

SOY-BASED INK

Soy-based ink is very similar to “regular” printing ink, except that it contains varying amounts of soybean oil instead of petroleum oil.

Soy-based ink is low in volatile organic compounds (VOCs). In addition, soy-based ink is recycling-friendly.

Currently, soy-based ink is available in several formulations, including news, sheet-fed, heat-set, cold-set, business forms, and some flexographic. It is not available for ballpoint pens or laser printers and photocopier ink cartridges.

BIODEGRADABLE PLASTIC or “BIO-PLASTIC”

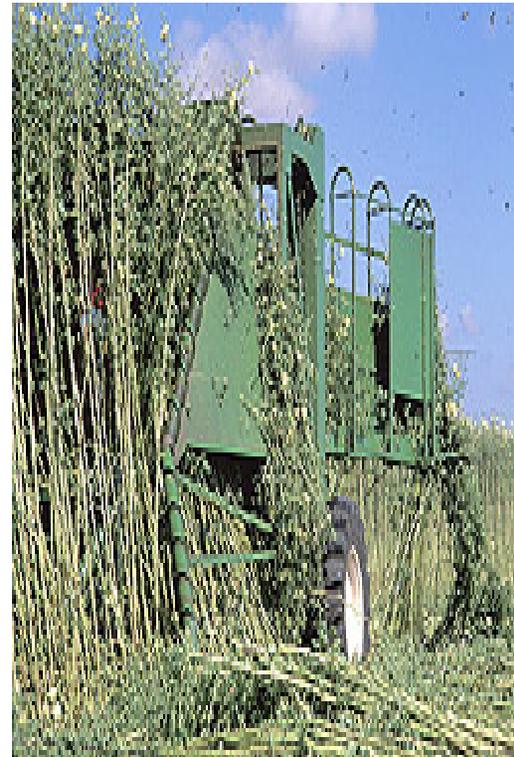
Bio-plastics are materials with plastic-like properties made from renewable resources such as corn, wheat, rice, soy, and potato. Bio-plastic materials can be fashioned in a variety of modalities -- from dissolving in water to withstanding the impact of a hammer -- to meet the needs of the specific application.

BIODIESEL

Both animal fats and vegetable oils may be converted into derivatives called “esters,” which are being evaluated worldwide as environmentally sound alternatives to petroleum-based diesel fuel. These esters are referred to as biodiesel.

KENAF PLANT

Kenaf is a 4,000 year old plant with roots in ancient Africa. Kenaf is a member of the hibiscus family and is related to cotton and okra. Kenaf grows quickly, rising to heights of 12-14 feet in as little as 4-5 months. It offers a way to make paper without cutting trees.



Upon harvest, the whole kenaf plant is processed in a mechanical fiber separator. The separation of the outer fibers and the whiter, inner fibers allows for independent processing and provides raw materials for various products, such as paper, particle board, and bioremediation aids.

CORN - CORNSTARCH . . . IT'S A-MAIZE-ING-LY VERSATILE

Take a look at the list of cutting-edge nonfood products (on the left) and match them to the agricultural commodities they come from.

Nonfood Product

Batteries in boom boxes
Baby powder
Fuel filter in a car
Disposable diapers
Sanitary napkins
"Soft-Ice" used to sooth sprained wrists
Wound dressings

Agricultural Commodity

Corn
Wheat
Soybeans
Crushed egg shells
Whey from dairy processing
Rice
Oats

ANSWER: All of the above nonfood products are derived from corn, specifically cornstarch!

Starch is the main constituent of grain flours, and the most plentiful starch is cornstarch. Although most of the products from corn milling go into food and feed, 4.5 billion pounds of starch are produced each year, largely for nonfood purposes. Of this, 3.5 billion pounds are used in the paperboard, paper, and related industries, where starch serves both as an adhesive and a coating.

Back in the 1970s, the U.S. Department of Agriculture's Agricultural Research Service scientists married starch to a synthetic chemical, they managed to create a product so thirsty, it could absorb many times its own weight in water. Someone called it SUPER SLURPER, and the name stuck.

After patents were secured in 1976, Super Slurper started popping up all over the marketplace. The absorbent compound, which can slurp up to 2,000 times its weight in water, is used as an electrical conductor in batteries. You can find it in fuel filters, baby powders, and wound dressings. Compounds very much like it are now used in disposable diapers and sanitary napkins.