

Partnership Brings New Soy Paints and Finishes

United Soybean Board partnerships make products more environmentally friendly

As all industries strive to become a little "greener," soybeans are being seen in a new light, and new colors, with the market introductions of Sherwin-Williams' low-VOC water-based paint and Rust-Oleum's water-based stain. Both of these new products contain soy and were made possible with the help of the United Soybean Board (USB) and the soybean checkoff.

"The soybean checkoff looks for industry partners to grow demand for our product by partnering with them to research and create new soy technologies," says Todd Allen, USB new uses chair and soybean farmer from West Memphis, Ark. "We evaluate all of the projects brought to us to see if they have the potential to expand utilization of U.S.-grown soybeans."

Sherwin-Williams' soy paint is manufactured using the same process and most of the same materials as conventional paint. Soybean oil is used to replace some of the petroleum ingredients, making the product more environmentally friendly. The replacement



of petrochemicals with soy oil also provides a renewable resource for the materials required in the production of paints.

"With the increasingly tighter VOC regulations from EPA to lower solvent levels, there is a drive to use water-borne coatings and move away from solventborne paints," says Duke Rao, director of polymers and materials technology at Sherwin-Williams. "Water-based soy products provide acceptable performance compared with solventborne products."

This soy water-based paint cleans up easily with soap and water and comes in a variety of colors in both gloss and semigloss finishes. The paint met all performance expectations and has been receiving good reviews from users. Rao adds that the support of the USB and soybean checkoff has accelerated both the development and commercialization of this technology.

"The soybean checkoff is pleased to work with Sherwin-Williams to find new uses for soybeans," adds Allen. "It's good for farmers, industry partners, the environment and consumers."

Rust-Oleum already manufactures several products that include soy such as solvent-

based urethanes, soy stains and soy polyols. "We found when we designed stains we were looking for clean and clear oil and resin," says John Schierlmann Technology Manager Rust-Oleum/Zinsser Wood Care. "Soybean oil and resin are clean, clear and easy to work with. In going forward with these stains, we worked with the United Soybean Board who helped us identify this new opportunity."

This collaboration led to the inclusion of soy in Rust-Oleum's water-based products. These products were so well received that Rust-Oleum continued to expand its use of soy in their products with Varathane Clear Finish, a soy water-based polyurethane stain.

According to Schierlmann, Rust-Oleum products that contain soy come with several benefits, one of the most important being that soy is a sustainable ingredient. Soy also imparts a warmth to the wood, which conventional water-based stains do not.

"I've enjoyed working with USB," adds Schierlmann. "Rust-Oleum is looking to increase sustainable projects. In fact, we have a group dedicated to that. This is just the beginning."

"Coatings are one of the target areas of the soybean checkoff for new use development, and polyurethanes are a big part of that," says Karen Fear, USB director and soybean farmer from Montpelier, IN. "The soybean checkoff is proud to partner with Rust-Oleum to incorporate soy into more products, as companies move away from using petrochemical ingredients."

With increasing environmental regulations, more companies in the coatings industry will most likely be looking to lower VOCs and costs by using soy in their products.

These paints and finishes are just two products that have come out of USB's industry partnerships. In fact, 28 new soy-based products were introduced in 2008, thanks to USB's and the soybean checkoff's support. ■

For more information on soy products, visit www.soynewuses.org. Information on Sherwin-Williams' products is available at www.sherwin-williams.com. To learn more about Rust-Oleum's soy products, visit www.rustoleum.com. Please see the April 2009 issue of *PCI* for a technical feature by Duke Rao entitled "Novel Low-VOC Soya Polyester Acrylic Hybrid Emulsion Coatings"

USB is made up of 68 farmer-directors who oversee the investments of the soybean checkoff on behalf of all U.S. soybean farmers. Checkoff funds are invested in the areas of animal utilization, human utilization, industrial utilization, industry relations, market access and supply. As stipulated in the Soybean Promotion, Research and Consumer Information Act, USDA's Agricultural Marketing Service has oversight responsibilities for USB and the soybean checkoff.

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