

# Continuous Corn Concerns

## Problems With Corn After Corn Start Early In Season

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Corn following corn has become a comfortable concept with as much as 40 percent of Illinois corn expected to be planted in the same field in 2008 where corn was grown in 2007, according to Dr. Emerson Nafziger, extension agronomist at the University of Illinois. Nafziger said that as the trend continues it's possible that more than half of the corn crop might follow corn.

"We are not there yet, but certainly we are at a point where we can't consider corn following corn to be an odd system anymore," he said.

Nafziger showed data from a series of comparisons done for almost 10 years around the state.

affect seedlings and affect larger plants in corn following corn. We saw a little of this in 2007 and I think one of the keys was that May started off warm in 2007. I think if we found a magic way to reduce those temperature differences and maybe the soil moisture differences that tend to be there when corn follows corn, that we would probably have this problem solved. Our observations this past year were wherever the two crops were near one another they looked identical pretty much all season long."

He said planting dates, populations and those things seem to have been pretty much the same in both crops in 2007, but that might not always be the case.

"One of my biggest concerns with corn following corn though is when people do a lot of tillage



Dr. Emerson Nafziger, Extension Agronomist at the University of Illinois, explains that the corn following corn system may not be odd after all. Photo by John LaRose, Jr.

"There is no question that a yield reduction in corn following corn compared to corn following soybean is more common than for the yield to increase, or even stay the same," Nafziger continued. "However, our old rule of thumb has been that there's a 10 percent yield loss when corn follows corn compared to corn following soybean, and it's possible that this yield penalty is larger than what we're seeing now. It's too early to say that rule doesn't apply anymore."

Certainly 2007 was a very good year for corn to follow corn, and it certainly is safe to say that in 2007 the yields of corn following corn and corn following soybean were almost identical in most of the trials that Nafziger conducted in 2007. At this point though, he is not willing to say it will always be that way.

Companies say that their corn hybrids are improved in things like Bt, corn borer and root-worm control. They are simply newer and better than the old hybrids. Nafziger feels it might be that the newer hybrids are able to offer more control.

"However, we are still very much aware of the problems," he said. "As recently as 2005 and in 2006 we had some indications that there were serious yield losses in corn following corn fields, especially in the very dry areas of the state. Still, we can't say that every time you have a dry year your corn following corn will suffer; because it was dry in some areas in 2007 and we saw little or no yield penalty.

"But when there is a big problem with corn following corn, I think it starts early," Nafziger said. "In many cases it probably is related to the cool, wetter soils, maybe there's more diseases that

in the fall after the corn crop," Nafziger said. "If they are going to come in with corn the next year, some think they need to bury some of the residue to get it out of the way for planting. But the tendency is to go into the fields in the spring a little bit earlier than the conditions of the soil probably suggest. As I have noted, corn ground that has been tilled will dry off over the surface in the spring and when the calendar says it's April, it might look like it's time to go when it's still too wet underneath.

"So people get a little anxious," he noted. "I try to remind them that just because you tilled it and it looks dry over the surface does not mean the soil is dry enough for planting. It is easy to undo the benefit we feel we have from tillage by driving on soils to till or plant when it's too wet in the spring."

Nafziger just asks farmers to remember that their focus should be to help the root system, whether they are planting corn following corn or corn following soybeans.

"Driving on the field when it is too wet does not help it out in the spring," he said. "That means doing field operations when it's fit, and not before."

One advantage farmers had in 2007 was that it was relatively dry at planting time. Most farmers waited long enough, and the weather pattern was such that the crop didn't suffer from it.

"However, I am guessing that on average we are going to do a little bit more to compromise that root system when we plant in corn following corn," Nafziger added. "That is one thing that we ought to guard against as much as we are able to do so." Δ