

# Researchers develop soybean varieties suited to no-till

COLLEGE PARK, Md. — Agronomy researchers for the Maryland Agricultural Experiment Station have begun efforts to develop new soybean varieties especially suited to no-till double-cropping methods.

As double-cropping under no-till cultivation methods increases in popularity throughout the state, researchers have found older varieties of soybean lines have not given yields or shown disease resistance most farmers and researchers expected, according to William J. Kenworthy, noted soybean breeder for MAES and an associate professor of agronomy at the University of Maryland, College Park.

No-till cropping is a cultivation practice in which a crop such as soybeans is planted directly into the stubble of a previously harvested crop without plowing or other methods of breaking the topsoil.

"Nationwide, breeding

programs for no-till, double-cropping practices are only four or five years old and have centered for the most part in southern states like Georgia, North Carolina, Virginia and Kentucky," says Kenworthy.

"This year, Maryland has begun its own breeding program for double-cropping soybeans, one that is specially suited to Maryland's growing conditions," he adds.

Existing full-season varieties under double-cropping cultivation have shown reduced yields, according to Kentucky. And Maryland's characteristic warm and humid climate during plant maturation at the end of the summer provide the optimum climatic conditions for fungal seed diseases that affect seed stock quality.

Maryland's breeding program, therefore, will emphasize identifying those plant traits that appear to limit double-cropping

soybean productivity, says Kenworthy. This will make it easier for researchers to breed for characteristics more adaptable to

Maryland's climate and particularly to no-till double-cropping cultivation methods. Kenworthy adds that the

researchers have "several promising new lines" now; but they will require additional testing before seed stock is available for release to farmers.

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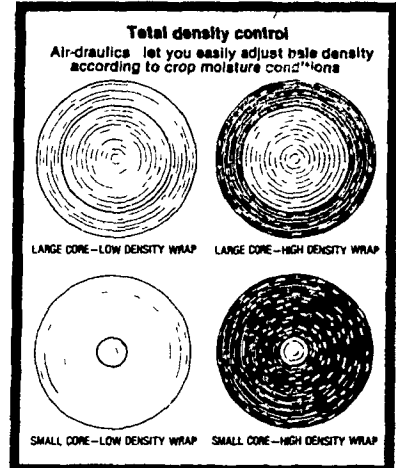
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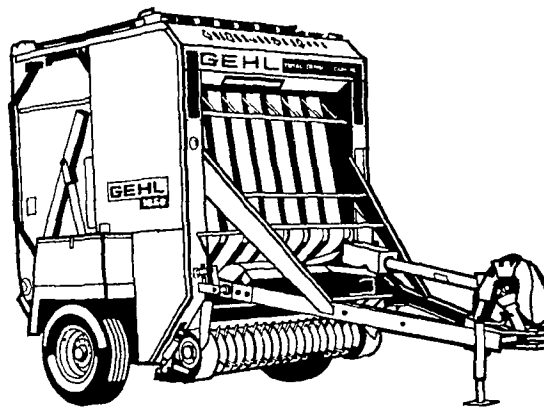
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