

Food conversion rates may boost soybean yields

COLLEGE PARK, Md. — Why are agronomists and crop plant breeders finding it so difficult to push soybean harvests beyond the current plateau of 27 bushels per acre?

One reason is commercial soybean varieties now available to farmers have been developed from only a few parents, all having similar food conversion rates, say scientists at the University of Maryland's Eastern Shore Soybean Research Institute.

This is a hindrance to higher yields because there may be other soybean varieties whose conversion of manufactured food to the seed portion of the plant is higher than the food conversion rates of varieties planted now by farmers.

The reason food conversion rates are so important is simple. Scientists would rather see the food manufactured by a plant converted into the seed portion of

the plant, rather than the stem, leaf or roots.

The seed portion, after all, represents the "economic yield" of the soybean crop, according to Robert Dadson, acting director of the Soybean Research Institute.

There is historical evidence that plant breeders - without actually knowing it - developed high-yielding varieties of crops by joining parents with high food conversion rates.

In 50 years of wheat breeding, says Dadson, the ratio of grain to straw has increased approximately 15 percentage points.

That, he adds, is a major contributor to a 29 percent increase in wheat yields in the last half-century.

"We may be able to improve the yield of the soybean plant if we can selectively breed those parents who convert most of their food into the plant's seed portion and a

minimum amount into the non-seed portion," says Dadson.

Soybean scientists may be in luck because they have access to one of the world's largest soybean germplasm repositories.

Most of the 10,000 different soybean cultivars banked in the USDA germplasm collection at

Urbana, Ill. and Stoneville, Ms. have never been examined for their food conversion rates, says Dadson.

Under Dadson, Maryland's Soybean Research Institute - on Maryland's Eastern Shore and in the heart of the state's soybean country - has taken on the task of

evaluating approximately 170 of the existing soybean cultivars.

Says Dadson, it is likely that among the 10,000 plants in the USDA collection there lurk a few potential parents whose food conversion rates make them ideal candidates to help boost soybean yields.

Beef breeders sale April 30

ANGELICA, N.Y. — Seventy-five lots of beef breeding cattle have been consigned to the Fourth Annual Breeders Sale at 1 p.m. April 30 at the Angelica Sales Barn.

The sale is sponsored by the Southwestern Division of the New York Beef Cattlemen's Association and will feature purebred and commercial Angus, Charolais, Polled Herefords, Shorthorn and Simmental cattle. James Ford of Angelica, sale manager, said sale lots will include bulls, bred cows,

cow/calf pairs and heifers.

The sale includes the dispersion of the Charolais brood cow herd of Circle B Farm, Little Genesee; the last Shorthorn females from the Robert Dalrymple herd at Ovid; and dispersion of the King's Grant Farm Simmental herd at Troy. Ford noted seven consignors to the April 30 sale are "repeat consignors" and said, "this is an indication we are meeting the marketing needs of Association members."

The Southwestern Division is also sponsoring a feeder calf sale at 1 p.m. April 23 at the Angelica Sales Barn. Ford said about 300 head of feeder calves are expected to be consigned. They will be penned as to weight, sex, breed, and quality by the livestock judging team at Alfred State College.

Information about either sale may be obtained from James Ford, RD1, Angelica, 14709 or 716-466-7872.

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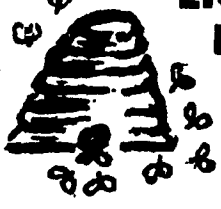
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