

# **Gillespie County Agricultural Mechanics Show**

## **Purpose of the Agricultural Mechanics Project Show**

1. To provide an opportunity for 4-H and FFA members to display constructed projects.
2. To promote the development of skills in agricultural mechanics through competition.
3. To recognize individual and group accomplishments in the area of agricultural mechanics.
4. To provide an opportunity for public appreciation of this important phase of 4-H and FFA Youth Programs.

This show is subject to the Gillespie County Junior Livestock Show General Rules and Regulations and to the Special Rules of this section. Where Special Rules conflict with other rules, Special Rules prevail.

## **Special Rules for Agricultural Mechanics Project Show**

1. **Eligible Entries:** Entries in this division are limited to Texas FFA and 4-H members. Participants must be in at least 1<sup>st</sup> grade and have not graduated high school. Projects exhibited must have been constructed by FFA and 4-H members under direct supervision of the CEA or AST.
2. **Maximum Entries:** Each exhibitor may enter only one individual project. Each group of students may enter no more than two group constructed projects and may have no more than one entry in any project class. No individual exhibitor may enter more than two projects, either group and/or individually constructed.
3. **Classification of Projects:** Projects are to be classified by primary use or function.
4. **Ineligible Projects:** Towed or hauled projects that exceed typical or legal road and highway widths and cause city traffic flow problems are subject to disqualification and/or may not be allowed to access to Show grounds.
5. **Construction Date:** A project can be exhibited only one time at the Gillespie County Junior Livestock Show
6. **Project Presentation:** 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 once project is in place. 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 show officials and as space permits. When used, it must be limited to the floor area under individual projects. No additional floor space will be provided for podiums, chairs, tables, show boxes, etc. Electrical outlets may be provided upon request at check-in but are not guaranteed.
7. **Documentation:** An original plan or drawing, a bill of materials and photographs showing all phases of construction are to be provided with projects. All documentation must be typed or presented in an electronic format. TxDOT and/or ASABE regulations and specifications must be provided as they apply to individual projects. TxDOT documentation must include registration and inspection and/or justification of exemption. Display of plans, photos, etc. must be done in such a manner that no additional floor space is required. Stands, podiums, computers, etc. will be permitted only when they can be positioned on or under the project.

8. Project 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.

9. Trailer Safety: All trailers and other equipment that is to be operated and/or transported on public roads are to be equipped with the safety equipment specified in Title 7, Federal Motor Carrier Safety Administration or Vehicles and Traffic Transportation Code of Texas Statutes. All tongue equipment that is pulled on a public highway – for example: trailers, squeeze chutes, hydraulic log splitters, mowers, tillage tools, sprayers, etc. must have approved safety chains. All trailers that are rated at 4,500 pounds GWR or greater must have approved brakes and break-away equipment as well as current registration and annual inspection documentation unless exempt. This includes bumper pull, as well as gooseneck trailers. All trailers must be equipped with lift jacks for hitching and unhitching. Tie down attachments (minimum of 4) are recommended on all trailers. Fender clearance above tire of 4 inches is required with exceptions. Any trailer that is over wide (102 inches) must have a signed permit. Trailer widths will be measured from metal to metal, including for example, fenders, wheels, and dust caps. Trailers should follow Federal Safety lighting requirements as described in <http://icsw.nhtsa.gov/cars/rules/standards/conspicuity/Trlrpstr.html>. Any trailer that does not meet these requirements will be disqualified. Refer to TxDMV for further regulations regarding registration and inspection at: <http://txdmv.gov/motorists/buying-or-selling-a-vehicle/trailers>.

10. Trailer Registration and Inspection: Current registration plates or one trip permits and paper plates are required on all trailers that are shown at the project show. Trailers must have documentation indicating an annual inspection has been conducted or is exempt. Hauled trailers will NOT be exempt from this rule. Refer to TxDMV for farther regulations regarding registration and inspection at: <http://txdmv.gov/motorists/buying-or-selling-a-vehicle/trailers>. A project that provides TX DOT inspection documentation (including exempt) will be spared during judging from the following items:

- Reflective Tape location and length
- License Plate Location and Mount
- Light location and Arrangement
- Side Marker Reflectors
- Safety Guards and Flaps.

