

# 2024 OKLAHOMA 4-H/FFA WHEAT SHOW QUALITY IMPROVEMENT PROGRAM and STATE 4-H/FFA WHEAT SHOW

Sponsors: Oklahoma Department of Career and Technology Education, Oklahoma Genetics, Inc., Oklahoma State University, Oklahoma Wheat Commission, Oklahoma Wheat Research Foundation, and WestBred™ seeds

## -Purpose-

The purpose of this program is to encourage increased production of wheat with superior market quality.

## -Requirements-

1. Fill out the attached report form including the story and the entry form certifying involvement and return it with a 10-pound sample of wheat by 8:15 a.m. on July 17, 2024.

For shipped samples, ship them to Payne County Fairgrounds, **4518 Expo Circle East, Stillwater, OK 74075, Attn: 4-H/FFA Wheat Contest. Shipped samples must arrive by Monday, July 15, 2024.**

**No entries, either delivered or mailed will be accepted after 8:15 a.m. on July 17, 2024.** Samples will be judged at Heritage Hall, Payne County Fairgrounds, on **July 17, 2024 beginning at 8:30 a.m.**

To get to the fairgrounds, go east 1.9 miles from the intersection of Highways 51 and 177, then north into the fairgrounds. Or, from the traffic light at Highway 51 and Fairgrounds Road, turn north, then west into the Fairgrounds parking lot. Heritage Hall is the second entrance from the south, on the west end of the Expo Center building.

2. WHO MAY TAKE PART— Any regularly enrolled FFA member or “active” 4-H member (See the current year Oklahoma 4-H Rules and Guidelines, August 2022) may participate.
3. HOW TO TAKE PART— Plant five acres or more of any variety of hard red or white winter wheat. **Entrants using certified or registered seed (verified by the original certified/registered tag or an original certified/ registered seed receipt) are awarded three points in the Milling and Production contest.**
4. No more than two entries per entrant may be submitted; the entries must be different varieties, and they must each have been planted on five acres or more and harvested within the current calendar year.
5. Members of both 4-H and FFA may enter in only one division (either 4-H or FFA) each year.
6. Each Club/Chapter member is required to submit an accurate record of production and marketing costs involved in preparing, seeding, and harvesting the crop. This record must consist of:
  - (a) A **fully completed** Current Year Report Form for the Wheat Quality Improvement Program.
  - (b) **An original**, one-page typed narrative story authored by the entrant, giving the important facts and details relative to producing and marketing the crop, including but not limited to tillage practices and timing, rental agreement (if any), seeding rate, soil testing, pest control, grazing, harvesting/yield, fertilizer, chemical use, and weather conditions. This story will be scored and is worth one point.
  - (c) The completed Participant Certification form, **signed by member, parent, and educator.**

## 4-H/FFA STATE WHEAT CONTEST RULES AND PROCEDURES

**Two classes:** 4-H hard (red or white) winter wheat and FFA hard (red or white) winter wheat.

- a. Each entry must contain 10 pounds of wheat from a five acre or more plot.
- b. Entrants may enter a maximum of two entries per entrant; entries must be different varieties.
- c. Entries must have been harvested within the current calendar year.

### 1. Milling & Production contest

- a. All entries will be ranked separately in each class for visual characteristics relevant to grain marketability, primarily color and color retention, kernel size and morphology, consistency, and cleanliness. The visual judge will determine which entries are to be further evaluated for milling and baking attributes.
- b. Visual points will be allocated starting with 25 points for the highest-ranked entry (#1) and subtracting one (1) point for each placement below # 1. (#1 = 25; #2 = 24..... #26 = 0; #27 = -1; etc.).
- c. Three points will be given for certified or registered seed (only with the original tag or an original receipt stating that the seed is certified or registered. No reproductions accepted.).
- d. The top 25 entries will be selected using the visual and certified/registered seed scores.
- e. One point will be given for the report, which will be scored. (Report points will be added after the top 25 entries have been selected.)
- f. Test weight will be determined according to standard procedures for the top 25 visual entries. All entries will receive a base test weight score of 30 points.
- g. Entries with test weight <59.5 lb/bu will be deducted one point per 0.1 lb/bu below 59.5 lb/bu. For example, an entry with 59.4 lb/bu test weight will receive 29 points, or an entry with 59.0 lb/bu test weight will receive 25 points.
- h. Entries with test weight >61.0 lb/bu will receive one bonus point per 0.1 lb/bu above 61.0 lb/bu. For example, an entry with 61.1 lb/bu test weight will receive 31 points, or an entry with 61.5 lb/bu test weight will receive 35 points.
- i. Wheat protein (12.0% moisture basis) and kernel hardness will be determined by NIR spectroscopy (AACC approved methods) for the same entries evaluated for test weight. All entries will receive a base wheat protein score of 30 points.
- j. Entries with wheat protein content <12.0% will be deducted one point per 0.1 percentage unit below 12.0%. For example, an entry with 11.9% wheat protein will receive 29 points, or an entry with 11.5% wheat protein will receive 25 points.
- k. Entries with wheat protein content >12.5% will receive one bonus point per 0.1 percentage unit above 12.5%. For example, an entry with 12.6% wheat protein will receive 31 points, or an entry with 13.0% wheat protein will receive 35 points. No bonus points will be awarded for protein content exceeding 13.5%. Hence the maximum allowable score for wheat protein content is 40 points.
- l. All entries will receive a base kernel hardness index score of five points. Entries with kernel hardness <60 will be deducted one point per unit below 60. Any entry with a kernel hardness index <55 will thus receive zero points.
- m. **A subtotal score for the Milling and Production contest** will equal the actual sum of points awarded for the report, seed certification verification, the visual ranking, test weight, wheat protein content, and kernel hardness, with no adjustments. Only the top 25 visual entries will receive a Milling and Production contest score. For the purpose of ranking, visual placement (section 1.d) will be used to break a tie in the subtotal score for Milling and Production.
- n. The Milling and Production scores will be adjusted to a 100-point scale. The highest scoring 4-H or FFA Milling and Production entry will be adjusted to 100 points and all other entries will be adjusted accordingly.

