

No-till planter tune-up



By CAROL BROWN

AS spring approaches, keeping the melted snow and topsoil from heading south may take some re-thinking of your farming system. Maybe you've already decided to stop or reduce tillage, and you've mapped out a plan. Maybe you've already determined the steps for ultimate soil conservation, in addition to less tillage, such as adding grass waterways and riparian buffers along the creek.

The planter is fundamental for strip till and the key for no-till, says Mark Hanna, Iowa State University Extension ag engineer. Chances are your existing planter is capable of handling the job, perhaps with a few modifications.

There are modifications to consider and things to watch out for when planting into crop residue. Hanna stresses the importance of these because a planter is likely the only machinery that stirs the soil for seed placement.

"Suitable seed depth and seed-to-soil contact are keys to getting good crop emergence when you are planting through residue," he adds. "Undisturbed soil can be harder to penetrate."

To keep depth-gauge wheels on either side of the seed opener in consistent contact with the soil, down pressure springs on the parallel links of your planter need to be adequate. Consider replacing light springs with heavier ones or adding springs, but make sure not to go overboard with the pressure in wet or moist soils; maintaining depth wheel contact with the soil is the goal.

Good seed placement

"Keep the seed opener disks in good condition," advises Hanna, "to ensure a narrow soil entry point, which limits the amount of down pressure required to penetrate soil and prevents residue from entering the seed furrow."

"Also, watch the seed closing system. It should be aligned behind the opener and adjusted for adequate seed-to-soil contact without overcompaction."

Adding row cleaners ahead of the seed openers can be especially helpful in areas where the soil is slow to warm or when planting corn into heavy residue. Row cleaners leave a residue-free band of soil at the planting point that helps corn emergence. Adjust the cleaners to ensure they are moving the residue and the least amount of soil.

"If further cutting of residue is required, a coultter may be added in front of the seed opener," he says. "Adjust the bottom edge of the coultter to operate slightly above seed depth; too deep may hinder seed-to-soil contact."

Iowa Learning Farm cooperator Tom Vaske of Masonville switched from conventional tillage to strip till in 2000

Key Points

- Planter is key piece of equipment for success in no-till farming.
- Alterations to existing equipment help keep machinery costs low.
- Benefits of no-till are reduced labor, equipment costs, fuel bill.

because of a contract stipulation with his landlord. To save money, he made a strip-till bar from an old planter.

"Many small to midsize farmers turn away from strip till because of equipment prices," says Vaske. "You don't need to spend a lot of money on large equipment to make things work."

The benefits of changing to a reduced tillage or no-till cropping system are numerous, he explains. Specific equipment needs are minimal, and in some cases, entire field passes with equipment are eliminated. Labor costs are reduced, and there's less soil compaction when field passes are de-

creased. Organic matter also builds in the soil over time.

Brown is a communications specialist for the Iowa Learning Farm.

■ **To discuss questions or concerns about planting in no-till or reduced tillage, contact your local ISU Extension field agronomist or ag engineer. Also check the ILF site at www.extension.iastate/ilf.**



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STRIP TILLER:

"You don't have to purchase the best or latest equipment to get the job done," says Tom Vaske, who modified his planter for strip till.