**\*\*Note: DOT inspection does not exempt trailers wider than 102” to show without a permit. \*\***

11. Electrical Safety: All 120 VAC and higher electrical plugs and receptacles are to be the equipment grounding type. All metal components are to be grounded. Ground fault circuit interrupters (GFCI) are mandatory for all 120 VAC receptacles. All 50 VAC and higher connections are to be protected in appropriate indoor or outdoor rated enclosures.

12. Chemical and Liquid Safety: Flammable and/or combustible liquids shall not be used, stored, or sprayed inside at any time. This shall include, but not be limited to: enamel paints, thinners, reducers, gasoline, or any other petroleum based liquids. All liquids must be in properly labeled original containers. No compressed gas cylinders are permitted. Decoy cylinders are NOT permitted.

13. Projects Needing Offloading Assistance: Projects to be hoisted from the top-side are to be fitted with lifting eyes at balance points that accommodate 1-inch shackles. Projects that cannot be safely off-loaded or set-up with equipment available may be disqualified. Transport trailers loaded in a manner that is unsafe to be towed into the display area with a move-in tractor will be towed in by the exhibitor, as space

is available, after all other projects are in place. Please inform us at [calebe@fisd.org](mailto:calebe@fisd.org) if your project will need to assistance offloading no later than December 15<sup>th</sup>.

14. Projects with Small Engines: There is to be no more than two gallons of fuel in any fuel tank. The fuel tank cap is to be in place and sealed with tape. The battery is to be disconnected. This applies to all engines in the exhibit area.

15 Vehicles: Tractors, trucks, ATVs or other vehicles (including non-entered trailers) are not allowed in the exhibit area as part of the display, unless approved by the Superintendent.

16. Signs: All projects are to be identified with standard club exhibitor cards. No "For Sale" or sponsorship signs will be permitted.

17. Sale Projects: All exhibitors/groups wishing to sell their projects should notify show management no later than December 15<sup>th</sup>. Exhibitors are encouraged to submit a detailed description and pictures of projects for sale to [calebe@fisd.org](mailto:calebe@fisd.org)

18. Loss or Damage: Gillespie County Junior Livestock Show, officials or committee members will NOT be responsible for any loss or damage to projects.

19. Judging System: The Danish System will be used in judging the projects. Projects will be judged on:

Criteria	Points
a. Workmanship	30
b. Design and Materials Used	20
e. Presentation	20
f. Documentation (email <a href="mailto:calebe@fisd.org">calebe@fisd.org</a> for reference)	20
d. Degree of Difficulty	10

20. Awards: Ribbons will be given as follows: Blue, Red and White. Projects receiving a red or white ribbon will not be placed as class winners.

21. Showmanship Awards: Judges will select exhibitors (by entry number) to receive recognition for showmanship awards based on the following criteria:

- a. Display and presentation of projects
- b. Housekeeping around projects
- d. Exhibitor's dress and professionalism
- e. Conduct, attitude and participation of exhibitors

22. Judging for Tractor Division

Judging System for Tractor Division

- a. Mechanical ..... 50 points
- b. Aesthetics..... 20 points
- c. Originality ..... 10 points
- d. Safety Equipment..... 10 points
- e. Documentation ..... 10 points

TOTAL..... 100 POINTS

A. Mechanical will include the restoration of engine, transmission, final drive, fuel system, cooling system, cranking or starting system, charging system, hydraulic system, steering system, etc.

B. Aesthetics will include the overall appearance of the tractor. This includes workmanship and finish. Items to be considered include, but are not limited to: metal preparation, completeness of sheet metal, paint and finish, detail and completeness of components such as wheels, tires, steering wheels, seats, decals, instrument panels, wiring harness, etc.

C. Originality will include paint color, fasteners, electrical systems, fuel systems, exhaust systems, mechanical systems, original unaltered serial places, etc.

D. Safety equipment will include all equipment that was original to the tractor. It also includes the provision of drip pans containing floor absorbent to collect any liquids that may drop from the tractor during display. Fuel shutoff valves under all fuel tanks must be functional and tractors are to be exhibited with the valves closed. An ABC fire extinguisher with a minimum of 2.5 pounds' capacity must be provided with each tractor. Extra fuel may not be stored in the arena. Tractor engines are to be started and run only at the request of judges or show officials.