## 2. Baking Contest

### a. Dough performance

1. To afford rapid and reliable assessment of dough quality, or that associated with dough strength, all entries (up to 25) receiving a Milling and Production contest score will be evaluated with a mixograph according to AACC standard methods commonly used in wheat research. Attributes to be scored will be visual rating of the mixogram (0-to-6 scale), band width of the mixogram at two minutes past peak dough development (in mm), and mixograph stability (unitless).
2. Points awarded for the mixogram visual rating will equal the rating value multiplied by two. Hence point values will vary from 0 to 12.
3. Points awarded for mixogram band width will equal the actual width rounded to the nearest mm. Point values will vary from 1 to about 20, or possibly more.
4. For mixogram stability value, lower values are more desirable. Because stability values rarely exceed 20, then the recorded stability values will be subtracted from an arbitrary value (e.g., 20, or a value appropriate to the evaluated set of samples) to arrive at an adjusted value consistent in direction with mixogram band width and visual rating. This adjusted value, rounded to an integer, shall be equal to the points awarded for mixograph stability.
5. A dough performance score is obtained by the sum of points received for the mixogram visual rating, band width, and adjusted stability value.

### b. Pup loaf performance

1. Pup loaves (100g flour) will be prepared according to standard AACC methods for all entries (up to 25) receiving a Milling and Production contest score. One pup loaf per entry will be scored for crumb grain (0-to-6 scale) and measured for loaf volume (in cc) and bake absorption (in percentage units, with one decimal place).
2. Points awarded for crumb grain will equal the actual rating multiplied by two. Hence point values will vary from 0 to 12.
3. Points awarded for loaf volume will equal the actual loaf volume minus 700 cc, with the difference divided by 10. This calculation puts the point value for loaf volume on a similar scale to crumb grain. A loaf volume below 700 cc is usually considered undesirable, whereas a loaf volume above 1000 cc is usually considered exceptional. Hence an excellent loaf volume will yield a loaf volume score of about 30 points. Any entry with loaf volume  $\leq 700$  cc will receive zero points.
4. Likewise, points awarded for bake absorption, rounded to an integer, will equal the loaf volume in percentage units minus 55.0%. A bake absorption below 55.0% is usually considered undesirable and often associated with lower wheat protein values. Bake absorption of about 65.0% is considered excellent, and such an entry will receive 10 points. Any entry with bake absorption  $< 55.5\%$  will receive 0 points.
5. A pup loaf performance score is obtained by the sum of points received for crumb grain, loaf volume, and bake absorption.

- c. A subtotal score for the Baking contest** will equal the simple sum of the dough performance and pup loaf performance scores. For the purpose of ranking, the pup loaf performance score will be used to break a tie in the subtotal score for Baking.

The Baking contest scores will be adjusted to a 100-point scale. The highest scoring 4-H or FFA entry will be adjusted to 100 points and all other entries will be adjusted accordingly.

