

Sun World uses analytics to make better decisions

By LEN RICHARDSON

SUN World International LLC, a Bakersfield-based agribusiness, is harnessing IBM analytics technology to improve crop yields, reduce waste and expand its customer base, while providing more cost-effective and energy-efficient harvesting practices.

Sun World operates one of the world's leading proprietary produce-variety development programs — generating more than 60 commercial varieties. It grows an array of table grape, pepper, stone fruit and citrus varieties on 12,000 acres of farmland across California.

Previous business practices were manual processes that made it difficult to deliver a timely, company-wide view of information to support decision-making. Today, Sun World uses an IBM analytics solution, Applied Analytix, that delivers predictive capability and deeper insight into crop yields, farm labor costs, water usage, growing patterns, and a wide range of sales and distribution processes. What previously took days to report can now be retrieved in minutes on a continuous basis and with greater accuracy.

"We've aimed to transform the company culture from a farming business where you 'grow and hope for the best' to one that uses information analytics to provide an accurate measurement of the business," said Steve Greenwood, Sun World's director of budgets and reporting.

"Before, we didn't know until 30 days after the month how our harvest costs were trending. By that time, it was too late to start financial planning because the crops had already been harvested. We've turned raw data into business insight, improved our order fill rates, and have gone from being a reactive company to a proactive company."

Improves yield, water management

Smarter farming practices are helping Sun World determine how to develop, plant, harvest and sell the right products at the right time to the right markets. The system helps Sun World analyze numerous types of farming data, including root stock, timing, location, irrigation and crop type to predict which combinations of elements will bring the best crop yield at the lowest cost.

Water, the most precious resource in California's agricultural areas, is closely measured, monitored and conserved. A systems approach aids the operation in knowing how it is managing this vital natural resource. The company has carefully measured its water usage — and through a variety of irrigation techniques has seen its water use per unit decline 8.5% since 2006.

Cuts labor, distribution cost

Sun World evaluates per-unit costs and revenue for each crop type, to optimize harvesting and speed the "field-to-shelf" distribution process. Sun World can also



MANAGEMENT CHALLENGE: Sun World International LLC, Bakersfield, grows an array of table grape, pepper, stone fruit and citrus varieties on 12,000 acres of farmland across California.

Key Points

- Sun World cut use of natural resources by using 20% less energy.
- Sun World grows customer its base by 20% from year to year.
- Analytics cuts labor/distribution costs 10-15%.

analyze how many boxes per hour each crew harvests to help maximize harvest investments. Overall, Sun World has seen a 10% to 15% reduction of labor and distribution costs between varieties. It can focus its resources on those varieties generating the highest returns.

The company realized an 8% efficiency increase in farm labor by analyzing worker hours and focusing resources where needed, when needed. During the same measurement period, the company has seen its use of fuel decrease by 20% by measuring equipment usage and matching the proper-sized equipment to the proper application. The use of smaller equipment and modern, fuel-efficient models is the result of having greater insight into its operations.

Sun World is also using analytics

tools and customer scenario modeling to optimize the sales planning process with key customers. This helps the company act on new customer insights and finds new markets for its products while transforming its sales team from commodity salespeople to business managers.

Managing sales

Previously, Sun World's sales teams sold freshly harvested produce mostly on the phone, while quoting commodity prices daily to potential customers. By analyzing crop yields along with sales data and retail buying trends, Sun World can now better segment and target clients to build sales programs ahead of the season, and ensure the right product mix is sold to the right market. At the same time, the solution reduces waste by helping estimate how much lower-grade fruit they can sell up front, rather than suboptimizing second-tier products or selling at a loss.

Thanks to these insights, key segments of Sun World's customer base have increased in size by over 20% year to year while generating more than \$3 million in new business in 2009.

More is at www.sun-world.com.



SAVING WATER: Sun World carefully measures its water usage — and through a variety of irrigation techniques, the company has seen water use per unit decline 8.5% since 2006.

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