

# 2024 Ag Mechanics Competition

Oklahoma  
OIL & NATURAL GAS



## Superintendent

Jerry Renshaw  
Nathan Smith  
Wayne Stricklin

## Show Dates

Saturday, March 16, 2024

\*A more detailed schedule by Division will be released after the entry deadline

*The Ag Mechanics Contest is held in the North Section of the Oklahoma Expo Hall.*

# Ag Mechanics Schedule

## **Staging:**

Friday, March 15 | 8 a.m.-6 p.m. | Oklahoma Building

## **Project Check-In:**

Friday, March 15 | 8 a.m.-6 p.m. | Oklahoma Building

## **Judging/Show Schedule:**

Saturday, March 16 | 8 a.m. | Oklahoma Building

## **Awards Ceremony and Sponsor Recognition:**

TBD

## **Move Out:**

Saturday, March 16 | Immediately following awards. Division Winners may be requested for Display throughout the duration of the Oklahoma Youth Expo.

**THERE WILL NOT BE AN AUCTION.**

# Ag Mechanics Regulations

The purpose of this show is to provide an opportunity for Oklahoma 4-H and FFA members to display projects constructed by students, to promote the development of skills in ag mechanics through competition and to recognize accomplishments in the area of ag mechanics.

All entries in this Ag Mechanics Competition will be subject to the General Rules and Regulations of the Oklahoma Youth Expo.

## **Nominations**

There will be no nominations for the Ag Mechanics Competition.

## **Eligibility**

Entries in this show are limited to Oklahoma 4-H and FFA members. The projects must have been constructed by 4-H and FFA members. Photo proof may be required and is encouraged periodically as the project is being constructed. **Projects require welding unless entered into the wood division.**

- a. A project may only be exhibited one (1) time at the Oklahoma Youth Expo. Only projects completed on or after March 17, 2023, are eligible for exhibition.
- b. Any project that does not fit into one (1) of the stated classes will be deemed ineligible and disqualified by Show officials.
- c. Projects must not be refurbished in the general Ag Mechanics & Engineering competition.

## **Loss or Damage**

Every precaution will be taken to protect the projects entered; however, neither the Oklahoma Youth Expo, its staff, directors, superintendents nor judges will be responsible for any loss or damage to projects.

## **Entries**

The entry fee is \$40. Entries must be made online through ShoWorks by February 23, 2024. Late entries follow as with livestock: late entries submitted from February 24-March 1 are \$140 and all late entries submitted March 1 or after are \$250.

Projects may have been constructed by an individual or a group and may be individually or chapter owned. All projects must be entered in the names of the exhibitors who participated in the planning and construction of the project.

a. Each exhibitor may enter six (6) individual projects; no more than one (1) per division. Each group of students may enter six (6) group projects; no more than one (1) entry per division.

b. Exhibitors may not enter both a group and an individual project per division; if a team project is entered, all individuals on the team would be the maxed for the division.

**Example:** If a student is on a team with their club, they cannot enter an additional entry in the same division as their team entry.

If a club has a team in the division and another individual who is not on the team would like to enter into the same division, they can.

c. A group of exhibitors shall not exceed four (4) students showing the project for a team.

d. Substitution of projects will not be allowed.

e. Exhibit space and location will be at the Superintendents' discretion.

## **Showmanship**

a. Exhibitors shall be dressed appropriately and remain with their project during judging and awards, official FFA or 4-H show attire is required, see general rules.

b. Exhibitors should be courteous and helpful to those viewing their project, including those exhibiting next to them. Exhibitors should not interfere with or shield those who are exhibiting next to them.

c. Exhibitors should be prepared to answer questions when their project is being judged. Knowledge of the project will be evaluated at that time. Exhibitors should be well informed on the project they are representing, but should not be boisterous or argumentative.

d. Exhibitors should make available any equipment that may be necessary to evaluate their project (flashlights, mat or creeper, square, tape, multi-meter, etc.). Exhibitors may be requested to hold measuring tape and assist the judge in making measurements on projects.