### 3. Scholarships, Grand Champion, Champions, and Top 5 Entries

- a. **An overall score for each entry** in a given class will be determined by the sum of the two subtotal scores (sections 1.m and 2.c above).
  - b. **Scholarships, which are funded by Check-off Dollars**, will be awarded to the top five 4-H entries and the top five FFA entries based on the overall score. An individual may only win up to \$6,000 in wheat show scholarships during their 4-H/FFA careers.
  - c. **Champions** will have the highest overall score for the 4-H contest and the FFA contest, and the **Grand Champion** will be awarded to the entry with the highest overall score between contests. If the Champion 4-H and Champion FFA entry scores are equal, the subtotal score for the Baking contest will be used to break the tie.
  - d. **In case of a tie**, the Scholarships will be equally divided between the tied entries.
  - e. If the awarded scholarship results in an individual's total scholarship winnings being above the \$6,000 lifetime limit, the excess (the amount the recipient total scholarship awards would be above \$6,000) will be awarded to the next lower scholarship winner(s) with the eligibility limits being \$3,000 annually and \$6,000 lifetime for each participant. For example, if the first-place winner reaches \$6,000 and \$2,000 remains, \$1,000 would go to the second-place winner (making \$3,000) and \$1,000 would go to the third-place winner (making \$2,000). If a participant is not eligible for a scholarship, then the next winner (i.e., sixth place) will be included as part of the top five scholarship winners.
  - f. **Oklahoma Genetics, Inc. (OGI)** will award the top five 4-H and FFA entries cash awards if the participant enters an OGI-licensed wheat variety.
  - g. **The Oklahoma Wheat Commission** pays the state premiums.
  - h. **WestBred™ will supplement the Grand Champion and Reserve Grand Champion** (The non-Grand Champion between the FFA or 4-H Champions) **Scholarship Awards noted in 3.b and 3.c. above** with a \$500 scholarship for the Grand Champion and \$250 for the Reserve Grand Champion. This award will be doubled if the Champion enters a WestBred™ variety. The WestBred™ awards will not count against the \$6,000 scholarship limit.
4. **An Appeals Committee** will be designated by the contest officials before the annual contest judging is held. This committee is to receive and act upon any protest or question arising out of the contest. A protest/procedure question must be filed in writing, accompanied with a \$50 cash fee and presented within a week of the visual judging event day of the contest to Dr. Kim Anderson with a copy being sent to the respective 4-H Specialist or FFA Supervisor assigned to work with the event. If a protest is not upheld by the Appeals Committee, the deposit will be forfeited to the show awards fund. Protests must include the specific rule(s) violated and evidence supporting how that respective rule(s) were not followed by contest officials or were violated by a participant, family, educator/teacher, or other individual. The protest must include the name and contact information of the person(s) filing the protest.

**-AWARDS-**

The Oklahoma Wheat Commission pays the premiums. The premium awards will be:

**MILLING AND PRODUCTION PLACEMENT**

1st - \$25.00	6th - \$15.00	11th - \$10.00	16th - \$7.50	21st - \$5.00
2nd - \$20.00	7th - \$10.00	12th - \$ 7.50	17th - \$5.00	22nd - \$5.00
3rd - \$20.00	8th - \$10.00	13th - \$ 7.50	18th - \$5.00	23rd - \$5.00
4th - \$15.00	9th - \$10.00	14th - \$ 7.50	19th - \$5.00	24th - \$5.00
5th - \$15.00	10th - \$10.00	15th - \$ 7.50	20th - \$5.00	25th - \$5.00

**BAKING PLACEMENT**

1st - \$25.00	6th - \$15.00	11th - \$10.00	16th - \$7.50	21st - \$5.00
2nd - \$20.00	7th - \$10.00	12th - \$ 7.50	17th - \$5.00	22nd - \$5.00
3rd - \$20.00	8th - \$10.00	13th - \$ 7.50	18th - \$5.00	23rd - \$5.00
4th - \$15.00	9th - \$10.00	14th - \$ 7.50	19th - \$5.00	24th - \$5.00
5th - \$15.00	10th - \$10.00	15th - \$ 7.50	20th - \$5.00	25th - \$5.00

**State Awards:**

The top three placing in 4-H and top three placing in FFA will receive cash awards, and the top five placing in both 4-H and FFA will receive a scholarship.

	<b>Cash Award</b>	<b>Scholarship</b>	<b>Grand Champion</b>
First	\$100	\$3,000	\$250
Second	\$50	\$2,000	
Third	\$50	\$1,000	
Fourth		\$1,000	
Fifth		\$1,000	

A maximum of \$6,000 total wheat show scholarships (4-H & FFA combined) may be awarded to an individual during their 4-H and FFA careers.

**-AWARDS continued-**

Oklahoma Genetics Inc. will supplement the top five 4-H and FFA entries cash awards if the participant enters an OGI-licensed variety.

1st place	\$500 + \$250 Grand Champion
2nd place	\$400
3rd place	\$300
4th place	\$200
5th place	\$100

WestBred™ will provide additional scholarship awards for the Grand and Reserve Champion entries. If the entries are WestBred™ varieties, the scholarship awards will be doubled.

