

Grow Your Own Hybrid Seed Corn?

Tired of paying big bucks for hybrid seed corn? If so, maybe you should grow your own.

University of Missouri extension agronomist Leon McIntyre, Linneus, Mo., says you can grow your own hybrids and do it for less.

Before joining the University, McIntyre worked several years for different seed companies in various jobs from research to seed production. He says producing seed corn requires an understanding of basic genetics, but there are no magic tricks involved and, if you plan well, no reason for surprises. "The seed corn companies have turned seed production into such a secretive process that most corn growers have been convinced that producing seed corn is too difficult to do yourself. It does require planning and attention to details, but you don't have to be a geneticist or genetic engineer to grow your own hybrid seed," he insists.

To do it yourself, you need to do everything the seed companies do including selection of inbred parents, properly isolating and

managing seed fields, and finally, careful, gentle harvesting and storage of the seed produced.

McIntyre says a good place to learn about corn inbreds available for parent seed is to read an Iowa Agricultural Experiment Station publication called "2000 Iowa Experimental Corn Trials," by A. R. Hallauer, K.R. Lamkey, and P.R. White. You can download an electronic version (in PDF format) at <http://corn2.agron.iastate.edu/data.html>. Click on "2000 Single Cross Report." Reports dating back to 1996 are available.

"This information will help you decide what hybrid or hybrids will perform best for you," he says.

If you're within driving distance, McIntyre also recommends attending the Central Iowa Field Days, held annually near Ames Iowa. "There you can see first-hand the hybrids and inbred lines available from several foundation seed companies, Iowa State University, the Committee for Agricultural Development (CAD) and the USDA," McIntyre says. (Con-

tact Del Koch, business manager and treasurer for CAD at 515 294-4166 for details.)

Check around for foundation seed companies that will sell seed of corn inbred lines to individuals. You'll probably have to sign a licensing agreement that says you will only use the seed for your own use. And a licensing fee may be required for privately owned inbreds.

"If you look around, you should be able to find inbreds that, when crossed, will make a hybrid with the traits and yield potential you need," he says. "You won't be able to buy inbreds with Roundup Ready, Liberty Link, or Bt genes, but there are some very good public inbreds with high tolerance to corn borer and even to rootworms."

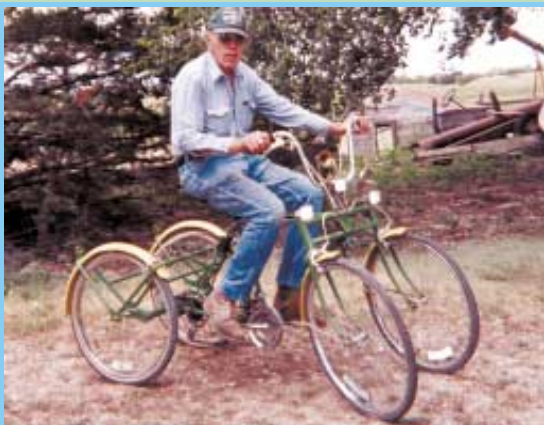
Locating a source or sources of parent lines is just the start.

Here are a few of the things you'll need to consider:

- Fields must be properly isolated so stray pollen doesn't contaminate your seed.
- More tillage may be needed, since inbreds used as parents are normally weak emergers.
- Weed and insect control need to be topnotch.
- You'll need to monitor fields carefully at flowering time, and female rows (the plants from which you'll harvest your seed) must be detasseled.
- Watch for boring and ear-feeding insects. While usually not significant in commercial corn fields, these can destroy a seed crop.
- Harvest and handling of the seed crop needs to be done carefully, although McIntyre says you can probably harvest with a combine if you set it properly and go slow.
- Germination should be good if you've done a good job of harvesting the seed, but a germination test is a good idea so you can make other plans if your home-grown seed



Photo shows two varieties McIntyre uses to produce hybrids. The taller corn is a tropical open pollinated variety called Juala Valley, which is naturally resistant to many of the diseases in the U.S. The shorter one is an inbred McIntyre developed from domestic yellow dent corn after several years of backcrossing. He says the tropical variety has such a long growing season that it begins shedding pollen just before frost. But it does have strong natural resistance to many of the diseases found in U.S. cornfields. The inbred, on the other hand, has high yield potential when used as a parent line and its maturity is suited to the Midwest.



Rudy Neubauer used the frames from two bicycles and parts from the frame of a third to put together his "quadricycle".

10-Speed "Quadricycle" Great On County Roads

Retired farmer Rudy Neubauer, Chapman, Kansas, rides a bicycle for fun and exercise and also does some bike repair in his farm shop. So when he saw a three-wheeled bicycle in FARM SHOW awhile back, he pulled together the parts and built one like it.

"It worked great until I turned a sharp corner one day," he says. "If I hadn't been able to get my feet on the ground, it would have tipped over.

"I figured if I gave it a fourth wheel, it would be more stable," he says.

Neubauer used the frames from two bicycles and parts from the frame of a third to put together his four-wheel "quadricycle."

"I put one frame at the center, complete with the seat, pedals and fork with handlebars," he says. He cut off the lower arms of the front fork and added two more forks about 12 in. on each side of the center one to hold the cycle's two front wheels. The wheels are roughly 25 in., center to center. He devised an automotive-style steering linkage from the handlebars on the center fork to the outside forks in order to turn the front wheels.

At the rear of the bike, he left the center frame intact, complete with fork and gears for a 10-speed derailleur. He removed the axle from the center fork, though, and inserted a longer one through a tube to the left wheel. The right wheel is mounted in a fork, but there's no power to it. He says the rear assembly resembles the back end of a commercial 3-wheel bike.

He left the two shift levers for the derailleur in place on the handlebars.



"It's fun to ride and not a lot different from riding a two-wheeler," says Neubauer.

"Getting the brakes on all four wheels to work evenly was the real problem," he says. He solved that dilemma, though, by running the cables from the side-pull calipers to eccentrics, one for the front and one for the rear, and then attached the cables from the brake handles on the handlebars to the corresponding eccentric. "With a little adjustment to get the cable lengths the same on both sides, it works fine," he says.

Neubauer says he made the bicycle "Just to see if I could. It's fun to ride and not a lot different from riding a two wheel bike," he says. "It would be a great bicycle for people with balance problems or older people who like to ride but don't ride because they're afraid of falling. It's a very stable bicycle.

"Most of what I used to build it I dug out of the junk, so the cost wasn't much. My biggest expense was paint. I used John Deere green and yellow on it."

Contact: FARM SHOW Followup, Rudy Neubauer, 1937 2100 Ave., Chapman, Kan. 67431 (ph 785 922-6697).

Foundation Seed Sources:

Committee for Ag Development
133 Curtiss Hall
Iowa State University
Ames, Iowa 50011-1170

Downing Foundation Seeds
2380 Harrison Road
New Madison, Ohio 45346
ph 800 336-2076

North Central Regional
Plant Introduction Center
G-212 Agronomy
Iowa State University
Ames, Iowa 50011-1170
(ph 515 294-3255; fax: 515 294-4880)

Illinois Foundation Seeds
Box 722,
Champaign, Ill. 61824-0722
ph 217 485-6260;
Website: <http://www.ifsi.com/>

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