# **Ag Mechanics Guidelines**

## **Presentation**

- a. Teams should indicate to the judges which team member served as lead engineer and welder to better present information to the judges. All team members may present, but it is the responsibility of the team to clarify which team members worked on specific areas of the project.
- b. All projects should be complete including finish. Any item, necessary for use of the project, must be a part of it (example: hinges and latches on gates and panels, lift pins, hydraulic hoses on tractor equipment, etc.), including documentation.
- c. All projects must be painted or properly treated and must be clean and in a presentable condition, even though they may have been used. No touch up painting of ANY type will be allowed inside the exhibit area.
- d. Due to limited exhibit space, trailers and other equipment are to be displayed in transport position. Operation of ramps, extensions and other special features may be demonstrated only as directed by the official judges and as space permits.
- e. No electricity will be available for computers or other electronic devices. An effort will be made to provide electricity for projects requiring it for operation during judging only.
- f. Tractors, trucks or other vehicles (including non-entered trailers) are not allowed in the exhibit area as part of the display. If the project is permanently attached, please contact staff or superintendents for ruling.

## **Documentation**

A portfolio that includes the following: original (exhibitor created) plan or drawing, a bill of materials, construction log, and no more than 40 photographs showing all phases of construction. ODOT regulations and specifications are to be provided as they apply to individual projects. Stands, podiums, etc. will be permitted.

### **1. Portfolio:**

The original (exhibitor created: hand drawn or digitally created) plan or drawing, a bill of materials and photographs showing all phases of construction/restoration should be bound together via binder or folder. Portfolio total should not exceed 20 pages, two-sided. Exhibitors may use their discretion on this part of the documentation but all of the above must be included.

### **2. Marketing Flier:**

Each team will develop an 8.5" by 11" one-sided flier promoting and detailing the product. The flier should be designed to be utilized as an advertisement and an overview of the product to be shared with customers. The Marketing Flier should also be displayed with the project. Please attach the hard copy to the back of the documentation portfolio.

## **Safety on the Fairgrounds**

- a. General Safety – Appropriate and safe display stands must be provided for gates, panels and other projects that need support. Sharp edges and points, such as found on self-feeder roofs, bale movers, etc. are to be padded or covered as necessary to prevent injury. Flammable and/or combustible liquids shall not be used, stored or sprayed inside any building at any time. This shall include, but not limited to, enamel paints, thinners, reducers, gasoline or any other petroleum-based liquids. All liquids must be in

properly labeled original containers. All compressed gas cylinders shall be properly secured. Hand wheels are to be removed. Protective caps installed and taped. No regulators or hoses are to be installed at any time.

b. Trailer Safety – All trailers and other equipment to be operated and/or transported on public roads are to be equipped with safety equipment specified in Oklahoma Statutes. All towed equipment, regardless of standards, is to be equipped with safety chains. All three-point hitch and power take off (PTO) operated equipment are to meet current ASABE Safety and dimension standards.

c. Electrical Safety – All 120 VAC and higher electrical plugs and receptacles must be grounded. Ground Fault Circuit Interrupters (GFCI) shall be required for all 120 VAC receptacles. All electrical connections are to be protected in appropriate indoor or outdoor rated enclosures.

d. Projects with Engines – There is to be no more than five (5) gallons of fuel in any fuel tank. Fuel cap taped closed and secure against tampering. Disconnect all batteries. No vehicle and/or equipment refueling inside any building.

Criteria Points:

Workmanship (including finish) .....	30
Design and Materials Used (including practicality) .....	20
Documentation .....	30
Degree of Difficulty .....	30
Knowledge of Project (response to questions) .....	30
Safety .....	10

Total: 150 points

Failure to provide all required documentation and information will result in docked points.

## **Ag Mechanics Classification**

All of the following divisions require the student participant(s) to have made a weld on the project, other than the “wood and tractor restoration division”.

### **Agriculture Machinery & Equipment Division**

- 1-Tractor Mounted and/or Pulled Equipment
- 2-Shop Tables
- 3-Other Shop Equipment
- 4-Truck and/or Tractor Accessories

### **Livestock Equipment Division**

- 5-Gates, Panels, etc.
- 6-Chutes and Headgates (all types - squeeze chutes, trim chutes, loading chutes, etc.)
- 7-Other Livestock Handling Equipment (blocking tables, hoof trimming tables, crates etc.)
- 8-Livestock Feeding/Watering Equipment (creep feeders, hay feeders, mineral feeders, combo feeders, etc.)

### **Outdoor Recreation & Convenience Division**

9–Stationary Smokers

10–Fryers, Fire Pits, etc.

11–Trailer Mounted Cookers (Trailer must meet ODOT regulations)

12–Other Yard Conveniences (fire wood racks, picnic tables, porch swings, lawn chairs) (No indoor furniture items)

### **Wildlife Equipment Division**

13–Feeding/Watering Equipment

14–Traps and Capture Devices

15–Stands, Blinds, Observation Towers, Other Wildlife Equipment (drop chutes, working boxes, etc.)