E. Documentation must be typed or computer generated and is to include a one-page description of the overall restoration project, and expense report identifying all costs of restoration, photos showing before, during and after restoration that shows safe working environment, and a complete description of all mechanical work performed. All documentation is to be displayed in a three- ring binder, divided, and sequenced with a table of contents and page numbers. The National FFA Tractor Restoration Competition format and forms may be used.

F. A tractor restoration project can be exhibited only one time at the Hill Country District Junior Agricultural Mechanics Project Show and must have been constructed within two calendar years of the exhibition date.

23. Judging Courtesy: Exhibitors are not to interfere with judging. It is recommended they be with their projects as they are judged to answer questions and demonstrate operations as requested by the judges. AST/CEAs or adult leaders are not to participate in judging activities. Exhibitors participating in the breeding show will not be penalized. Exhibitors should not "over-recruit" passersby.

## **DIVISIONS**

### **AGRICULTURAL MACHINERY AND EQUIPMENT CLASSES**

1. Hay Handling Equipment
2. Spraying Equipment
3. Mounted Tractor Equipment
4. Shop Tables (NOT CNC-type tables)
5. Shop Equipment
6. Truck and Tractor Accessories
7. Other Agricultural Equipment
8. 1st place project for Division
9. 2nd place project for Division

### **LIVESTOCK EQUIPMENT CLASSES**

10. Entry Gates
11. Livestock Restraining and Handling Equipment
12. Livestock Show Equipment
13. Feeders
14. Other Livestock Equipment
15. 1st place project for Division
16. 2nd place project for Division

### **TRAILER CLASSES**

17. Small Utility Trailers – 10 ft. and under in length (length of cargo space)
18. Medium Utility Trailers – More than 10ft. up to 16 ft. in length (length of cargo space)
19. Large Utility Trailers – More than 16ft. and over in length (length of cargo space)
20. Modified Utility and Implement Trailers – all lengths
21. Welding Trailers
22. Special Purpose and Other Trailers (livestock, multi-bale hay hauler, dump, etc.)
23. Gooseneck Flatbed and Dovetail Trailers
24. Gooseneck Stock Trailers
25. Gooseneck Lowboy and Utility Implement Trailers
26. Other Gooseneck Trailers
27. 1st place project for Division
28. 2nd place project for Division

Other

29. Wildlife (wildlife projects such as deer stands (blinds), observation towers, hog traps, cages or hunting equipment.)

30. Outdoor equipment.

31. Grills

32. 1st place project for Division

33. 2nd place project for Division

Tractor Division

34. 1st place project for Division

35. 2nd place project for Division

## **NAMING AND DESCRIBING PROJECTS FOR SHOW**

A thorough and unique description should be utilized to describe projects. Brand names should not be used.

### **AGRICULTURAL MACHINERY AND EQUIPMENT CLASSES**

1. Hay handling equipment – Names and descriptions to use: 3-pt. hay fork, 3-pt. hay spear, front loader hay fork, bucket mounted hay spear, hay accumulator, pull-type single bale hay fork, hay conveyor, hay grapple, single bale hauler, etc.

2. Spraying Equipment -- Names and descriptions to use: 500-gallon nurse tank, 40' boom type pasture sprayer, 40' broad jet pasture sprayer, 5-gallon hand sprayer, etc.

3. Mounted Tractor Equipment -- Names and descriptions to use: 8' arena drag, 2 cubic yard scraper, 32' crust buster, 3-pt. carry-all, front end loader, 7' rotary cutter, 15' flex-wing rotary cutter, 8' box blade, 14' pasture aerator, 8' disc harrow, manure spreader, etc.

4. Shop Tables (Not CNC type tables) – Names and descriptions to use: 12ft. metal shop table with vice, 6ft Shop Table with drawers.

5. Shop Equipment -- Names and descriptions to use: shop table, jack stands, A-frame, saw horses, cut-off saw table, tire storage rack, barrel rack, welding table, cutting table, engine stand, cherry picker, oxy-fuel cylinder cart, A-frame hoist, electrical outlet stand, parts cleaner, electric over hydraulic floor press, electric over hydraulic pipe bender, sheet metal roller, trailer light tester, pipe roller, cut-off saw, bio-diesel machine, etc.

