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When I heard about the ISA On-Farm Network Ripping study, I saw it as a chance to answer some questions I'd had about soil hardpans.

We had one field in particular, mostly Tama and Muscatine soils, where we knew there was a serious hardpan. A few years ago, we dug pits and located the compaction layer, but we were surprised to see the amount of corn roots that were penetrating it.

I hadn't really thought about buying a deep ripper, and now that I've seen the first year's results, I don't think I can justify it. We set up trials in two different fields for the first year of trials.

In one, which was a mix of Colo-Ely Complex, Kenyon, Garwin, Muscatine and Dinsdale soils, ripping gave us an extra 0.5 bu. per acre. That doesn't tell the whole story, though. Nearly three-quarters of this field is Dinsdale soil and on that, ripping gave us no significant difference. Garwin, Kenyon and Colo-Ely Complex soils each make up less than 5% of the field. Where we ripped the Kenyon soil, the data suggests a significant yield increase. There was a slight increase on the Garwin, and on the Colo-Ely Complex soils, data showed a big yield decline.

Our second trial was on a field of mostly Muscatine and Tama soils. Ripping these cost us more than 2 bu. an acre.



I haven't taken the time to really think out the practicality of what this says, but it suggests that if we could selectively rip just the Kenyon soils where they run through our fields, we could see some improvements in yield. Because Kenyon soil makes up less than 5% of the field where we did the first test, though, I'm not sure just what the overall impact on profits would be.

I do a lot of fall strip-till, so mounting ripper knives on the toolbar and using them only where they're needed might be a possibility. With GPS/GIS, we could write a program that could do this, but I'm not sure of the economics of it. Would it be worthwhile with Kenyon soils making up less than 5% of the total field?