

## MSU Product Center

For Agriculture and Natural Resources

Funding: USDA Rural Development Cooperative Service Market Advisor: The Hale Group

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### **Biobased Coatings**

#### **Product Description**

- Coatings include paints and surfactants. Surfactants are agents that reduce the surface tension of liquids and thereby improve the performance of detergents, cosmetics, plastic resins, paints and other products.

#### **Size of Market and Market Trends**

- According a study by Informa Economics, the size of the U.S. coatings market is 1.2 billion gallons per year. Of this amount the surfactant market is 410 million pounds. The United Soybean Board estimates that soy based surfactants can capture 80 million pounds of this market.
- It is estimated that the annual growth rate of the coatings market in the U.S. is 2.2 percent per year.
- The largest user of coatings is architectural uses including home and commercial buildings which account for 50 percent of the total market.
- Approximately 130 million pounds of soybean oil were used to make alkyd resins that are used in paint. Linseed and tall oils are also used in this market. Buyers of these resins are very price sensitive.
- The United Soybean Board believes that surfactants used for cosmetics and personal care, coatings and emulsion polymerization, microemulsions and agricultural adjuvants have the most potential. Agricultural adjuvants are placed in pesticides to improve the mixing, deposition, retention, spreading, dispersion and drift control of the pesticide. Biobased products are particularly well suited to this application.

#### **Technology, Manufacturing and Value-Chain Issues**

- Soybased surfactants are beginning to compete with petroleum based surfactants. They have many advantages over petroleum and the increased cost of petroleum works to the advantage of biobased products.
- However, the industry is focusing on water based products which will add to the competition in the industry.
- Powder coatings which do not use alkyd resins also threaten the growth of biobased coatings and resins used in paint.
- Compared to many biobased industries, the biobased coatings market is fairly well established. The technology is understood for many applications and the supply chain has been established.

#### **Overall Assessment of Opportunities**

- There are selective opportunities for biobased coatings. The industry is maturing and the interest in water based products may restrict the industry. However, the interest in environmentally sustainable products and the interest in finding substitutes for petroleum based products will increase the demand for biobased coatings.

#### **Sources**

Informa Economics, Inc., MBI International, and the Windmill Group. *The Emerging Biobased Economy*, 2006.

United Soybean Board. *Market Opportunity Summary: Soy-Based Emulsifiers and Wetting Agents*, 2006.

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