### **Trailers Division**

16–Single Axle Bumper Pull Utility Trailers (all lengths)

17–Multi Axle Bumper Pull Utility Trailers (all lengths)

18–Stock Trailers-Bumper Pull and Gooseneck (all lengths)

19–Gooseneck Lowboys and Flatbeds (all lengths)

20–Other Trailers (Multi-bale, welding, tilt bed hydraulic dump, cargo, etc.)

### **Decorative Division (requires welding)**

21–Small Decorative Pieces (Fit inside a 24"x24"x24" Box)

22–Medium Decorative Pieces (Fit inside 48"x48"x48" Box, but larger than Small Class)

23–Large Decorative Pieces (Larger than 48"x48"x48" Box)

### **Wood Only Division**

24 - Recreational (Benches, Patio Furniture (Indoor/Outdoor), Pergola)

25 - Livestock Structures (Chicken Coops, Sheds)

Superintendent's will have final say in classification and may designate projects for a different division, other than the one they had entered.

## **Tractor Restoration Division**

### 26 - Tractor Restoration Division

- No yard tractors or riding lawn mowers.
- Exhibitors must provide mats or lumber/plywood to serve as runners to protect asphalt and concrete from damage for entries with steel lugs.
- Year model and serial number must be included with description on entry application .
- Projects will not compete for Grand Overall Ag Mechanics & Engineering project.

### Criteria Points - Tractor Restoration Projects

#### Aesthetics----- 15 Points

- Overall appearance of entry including workmanship and finish will be considered.
- Preparation prior to painting.
- Painting and finish.
- Detail and completeness of components; steering wheels, seats, decals, brakes, tongues, instrument panels, wiring harness, etc.

#### Original----- 10 Points

- Must be as original as possible. To include:
- Finish, fasteners, decals and other components.
- Mechanical systems, fuel, electrical, engine, transmission, final drive, cooling, etc.
- Serial plates in place with unaltered serial numbers.

#### Functional----- 40 Points

- To include the restoration of all mechanical systems.
- Engine, transmission, final drive.
- Fuel, cooling, ignition, lighting, exhaust, charging, starting, hydraulic and steering systems.

#### Presentation----- 25 Points

- Demonstrates knowledge of reconstruction
- Portfolio and photos should show all points of reconstruction and include a before photo
- Student and team shall be present at time of judging

Exhibitors may be asked to start and drive the tractor; demonstrating all gears along with systems: hydraulics, lights, brakes, etc. (Driving and mechanical evaluation will be done outside when offloading.)

Exhibitors may be asked to move tractors outside for additional driving and mechanical evaluation during judging.

A Mechanical Check Sheet, used by tractor judges in the evaluation, will be posted on the website as it is available. This score sheet will include checks on systems, engine, transmission, final drive, brakes/steering, lights/safety equipment, cranking/charging and PTO/lift/hydraulics.

#### Safety Equipment----- 5 Points

All equipment that was original to the tractor should be in place (includes all shields and decals). Tractor must be in safe operating condition. To exhibit a tractor, the following safety considerations must be followed:

- No more than five (5) gallons of fuel in the fuel tank.

- Neat and functional drip pans containing floor absorbent material to collect any coolant, oil or hydraulics that may drip from the tractor.
- Fuel shut off valves on all fuel tanks must be functional and all tractors must be exhibited with these valves off.
- An approved ABC fire extinguisher with a minimum of 5 lb. capacity must be provided and placed near the tractor.

Tractors may be started only at the request of the Show Officials.

## **Ag Mechanics Awards**

### **Premiums**

The following premiums will be paid in all Classes with a minimum of 3 entries (Classes with less than 3 entries premium will be paid based on number of entries):

Place	1st	2nd	3rd
Premium	\$80	\$60	\$40

### **Division Winners**

Along with a banner, the exhibitor(s) of each Division Champion in Ag Mechanics Contest will receive prizes.

### **Grand Champion Ag Mechanics Prizes**

Along with a banner, the exhibitor(s) of the Grand Champion of Ag Mechanics Contest will receive prizes.

### **Reserve Grand Champion Ag Mechanics Prizes**

Along with a banner, the exhibitor(s) of the Grand Champion of Ag Mechanics Contest will receive prizes