

New Insight On Pollinators May Aid Strawberry Production

TROY, Ohio — A steady rain-fall soaks strawberry fields in this town just outside of Dayton, but the weather doesn't deter Ohio State University entomologists from trekking through standing water and mud to record the growth progression of strawberry blooms — food for many insects whose pollination transforms the flowers into fruit.

"The blooms have to be open wide enough for the insects to get in and pollinate," said Ohio State research assistant Diane Hartzler, pointing to blooms that were either partially or fully open. "If the blooms don't get pollinated, the result is irregular fruit, or no fruit at all."

Though no pollinators were to be seen on this wet day, such observations are giving university researchers a better handle as to how insects, namely native feral or wild bees, affect strawberry fruit set, development and yield.

"People used to think that honey bees were the main pollinators of strawberry plants. They pollinate brambles like raspberries and blackberries," said Roger Williams, Ohio State leader of

small fruit entomology with the Ohio Agricultural Research and Development Center in Wooster, Ohio. "Though other insects like ants and beetles help pollinate strawberries, we have found that the primary pollinators are native bees."

Williams said the startling conclusion came after three years of identifying bee species that were visiting strawberry fields in Wooster and Moreland, Ohio. The researchers recorded 19 different species, all of which were native except the honey bee. Bee species included carpenter bees, leaf cutting bees, orchid bees, bumble bees, digger bees, cuckoo bees and small, metallic bees of the family Halictidae.

"We didn't know what to expect as not much literature exists that describes strawberry pollinators," said Williams.

Williams and his associates have expanded their research to other areas of the state in the hopes of compiling a comprehensive guide of bee pollinators. The goal of their work is to more clearly define which species pollinate strawberry plants, how field

placement affects pollination and ultimately establish a new market of beekeeping in Ohio.

"More and more growers want to get their crop off earlier in the season. If we can identify which bee species pollinate fields in certain areas, then we may be able to create a new opportunity for beekeepers to provide those species to the grower," said Williams.

The honey bee, European in origin, clearly dominates the beekeeping industry in Ohio. More than 5,000 apiaries, or places where colonies are kept, exist in

every county in the state. Honey bees are essential to Ohio's vegetable production, as the insects account for 80 percent of all crop pollination.

Though honey bees do pollinate strawberry plants, Williams said it's clear that native bees are the main pollinators, a discovery that could give both strawberry production and beekeeping a boost.

"One reason why we want to look into identifying and possibly marketing native bees is because of the recent problems honey bees have with mites and diseases,"

said Williams. "Also if the strawberry plant doesn't get pollinated, it affects fruit size, fruit quality and overall market value."

Williams said that where strawberry fields are located in the landscape might also have an impact on how often the plants are pollinated. In their studies, the researchers found that strawberry fields located near native habitats, like woods, swamps, ponds and prairies, had higher berry development and less deformed berries, than those strawberry fields found in and around residential areas.

More Rain Could Mean Higher Corn Prices

COLUMBUS, Ohio — Corn prices are likely to increase within the next several weeks if wet weather persists throughout the eastern Corn Belt, says an Ohio State University Extension agricultural economist.

"Based upon the Chicago Board of Trade, corn prices right now are \$2.30 and could climb 10 to 12 cents higher because of the weather," said Matt Roberts. "I think the real question is what it will be like the next two weeks. If wet weather continues for both Indiana and Ohio, we'll see those corn prices start to rise and soybean prices soften."

Excessive rainfall in Indiana, Ohio and parts of Illinois has significantly delayed both corn and soybean planting. Ohio corn growers only have 17 percent of the corn crop planted, compared to 74 percent this same time last year. Planting is two weeks behind the five-year average. Six percent of the soybean crop has been planted so far, compared to 70 percent last year.

Roberts said that growers are remaining optimistic that they will get their corn crop in the ground on time. "The window

for planting corn still has not closed," he said. "It's very reasonable given Ohio's typical growing conditions that one can plant corn through the end of May and still see very good yields given a good growing season."

He added, however, that if growers are pushed to the limit, a significant shift from corn to soybean acreage could occur that might impact farm profitability over the long term.