Grand Champion: \$250 if not WestBred™ variety; \$500 if WestBred™ variety  
4-H and FFA Champion: \$250 - \$500 if WestBred™ variety

# 2024 4-H/FFA REGISTRATION/REPORT FORM for OKLAHOMA WHEAT QUALITY IMPROVEMENT PROJECT

(This page to be filled out legibly in participant's handwriting)

Office Use Only:

Entry No: \_\_\_\_\_

Certified Seed \_\_\_\_\_

Report Score \_\_\_\_\_

Name: \_\_\_\_\_ M \_\_\_ or F \_\_\_ Birthdate: \_\_\_\_\_

Parents' Names \_\_\_\_\_ Phone (\_\_\_\_) \_\_\_\_\_

Mailing Address \_\_\_\_\_  
(Street or P.O. Box) (City), Oklahoma (Zip)

(Choose one: 4-H or FFA) Member of \_\_\_\_\_ 4-H Club in \_\_\_\_\_ County  
 or FFA Chapter at \_\_\_\_\_ School in \_\_\_\_\_ County

Local newspaper name, phone \_\_\_\_\_

and mailing address \_\_\_\_\_

Newspaper e-mail address \_\_\_\_\_  
If available (Publication address to send press release) For example, ag.editor@newspaper.com

### Variety of Wheat Grown

Variety of wheat seeded \_\_\_\_\_ Was planted seed certified or registered? **Yes** **No**  
If yes, fasten original tag to last page.

Date wheat was seeded \_\_\_\_\_ Date wheat was harvested \_\_\_\_\_

### Acreage and Yield

Value of wheat produced: \_\_\_\_\_ Bushels at \$ \_\_\_\_\_ per bushel, Total\* = \$ \_\_\_\_\_

Cost/value of wheat on per field or per acre basis (circle one). Based on how many acres? \_\_\_\_\_

### Financial Statement

Date land was first plowed/chiseled for wheat \_\_\_\_\_ Cost \$ \_\_\_\_\_

Number of times wheat land was worked (include dates in story) \_\_\_\_\_ Cost \$ \_\_\_\_\_

Cost of seedbed preparation ..... \$ \_\_\_\_\_

Cost of seed and seeding ..... \$ \_\_\_\_\_

Fertilizer cost at or before seeding ..... \$ \_\_\_\_\_

Cost of harvesting the crop ..... \$ \_\_\_\_\_

Cost for rental of land (detail in story) ..... \$ \_\_\_\_\_

Chemical and application cost ..... \$ \_\_\_\_\_

Fertilizer cost after seeding ..... \$ \_\_\_\_\_

Other expenses (list) ..... \$ \_\_\_\_\_

Total Expenses ..... \$ \_\_\_\_\_

Value of wheat produced  
 (\*total value from above) ..... \$ \_\_\_\_\_

Net Profit (Loss) ..... \$ \_\_\_\_\_

(Insert Narrative Report this page)

## PARTICIPANT CERTIFICATION

We have each read, understand, and will comply with the General Rules and Regulations governing the Oklahoma 4-H / FFA Wheat Improvement Show and agree that we will be held strictly liable for any violations of the aforesaid rules or regulations, which may include but are not limited to forfeiture of awards, scholarships, and premiums; and future participation by youth or students under the educator/teacher's supervision.

We each certify that the entrant is a bona fide 4-H Club or FFA Chapter member and meets all membership, age, and eligibility requirements for the show. The entrant is active in all phases of the production process, including management decisions, soil preparation, planting, harvesting, sample preparation, and reporting.

ALL SIGNATURES MUST BE PRESENT FOR ENTRY TO BE ACCEPTED.

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Member Signature

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Parent Signature

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4-H County Extension Educator OR FFA AG ED Teacher Signature  
*(Print name legibly and sign)*

**Narrative Report Instructions:** The student is to write an original, one-page narrative story giving the important facts and details relative to producing and marketing the current calendar year wheat crop, including but not limited to the location and history of the field, tillage practices and timing, any rental agreement, seed source, date and variety, seeding rate, soil testing, pest control, grazing, harvesting/yield, fertilizer, chemical use, growing and weather conditions, harvest date, price, and yield. This written narrative story will be scored and is worth up to one point. Submit one report form and an *original, separate story* for each variety entered, with a maximum of two varieties per youth. This Narrative Report page is to be typed\*, in either 12-point Times New Roman or 10-point Arial font (do not use ALL CAPS, **bold** lettering, or *italics*).

**Staple** report pages together once in the upper left corner (no paper clips, folders or binders), in the following order:

- 1) **Current year** Registration/Report form, completed by the entrant
- 2) **\*Typed Narrative report**; an original essay by the entrant (\*An original, legibly handwritten first draft of this page is acceptable from young entrants; a final typed copy of the Narrative page must also be provided.)
- 3) **Participant Certification form, signed by member, parent, and educator**

If the seed is certified, fasten **ORIGINAL** certified or registered seed tag (no reproductions) to this page.

(tape or staple tag here)