Improved product quality, output and environmental impact all with an ROI of less than 12 months

An innovator in the agriculture industry, Actagro optimizes product quality, output, labor and resource use, achieving one-year ROI with a Liquid Solid Separator™.

For industrial processors, the pressure to boost product output and quality while cutting cost is never ending. Though a little improvement here or there along the production chain is always welcome, savvy production managers realize that dramatic improvement occurs when they're able to optimize a source input process, thus enhancing sub-processes and sub-products all through the production chain.

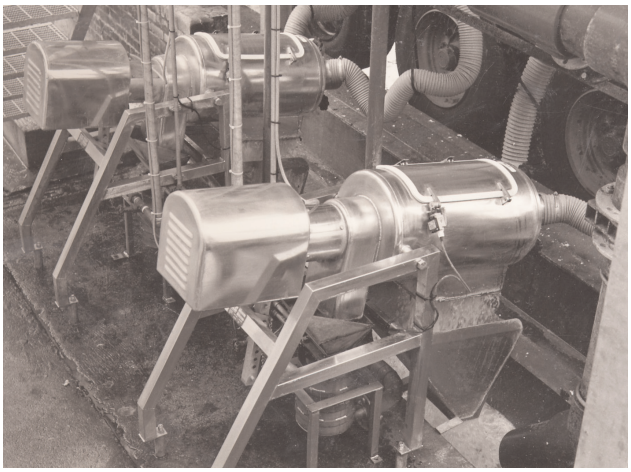
The payoff can be dramatic, as one agricultural products manufacturer discovered when it updated a labor-intensive, source input process with a state-of-the-art Liquid Solid Separator™.

"Because of the quality of its output and its process efficiency, it's paid for itself a few times already," says Jon Wiltfang, Production Supervisor at Actagro, a Californian based manufacturer of organic acid-based agricultural products that are highly effective with plant nutrients. "It earned a full return on our investment within a year."

Improved decanting process

Actagro, which is in the business of helping growers achieve greater, more cost effective crop yields, proactively sought to improve its own processes for a similar outcome. The company aimed to boost product quality, production efficiency and resource use as part of its process of continuous improvement.

The source input process to be improved involved a decanting process. At the start of the production process, a liquid/solid slurry is required to settle and separate in stainless steel vats. The separated liquid is then used as an important sub-product further down the production chain. After decanting, operators have the laborious task of washing the vats to remove the oversize insoluble particles that settle, requiring additional time, labor and water resources. "Since we mix the sub-product with other materials to create a range of end products, we felt that improving our initial source input process would provide a significant payoff in production and to our end users," says Wiltfang.



Two Liquid Solid Separators™ in operation

Wiltfang expressed some interest in a centrifuge separator to remove oversize insoluble particles, but dismissed the idea due to its excessive cost and use of production space. Therefore after further research, Wiltfang turned to a state-of-art Liquid Solid Separator™ from Russell Finex of Pineville, North Carolina.

The Liquid Solid Separator™ is a multi-purpose unit that separates soft and fibrous solids from liquids. Its centrifugal action provides high capacity separation down to 25 microns, which makes it suitable for materials such as pulps and fibers or even latex emulsions. Since it is capable of flow rates up to 15,000 gallons per hour, it will outperform most 48" to 60" separators yet is compact and portable.

Improving production efficiency and environmental impact

After a one-month on-site trial of a demo unit, Wiltfang purchased a Liquid Solid Separator™ and installed the unit before the stainless steel settling vats to remove oversize insoluble material from the slurry.

Wiltfang highlights that throughout Actagro's production process "the unit has helped to reduce labor costs because less time is spent unblocking filter plug-ups further down-stream, which has significantly reduced production downtime for filter maintenance." To maximize efficient production flow, an optional spraying system can be fitted allowing operators to quickly backflush and clean the separator's mesh as needed. The separator is also constructed of high quality stainless steel throughout, making the unit easy to clean and maintain.

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For Actagro's end users, primarily agricultural growers who dispense fertilizer through drip irrigation, "the Liquid Solid Separator™ adds another layer of assurance that our product will be delivered accurately and effectively through their drip irrigation systems," says Wiltfang.

The Liquid Solid Separator™ removes much of the solids from the initial slurry and the unit has helped to streamline production while boosting output. "We've cut insoluble settling time in half during our decanting process," says Wiltfang. "We've increased our flow rate, yield and production volume."

"We got more out of our buck than we could have with a centrifuge," says Wiltfang. "The unit is portable and compact so we move it around where needed. Another plus is that it's helped us cut water use by up to 30 percent since we use less water to clean out the decanting vats. As water resources get tighter, especially on the West Coast, that's becoming important."

The enclosed unit prevents outside pollutants from contaminating product and protects operators from fumes or spillage. "Our operations staff really like it," says Wiltfang. "It's faster, cleaner and easier than spending time washing insolubles out of vats. It's cut down on our use of the vats."

While the Liquid Solid Separator™ has long ago paid back Actagro for its initial cost, the potential for greater payback through saved resources looks even more promising.

"We expect the unit will help us recover usable liquid or solid to put back into our production process," explains Wiltfang, who worked with Russell Finex on the initial on-site trials. "The separator body tilts to increase or decrease retained water content, or insoluble particles, as needed. Saved resources, better quality, production and labor use: the Liquid Solid Separator™ continues to help us optimize our process."

For over 70 years Russell Finex has manufactured and supplied separators, filters and screeners to improve product quality, enhance productivity, safeguard worker health, and ensure powders and liquids are contamination-free. Throughout the world, Russell Finex serves a variety of industries with applications including food, pharmaceuticals, chemicals, adhesives, plastisols, paint, coatings, metal powders and ceramics.

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