"Given the new Farm Bill, if we see a significant shift to soybeans, that might begin to impact farm profitability simply because soybean support is not as generous as it has been in the past," said Roberts.

The government's loan rate for soybeans in the 2002 Farm Bill is set at \$5 per bushel, down from \$5.26, while corn was increased from \$1.89 to \$1.98 per bushel.

"The changes in prices changes the relative profitability of those crops," said Roberts. "By switching acreage from corn to soybeans, there will probably be some implications, but it's still a little bit early to worry about the impacts of large scale shifts."

calculating a shift back to larger soybean acreage than what was originally forecasted in the USDA's annual prospective plantings report released in March. "There is little doubt that if the wet weather persists for another week or so, that the corn harvest will be smaller than currently projected," he said.

Despite the grim outlook on corn planting, Roberts speculates that the situation is not severe enough to drive farmers to collect their government payments.

"I don't think we are anywhere near the point where we are talking about abandonment where people are taking payments because they couldn't get their crop planted at all or where those acres that got planted were flooded so bad that it killed the seedlings," said Roberts. "If growers haven't gotten anything in the ground for corn, there is still a window where they can get soybeans in the ground. I think they would prefer to try to plant something than take payments and have those fields sit idle for the rest of the season."

Roberts added that it wouldn't be until mid-June before any indication surfaces that farmers have made claims on abandonment payments.

Conservation Sign-Up Through June 30

LANCASTER (Lancaster Co.) — The Farm Service Agency will be accepting applications through June 30 for the Environmental Quality Incentive Program (EQIP). This sign-up period will be held for farms located in the Chickies Creek Watershed.

EQIP works primarily in areas where there are significant natural resource concerns, such as soil erosion, water quality and quantity, wildlife habitat, wetlands, and forest and grazing lands. Priority is given to areas where state or local governments offer financial, technical, or educational assistance and to areas where agricultural improvements will help meet water quality objectives. Activities must be carried out according to a conservation plan.

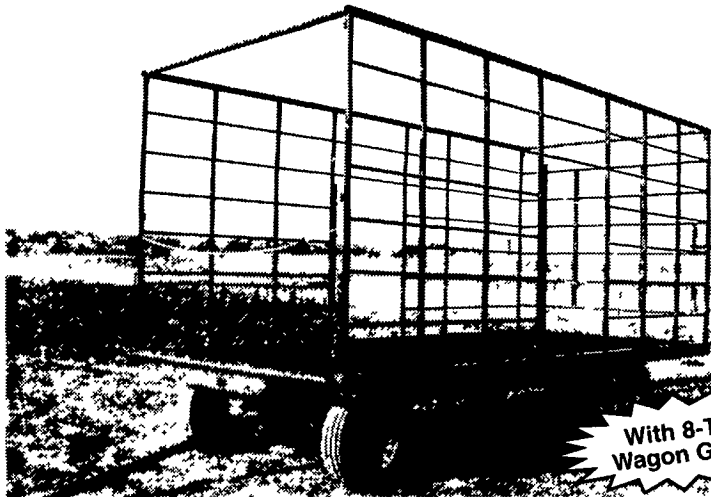
EQIP is one of several federal, state, and local conservation programs that farmers can use to solve their natural resource concerns. EQIP offers financial, educational, and

technical help to install or implement structural, vegetative, and management practices called for in five- to 10-year contracts.

These practices — which include manure management systems, pest management and erosion control — help improve and maintain the health of natural resources. Cost sharing may pay up to 75 percent of the costs of certain conservation practices. Half of the funding for EQIP is targeted to livestock-related natural resource concerns and the remainder to other significant conservation priorities.

Contracts are awarded on a competitive basis among applicants in the Chickies Watershed. Proposals are ranked using a scoring system based on ballpark estimate of total program costs of the practices planned. Requests can be made at the Farm Service Agency, located at the Farm and Home Center, 1383 Arcadia Rd., Lancaster, or phone (717) 397-6235.

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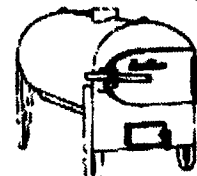
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