

# National Wheat Yield Contest

## Wheat Grower Breaches 200-Bushel Barrier in 2018 Wheat Yield Contest

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ROCKVILLE, Md. (DTN) -- A 202.53-bushel wheat yield and a third consecutive win in the National Wheat Yield Contest would satisfy many growers, but Phillip Gross still sees room for improvement.

"I think by increasing seed population and trying to encourage more tillers in the fall, we could have done better," the Warden, Washington, grower told DTN. Each year, Gross paces his fields, scrutinizing tillering, pollination, spikelet number, kernel size, disease and insect pressure, as well as taking tissue and soil samples to check nutrient levels. "I personally think this is only half of its yield potential," he said of his winning irrigated winter wheat variety, LCS Jet.

But Gross, like the contest's sponsor, the National Wheat Foundation (NWF), has a lot more than big numbers on his mind.

"Quality is extremely important," he said. "We don't want to flood the market with cheap feed wheat and lose our edge in the export market."

To that end, NWF has changed the contest to include a quality component this year. To be eligible for competition, wheat entries had to be Grade 1 or 2, the grades required for food-grade wheat. They were also tested for a variety of components, such as protein, test weight, falling number, hardness and 1,000 kernel weight.

The results were eye-opening, said Steve Joehl, director of research and technology at the National Association of Wheat Growers (NAWG) and director of the contest for the NWF.

Of the 163 wheat entries analyzed, only 11 didn't make Grade 1 or 2. Milling quality was high and protein levels held strong among even the highest-yielding fields, he said.

"Some people are concerned that if you drive yield, you will do it at the sacrifice of quality," Joehl said. "What we're seeing from these test results is we had really good production of high-quality wheat, and if I were a miller, I'd be camping out next to every one of these winners asking to buy their wheat."

In addition to the high yield award, the contest recognizes national and state yield winners in four categories: dryland winter wheat, irrigated winter wheat, dryland spring wheat and irrigated spring wheat.

These category winners are calculated not by raw yield numbers, but by the percentage they yield above their county's five-year average. This puts growers from a wide variety of geographies and soil types on a more even playing field, Joehl noted. For example, several entries brushed close to 200 bushels per acre (bpa) but didn't place first in their category because their yield wasn't quite as far from their county's norm as lower-yielding entries.

This year the top national winners for each category were:

**IRRIGATED WINTER WHEAT:** Ken Horton, of Horton Seed Services in Leoti, Kansas, for a 111.28-bpa field in Kearny County, 312% above the county average, with WB-Cedar, from WestBred.

DRYLAND WINTER WHEAT: Travis Freeburg, of R&K Farms in Pine Bluffs, Wyoming, for a 124.46-bpa field in Kimball County, Nebraska, 398% above the county average, with SY Monument, from AgriPro.

IRRIGATED SPRING WHEAT: Larry Carroll, of Holzapfel Ranch in Hermiston, Oregon, for a 158.93-bpa field in Morrow County, 413% above the county average, with Espresso, from WestBred.

DRYLAND SPRING WHEAT: Jon Wert, of Wert Farms in New England, North Dakota, for a 103.98-bpa field in Hettinger County, 126% above the county average, with LCS Trigger, from Limagrain.

### "YOU JUST HAVE TO LISTEN"

As the scrappy, resourceful relative to its prima donna cousin, corn, wheat can sometimes get short shrift when it comes to crop management. The wheat yield contest was designed to show that when farmers take time to scout and apply fertilizer, nutrients, fungicides and insecticides at just the right time, the crop shines.

Even after supplementing his winter wheat with nitrogen, phosphorus, potassium, and sulfur, based on carefully timed tissue and soil tests, Gross was astonished at the kernels from his winning winter wheat field.

"The kernel size was just huge -- they were humongous and heavy," he said. "You could take two or three small or semi-filled kernels and fit them in the same area as these big, plump ones. That was a pleasant surprise."

Nor did the quality suffer; the field's milling characteristics were excellent and protein held to a respectable 11.8.

Like Gross, the contest's other national yield winners are devoted to their wheat fields. "When that crop asks for something, be prepared," said Carroll, of his Oregon spring wheat fields. "It's going to talk to you; you just have to listen."

Carroll "listens" via biweekly petiole tissue tests during the growing season. If the petioles say they need micronutrients, he runs that through his sprayer and applies it to the foliage. This year, his winning field got liquid cow manure in the fall, on top of nutrients and fungicide in the spring.

Scouting is a chore to some, but not to Wert, who grows spring wheat in North Dakota.

"What I love to do is walk my fields," he said. "It's my favorite thing to do all summer." That diligence allowed him to knock down weeds like kochia and wild oats promptly, stave off disease with multiple fungicide passes and save on insecticide this year -- and win best dryland spring wheat yield in the country.

### IT ALWAYS COMES DOWN TO WATER

The wheat contest draws applicants from all over the country -- from the Pacific Northwest to the Dakotas and down to the southern Great Plains.

But each winner interviewed scarcely hesitated when asked what the biggest challenge for their winning wheat fields was: water.

Some, like Gross and Carroll, have aquifers lurking under their fields to feed pivots; others, like Wert, depend on unpredictable rainfall from the skies.

This year, Wert's North Dakota dryland spring wheat fields were helped along by good soil moisture in the spring, and an unusually wet June. But when the big spigot in the sky turned off on July 2, and no more rain fell before harvest, Wert credits his family's four-decade devotion to no-till with nursing the bin-buster crop along.

"No-till absolutely helps hold moisture in the soil," he said. "North Dakota State University says you can see five to seven bushels produced with every inch of rainfall, so when we're a couple inches short, that extra soil moisture makes a big difference."

Even the majority of Gross' irrigated winter wheat fields have sparse access to water.

The Odessa Aquifer his operation pulls from is dropping lower every year, and the region's farmers have state-regulated water meters tracking and limiting their water use.

"Farmers here are actually preserving their water for high-value crops such as potatoes and onions," Gross said. "Wheat, which is a rotation crop for us, just gets what's left over."

For Carroll, the timing of his irrigation water is his most important wheat management tool. "Water usage at flowering time will make or break a wheat kernel," he said.

His soils turn to sand about 2.5 feet down, so Carroll can't depend on soil moisture storage to feed the wheat plant at flowering, and like Gross, he has a meter-limited water supply.

"When the wheat is just starting to flower, you have to make sure the moisture profile is full," he said. "You have to walk out for days and watch ahead of time."

## A DATA BONANZA

The decision to test wheat entries for quality components this year added a lot of work for the contest organizers. But Joehl expects it to pay huge dividends in the years to come.

"What's unique about this contest is farmers have to put down every little management practice -- planting date, fertility, variety, and more," he explained. "So every sample we have -- and its quality results -- is correlated to those management practices."

In just a few years, the contest should be able to use that aggregated data to make interesting conclusions on how each management practice affects crucial milling and baking characteristics like protein and falling number, Joehl said.

"That's a lot of data power," he said.

Those results will be a welcome source of information both to contestants and the larger wheat industry, said Gross.

"I hope it will really encourage growers to focus more on quality and not just yield by itself," he said. "Wheat acres are really dwindling and in order to keep the markets we do have, we need to make sure that our buyers know that they're getting a premium quality."

You can find more details on the National Wheat Yield Contest and its winners from NWF here: [https://wheatfoundation.org/...](https://wheatfoundation.org/)