6. Truck and Tractor Accessories – Names and descriptions to use: pickup headache rack, pickup brush guard, front and/or rear pickup bumper, tractor grille guard, tractor brush guard, 3-pt. trailer coupler, pickup grille guard, truck tool box, receiver hitch carrier, ATV rack, fuel tank, welder bed for truck, air flow tailgate, custom truck bed, etc.

7. Other Agricultural Equipment – items that are Agricultural Machinery or equipment that do not fit into classes 1-6.

### **LIVESTOCK EQUIPMENT CLASSES**

(Domesticated Livestock Equipment Only)

10. Entry Gates – Names and descriptions to use: 10' entrance gate, 10' pasture gate, 10' livestock panel, 24' double entrance gate with arch way, cattle guard, etc.

11. Livestock Restraining and Handling Equipment – Names and descriptions to use: Hydraulic squeeze chute, hoof trimming table, squeeze chute with crowding pen or panels, squeeze chute, calf tilt table, farrowing crates, stalls, roping chutes, horse walker, portable alley way.

12. Livestock Show Equipment – Names and descriptions to use: cattle trim chute, sheep trimming stand, goat trimming stand, hog clipping stand, small animal crate for pickup, hog weighing station, animal scale, show box, grooming light stand, grooming stand with lights and outlets, livestock show display, lamb treadmill, chicken brooder, clipper blade sharpener, livestock blower, horse walker, etc.

13. Feeders – Names and descriptions to use: wind-vane mineral feeder, 8' open feed trough, 6' x 4' mineral and salt feeder, hanging hay feeder for horse stall, 12' hay/grain feeder, 1-ton self-feeder, 8' creep feeder, 12' trailer mounted self-feeder, 10' combination self-feeder/creep feeder, etc. No Wildlife feeders such as timed-tripod feeders, mineral feeders, etc.

14. Other Livestock Equipment – Names and descriptions to use: saddle rack, feed dolly, sales ring, auction stand, storage buildings (less than 200 sq. ft. ONLY). No wildlife projects such as deer stands (blinds), observation towers, hog traps, cages or hunting equipment.

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#### TRAILER CLASSES

17. Small Utility Trailers – 10ft. and under in length – Names and descriptions to use: 8' utility trailer, 10' tilt-bed utility trailer, 10' tandem axle utility trailer, etc.

18. Medium Utility Trailers – More than 10ft. up to 16 ft. in length – Names and descriptions to use: 12' utility trailer, 12' tilt-bed utility trailer, 15' utility trailer, etc.

19. Large Utility Trailers – Over 16 ft. in length – Names and descriptions to use: 18' tilt-bed utility trailer, 18' utility trailer, etc.

20. Modified Utility and Implement Trailers – *Note: Drop-bed trailers, trailers without side rails, landscape trailers, and other special purpose trailers that do not fit into the traditional trailer classes are to be entered in this class.* Names and descriptions to use: 14' flatbed equipment trailer, 16' landscape trailer, 10' drop-bed utility trailer, etc.

21. Welding Trailers – Names and descriptions to use: 14' welding trailer, 18' welding trailer with cutting torch, etc.

22. Special Purpose and Other Trailers – Names and descriptions to use: multi-bale hay hauler, livestock, dump trailer, etc.

23. Gooseneck Flatbed and Dovetail Trailers – Names and descriptions to use: 32' gooseneck float, 32' gooseneck dovetail float, etc.

24. Gooseneck Stock Trailers – Names and descriptions to use: 24' gooseneck stock trailer, 24' porta-frame gooseneck stock trailer, etc.

25. Gooseneck Lowboy and Utility Implement Trailers – Names and descriptions to use: 24' gooseneck lowboy, 20' gooseneck lowboy with ramps, 28' gooseneck combine hauler, etc.

26. Other Gooseneck Trailers – Names and descriptions to use: 14' welder trailer, 12' hydraulic dump trailer, etc.

Other

29. Wildlife Names and descriptions to use: deer stands (blinds), observation towers, hog traps, cages or hunting equipment.

