

# 45-Ft. Corn Stalk Set To Challenge World Record

Jason Karl is on a mission to breed taller corn, with his latest being a 45-ft. tall stalk with ears 23 ft. above ground. If certified by Guinness World Records, it will break his 2011 (Vol. 35, No. 6) world record of 35 ft., 3 in. The private plant breeder and researcher is optimistic he can grow them even higher.

"I set up a 55-ft. tall plastic greenhouse that's only several feet wide," says Karl. "It's designed specifically for this project."

The greenhouse protects the plants from cool nighttime temperatures, but also provides a support structure. It also elongates stalk segments and reduces wind damage. Karl notes that without it, water-saturated stalks would snap. Other 30 to 40-ft. plants simply bend over in an arc to the ground. He has found those can require very little support.

"I've held a 32-ft. plant up in the air with just my hands," says Karl. "A support structure is the practical limit to the height of a corn plant."

His tallest plant so far is the result of 7 generations of breeding a tropical strain called Chiapas 234 after crossing it with a naturally occurring mutation that adds internodes. Normally Chiapas 234 has 18 internodes below the ear and 6 above. The more internodes and elongation between them, the more leaves and the taller the plant.

"I select for the tallest strain, not the tallest plant," says Karl. "Then I cross my tallest strain to the mutant to get the 45-ft. plant."

There were 80 internodes on the 40-ft. plus plants."

Karl has other mutations he's working with as well as non-hybrid lines that have surprising height on their own. One 42-ft. tall plant has ears at the 40-ft. height and is still growing.

While it is hard to estimate "yield" from a tall plant, Karl notes that ear shoots appear along much of the length of the stalk. Seed matures at several nodes with multiple ears of full or small cobs appearing at some shanks. Cobs can be along shank nodes or all within the same husks. He expects ears from perhaps 14 nodes to be viable.

What he can measure more easily is leaves. Conventional breeders use the same identified mutation to add a few extra leaves above the ear in silage corn.

"Mine doesn't have 3 or 4 extra leaves; it has 50," says Karl.

Even with the added leaves and height, Karl's corn needs no extra fertilizer. He did use lights to shorten the night length. This doubled the original internode quantity.

When asked if he plans to continue with the project, he responded that the current work would be a good stopping place. However, he adds, "I'm definitely continuing. The next steps are clear."

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Last summer Jason Karl grew a 45-ft. tall corn stalk inside this 55-ft. tall plastic greenhouse. It supported the plant and also protected it from cool nighttime temperatures.

## Loader Hopper Handles Bulk Cargo

Iron Bull has an answer for loading firewood, mulch or other bulk materials fast and gentle. The company's bottom-unloading hopper can be lowered to a truck or trailer bed before opening. No more worrying about damaging the vehicle. Contents fall only a few feet, and the hopper slowly empties as it's raised.

"I was watching a customer use a conventional, self-dumping hopper to load firewood and thought how tricky it was to position the hopper just right so it didn't hit the customer's truck or trailer," recalls Joe Glick, Iron Bull. "I put some thought into it and came up with the EZ-Load."

The basic EZ-Load Hopper holds 2 cu. yds., equivalent to a face cord of firewood. The 48-in. wide, 40-in. deep and 42-in. tall open topped, steel box has 2 drop down doors in its underside. It can be mounted

to a skid steer or front-end loader with its standard quick-tach plate or with optional fork receivers.

"It's easy to load and unload," says Glick. "The manual release works like a retractable dog leash. It can be triggered from the operator's seat. Press the thumb latch and pull to dump."

The doors shut when the empty hopper is lowered to the ground. The release reel has a magnet attached to its side, making it easy to mount to any steel surface near the operator.

"We built it tough with 1/4-in. and 7-gauge steel," says Glick. "It has to be. Loaded with mixed hardwood, it can weigh as much as 2,800 lbs."

The EZ-Load Hopper starts at \$2,847 for the face cord capacity. Larger units are available.



Bottom-unloading hopper lets you load firewood into a pickup or trailer bed without worrying about damaging the vehicle. Hopper slowly empties as it's raised.

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