

Posted on Thu, Aug. 07, 2008

When the soybean champ speaks, thousands listen

By Christopher Leonard

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STARK CITY, Mo. --

In the soybean world, Kip Cullers is the equivalent of a rock star.

He's the undisputed world champion of soybean production and he's spilling the beans, so to speak, on his record-shattering secrets.

"Anyways, uh, I always work under the theory that once they start blooming you want to remove as much stress as possible," Cullers told farmers from as far away as Brazil and Canada who were hanging on his every word like he was a preacher at a church revival meeting.

"It's just like if you feel good, you want to run that extra mile," he said.

More than 2,000 farmers came to tour Cullers' farm this week, to learn from the master. Cullers doesn't look like much of a professor as he leans against the podium in a circus tent erected on his farm. Tall and reedy as a beanpole, he looks more like the farmer he is.

And he's quite a farmer. Last year, Cullers grew 154 bushels of soybeans per acre. That's almost four times the national average.

Cullers has taken the soybean crown for two years in a row in a highly competitive market. But it isn't just a contest. In a world where there are more mouths than ever to feed, boosting crop yields is big business.

Cullers' peers hold him in awe.

"I think you almost have to be at a genius level to do what he's done. You've got to be thinking 24 hours a day," said Aaron Hicks, a burly corn and soybean farmer from Henrietta, Mo. Hicks said he worked his heart out last year to yield 45 bushels of soybeans per acre.

Revealing his secrets, Cullers makes them seem almost deceptively simple.

He waters his soybeans daily to cool and nourish the plants, a move that surprised some farmers who wait until leaves droop to turn on irrigation faucets. He uses the irrigation spray to apply fungicides late in the season so soybeans can fatten their pods instead of fighting infection.

For fertilizer, Cullers uses chicken litter from industrial barns near his farm, applying about 3 tons an acre. It costs between \$40 to \$60 an acre, giving him an advantage over

farmers who must use increasingly expensive synthetic fertilizers like anhydrous ammonia, which cost \$523 a ton in 2007 according to the U.S. Department of Agriculture.

Finding the right soybean variety is crucial. Cullers like them short, because he plants them close together. They compete for light, and he doesn't want them to grow so tall they bend over and form matted tangles.

"We want miniature Christmas trees out there," he said amid the scratching of pens and pencils as farmers furiously scribbled down his advice.

Researchers around the world are racing to discover new technologies to boost crop yields as farmers strain to grow enough food on a limited amount of arable land.

Monsanto Co. set the ambitious goal of doubling yields of corn and soybeans by 2030. Pioneer Hi-Bred, a division of DuPont Co., plans to boost yields of its seeds by 40 percent within a decade.

Agribusiness groups say boosting yields is more important than ever as growing middle class populations in China and India eat more meat, which requires vast amounts of grain to feed livestock. Using crops as stock for biofuels like ethanol and biodiesel increases the pressure.

A day on Cullers' farm shows why boosting yields can be so difficult.

It's not just a matter of adding more fertilizer or planting more seeds per acre. It's like playing a three-month long game of chess, except the rules allow pieces to be swept off the board randomly by floods, hail storms or swarms of beetles.

Farmers compare notes on when to plant, when to harvest, how far apart to space rows and whether to apply everything from sugar to herbicide on their fields.

Cullers said he's up in the morning around 3:30 or 4:00 a.m. He logs on to the Internet to check the weather and grain prices on the Chicago Board of Trade. By about 5:30 or 6:00 a.m., he likes to be outside walking through the rows of his 11,500 acre spread of corn and soybean plants. He checks leaves for spots or bugs. He gauges how much water they might need.

Cullers pays special attention to what he calls his "contest acres," a smaller collection of plots where he uses more water, fungicide and other techniques to boost yields.

Not all farmers can grow the strains Cullers uses. They must pick varieties based on their soil and geography. During Cullers' talk, they debated which strains grow best - fluently spouting variety names like 94Y90 and 90M60.

Attendees said they can't match Cullers' obsessive attention on their thousand-acre stretches of crops. It also wouldn't be economical for many to use Cullers' level of inputs like herbicide, water and pesticide.

"He literally babies these plants," said Tom Kreutzer, a wheat and milo farmer from Wakeeney, Ks. "You just hope that some of what he does spills over and applies to your operation."

Hicks said he might apply Cullers' fungicide techniques when he gets home. He might also plant more seeds per acre - although not as much as Cullers does. Hicks said any yield advantage helps boost his profit margins.

It will also help Hicks keep pace with his neighbors. Every year at harvest time, they compare yield figures at the coffee shop. He said a disc jockey at the local radio station KMZU calls farmers and asks them to reveal their yields on the air. Hicks swears he tells the truth. But he suspects some neighbors fudge the numbers.

"I think there's a certain degree of fibbing that takes place," Hicks said. "I played college athletics, and I think farming is more competitive."

Cullers said he's bored with breaking soybean records. Now he's set his sights on corn. He's won seven national yield titles from the National Corn Growers Association. But he hasn't broken the world record of 442 bushels an acre held by Iowa farmer Francis Childs, who died in January at the age of 68.

How high is Cullers' corn yield now?

With a note of defeat in his voice, Cullers says it's only 350 bushels an acre. The national average is about 150 bushels. Cullers said his goal is to grow 500.



Mike Gullett / AP Photo

Kip Cullers talks to farmers visiting his farm near Stark City, Mo., Wednesday, August 6, 2008. More than 2,000 farmers from all over the country toured his farm and talked to representatives about growing techniques.