30. Outdoor Names and descriptions to use: picnic table, swing, deck furniture, etc.

31. Grills Names and descriptions to use: bumper pull, smoker, fryer, etc.

### **Fastest Cutting Torch in Gillespie County**

The Fastest Cutting Torch in Gillespie County is a cutting torch contest designed to showcase students with cutting torch skills. This most essential metal fabrication skill is measured in head to head competition between students with speed and accuracy advancing students to the final rounds in a tournament format. Participants must be signed up for Ag Mech show to participate.

Rules:

1. Students participating in the contest will be paired by a drawing that will randomly place participants in a bracket that will remain the same for the entire contest. Irregular numbers of students may require the bracket to include some "bye" slots be added to complete the bracket.
2. In each round students will light their own torch, adjust to a neutral flame, and make the cut required in that round. Regulators will be preset by contest officials. The student whose metal falls to the ground first advances to the next round and the other student will be eliminated.
3. Any attempt to force the cut to fall by any action other than gravity (tapping with the torch tip, jarring the table, forcing with the hand, etc.) will result in that student being disqualified.
4. Safety equipment will be provided. Students choosing to use their own may do so. TWO high cuff gloves, safety glasses and a face shield must be worn while cutting. Eyewear must meet minimum Z87 standards. Students will be responsible for appropriate clothing. Long pants, closed toed shoes, and a long sleeved cotton shirt are required. Judges decision on appropriate clothing will be final.
5. If judges determine that a tip is dirty, both tips will be cleaned by contest officials prior to the next round. Equipment malfunctions that cause an unfair advantage to one contestant may result in a "re-ride" if judges deem it appropriate.
6. Metal to be cut will be provided by the contest. Preliminary rounds will cut flat metal,



approximately 4" wide and approximately 3/8" thick. As the contest progresses contestants will be expected to make cuts on pipe, angle iron, channel iron, etc. Piercing cuts may be required in later rounds. At no point will metal to be cut exceed 1/2" in thickness.

7. Prior to making their cuts students will be permitted to arrange metal, loses, and strikers on their work table for their own comfort. Judges will announce "go" to begin cuts in each round. Cut lines will be pre-marked by the judges.

8. If during the contest a student is called for and is not present for his turn, he will be eliminated and his competitor in that round will advance. Every effort will be made to accommodate students with other showing obligations and show officials may change the order of the brackets to help students participate.

9. Contestants may choose the torch/table they use to cut on. If both students choose the same station, a coin flip will determine student placement.

10. Participation in the contest will be limited to students that have submitted entries in the Ag Mechanics Division of the Gillespie County Junior Livestock Show.

11. Decisions of the contest officials as they pertain to safety and details of the contest are final.

<b>Gillespie County Junior Live Stock Show Ag Mech Summary Sheet</b>		
<b>Class</b>	<b>Item</b>	<b>Entry Number</b>
<b>Workmanship</b>	<b>/30</b>	<b>True &amp; Square</b>
		<b>Weld Quality</b> cold welds, over welding, lack of penetration, wagon tracks, under cutting, overlap, distortion control, poor head profile
		<b>Metal Cutting &amp; Drilling</b> (part of Fabrication) Sharp edges, poor fit up, rough torch cuts, poor pin hole or fit
		<b>Grinding</b> Excessive weld grinding, sharp corners, others
		<b>Paint Prep &amp; Finish</b> Slag and buckshot removal, weld cleaning, clean paint surface, primer coat, smooth even paint, finish appropriate for project, smooth even paint, Bondo use
<b>Design</b>	<b>/20</b>	Dimensions consistent with drawing, over or under sized materials, proper fasteners, ASABE standards met, safety, knowledge of why materials were used, practically and functionality of construction, operation convenience, how was design conceived.
<b>Documentation</b>	<b>/20</b>	<b>Drawing</b> To scale, dimensioned, complete enough to build from
		<b>BOM</b> Bill of materials
		<b>Photographs</b> Shows work in progress, labeled, shows safety, 24 max
		<b>Research</b> ASABE standards, DOT info, MSDS, and trailer components
<b>Presentation</b>	<b>/20</b>	Knowledge of manufacturing process and materials, student's speaking ability, answers to "Why?" questions, knowledge of design of project, student's appearance
<b>Difficulty</b>	<b>/10</b>	Size, scope, complexity, use of several skills and process, intricate and more

		difficult to build, added details, extra moving parts
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