrew van Workum, Mr Apple Ltd (Hawkes Bay, New Zealand)

Using Croptracker over the last two years we have seen substantial buy in from our 40 farms, and from our SQF auditor. Technical support has been excellent, the learning curve short, and resulting information very useful.

- Bill Cusack, Scotian Gold Co-operative Ltd (Coldbrook, Nova Scotia)

Benefits to Research Institutions

- Capable of recording and storing years of data securely and privately, Croptracker is an ideal candidate for use in longitudinal studies. Croptracker's robust backup system also ensures that records are never lost, and are permanently stored for easy access and review by the user.
- Croptracker is compatible with all fresh produce commodities and its modules account for the whole growth cycle. Therefore, its record-keeping and reporting capabilities can be implemented in a wide range of horticultural research - from chemical treatment vs yield studies to farm worker productivity research.

- Croptracker is a customizable solution. In constant collaboration with partnering association boards and members, our team continuously augments the software to fit the dynamic needs of its diverse membership body and help meet each association's goals. Research institutions would enjoy the same level of mass customization.
- Croptracker uses SSL-encrypted connections to keep information secure and private. All collected data and any ensuing reports belong to and are accessible solely by the user, ensuring that no breaches of intellectual property occur.
- Croptracker is not affiliated with any for-profit enterprises, ensuring for complete objectivity.
- Croptracker is a cloud-based solution. Consequently, stored data and reports can be accessed by the user from anywhere in the world. This means researchers will not be confined to their offices when they wish to input, edit, or review records.

Harvest Quality Vision™

Introduction

Harvest Quality Vision™ is a rapid, economic, and objective means to monitor and analyze harvest progress. It will save time and money by eliminating the need for manual inspection, and by alerting growers of problems and deviations so they can course-correct early on in the harvest process.

The HQV consists of a 3D scanner tablet attachment that captures images of bins and processes and delivers them in real time.

Through its instantaneous image analysis and processing capabilities, the HQV determines the size, color, and quantity of fruit in its visible range and alerts key managers to deviations from predetermined standards.

Therefore, growers and field/orchard managers become aware of and can deal with issues like quantity shortages, defects, and disease much quicker - without the need for time-consuming manual inspection or waiting for a packing report.

Harvest Quality Vision™ will be soft launched in Q1 2019.

Benefits To Growers

The HQV will allow large growers and co-operatives to uphold quantitative and qualitative standards across thousands of workers and millions of pounds of produce. Conservative estimates based on one global apple exporter suggest millions of dollars more in revenue could be generated from consistently delivering more apples of higher quality with the help of the HQV.

We are confident in this technology's ability to make significant cost-saving contributions to growers' operations by reducing and eliminating costs related to crop and quality management, and to contribute to the pursuit of greater automation in food safety.

Benefits to Research Institutions

The HQV will augment researchers' understanding of and allow for easy monitoring of how studied treatments affect harvestables and yields. The HQV's ability to automatically identify and alert researchers of defects and disease will decrease the time and financial costs of manual inspections.

Proposal

Croptracker will extend the Penn State Fruit Research and Extension Center free, unlimited use of its software for implementation in its 2019 SHAP Research Project. Access will also be provided for day-to-day study and maintenance of its research fields and orchards.

A dedicated support team will also be provided in addition to 12-hour daily support. This support team will assist FREC in introducing the software to researchers, provide individualized support, and lead any customization initiatives.

FREC will also enjoy first access to Harvest Quality Vision™ when it launches Q1 2019.

As recompense, Croptracker requests FREC provide links to the Croptracker via their website.

Contact Information

Please feel free to book a meeting in which myself, Croptracker's CEO Matthew Deir, and a support team representative may provide you with a live demo of the software and discuss our proposal in greater detail.

To arrange a meeting time or to discuss further, please phone or email:

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Please also feel free to visit our website at www.croptracker.com.