

AGRISCIENCE FAIR

Texas FFA Convention

1. All registration will be on-line <www.judgingcard.com> in advance of the event date.
2. Teachers must complete the online application submit the written project as a PDF file, and all appropriate alternative forms via the judgingcard.com entry system no later than midnight, **June 23, 2014** (three weeks prior to event set-up at convention). All related materials must be uploaded at the time of registration. To determine if the alternative forms, such as a hazardous materials waiver, non-human vertebrate endorsement or human vertebrate forms are required, participants should consult the National FFA Agriscience Program details on the Texas FFA Website Agriscience Fair page. National qualifiers must refer to this same web site www.ffa.org and complete the National FFA Agriscience Fair Application Form and Related Forms contained in the National FFA Agriscience Fair Guidelines and Procedures. **DUE TO THE PRE-EVENT JUDGING SCHEDULE, LATE ENTRIES CANNOT BE ACCEPTED.** For additional details, please contact Dr. Rudy Ritz, the 2014 Texas FFA Agriscience Fair Superintendent (rudy.ritz@ttu.edu or 806.742.2816).
3. Competition is open to all FFA members in grades 7-12. Eligibility of each participant will be verified by checking the chapter's FFA roster. Students must:
 - a. be members of the FFA and listed on the state roster of a chartered chapter in current good standing.
 - b. at the time of the state event, must have completed one course in agriculture, food and natural resources (as defined by the Texas FFA membership policy) during the immediate past school year.
4. Participants must be present in official dress while their entries are being judged.
5. There are five divisions:
 - a. Division I is open to FFA members in grades 7, 8, and 9.
 - b. Division II is open to FFA members in grades 10, 11, and 12.
 - c. Division III is open to teams of two FFA members in grades 7, 8, and 9.
 - d. Division IV is open to teams of two FFA members in grades 10, 11, and 12.

5. There are **six** categories:

Animal Systems (AS)

The study of animal systems, including life processes, health, nutrition, genetics, management and processing, through the study of small animals, aquaculture, livestock, dairy, horses and/or poultry. Examples:

- Compare nutrient levels on animal growth
- Research new disease control mechanisms
- Effects of estrous synchronization on ovulation
- Compare effects of thawing temperatures on livestock semen
- Effects of growth hormone on meat/milk production

Environmental Services/Natural Resource Systems (ENR)

The study of systems, instruments and technology used in waste management; the study of the management of soil, water, wildlife, forests and air as natural resources and their influence on the environment. Examples:

- Effect of agricultural chemicals on water quality
- Effects of cropping practices on wildlife populations
- Compare water movements through different soil types

Food Products and Processing Systems (FPP)

The study of product development, quality assurance, food safety, production, sales and service, regulation and compliance and food service within the food science industry. Examples:

- Effects of packaging techniques on food spoilage rates
- Resistance of organic fruits to common diseases
- Determining chemical energy stored in foods
- Control of molds on bakery products

Plant Systems (PS)

The study of plant life cycles, classifications, functions, structures, reproduction, media and nutrients, as well as growth and cultural practices, through the study of crops, turf grass, trees and shrubs and/or ornamental plants. Examples:

- Determine rates of transpiration in plants
- Effects of heavy metals such as cadmium on edible plants
- Compare GMO and conventional seed/plant growth under various conditions

- Effects of lunar climate and soil condition on plant growth
- Compare plant growth of hydroponics and conventional methods

Power, Structural and Technical Systems (PST)

The study of agricultural equipment, power systems, alternative fuel sources and precision technology, as well as woodworking, metalworking, welding and project planning for agricultural structures. Examples:

- Develop alternate energy source engines
- Create minimum energy use structures
- Compare properties of various alternative insulation products
- Investigation of light/wind/water energy sources

Social Systems (SS)

The study of human behavior and the interaction of individuals in and to society, including agricultural education, agribusiness economic, agricultural communication, agricultural leadership and other social science applications in agriculture, food and natural resources. Examples:

- Investigate perceptions of community members towards alternative agricultural practices
- Determine the impact of local/state/national safety programs upon accident rates in agricultural/natural resource occupations
- Comparison of profitability of various agricultural/natural resource practices
- Investigate the impact of significant historical figures on a local community
- Determine the economical effects of local/state/national legislation impacting agricultural/natural resources

- Participants are limited to one entry. Grade is determined by the age of the member before completing the school year immediately preceding the State FFA Convention. A participant may compete in the junior division upon completing the 9th grade year. Each student and/or team of students may enter only one project. A team is defined as **two** members working cooperatively on the same project. Successive year projects must indicate a change or growth in the project from the previous year. There is no limit to the number of participants a chapter may submit. Upon receipt of abstracts and research papers, the contest superintendent may suggest a category change for project. Category changes will be done with the mutual agreement of the agricultural science teacher and contest superintendent. Category changes will not be made on-site.
- Interview times with the judging panel will be posted by 4:00 p.m. on the day of set-up. Interviews may not exceed fifteen (15) minutes. Judging times for each participant will be posted at the set-up site. Projects of like category and division will be judged consecutively as a group unless precluded by scheduling conflicts. Students with conflicts due to participation in other events will need to notify the agriscience fair coordinator during set-up to arrange alternative judging time. Students who are late for their interview appointment will not receive credit for interview or display portion of the evaluation sheet. Contest officials and participants only are allowed in event area during project judging.
- National scoring criteria will be used for evaluating the written project and presentations, with a total maximum score of 200, 100 points shall be allocated for the written project and 100 points for presentation. In the event of a tie, winner will be determined based on the score of the written project report. If a tie still exists, the tie will be broken on scores received in the following sections in order: Interview, Thoroughness, Information and Results/Conclusions.
- National Agriscience Fair Guidelines concerning safety regulations and display requirements will be used.
- Exhibited projects and project reports shall be the result of the student(s) own efforts. The official maximum size for a display is 48" wide by 30" deep (the distance from front to back) by 108" high (from floor to top, includes table if project is on table top). Failure to meet these requirements will result in disqualification. Please note that the width of tables vary per convention location and are generally 24" wide.
- All projects must have the following information attached to the upper right hand corner of the exhibit: Name of student(s), chapter name and location (city), title of category entered, division of category entered.
- Event judging days and times will be set by the superintendent and the State Executive Director or his designee in consultation with the teacher advisory committee and posted on the agriscience fair page and the general convention schedule on the Texas FFA Association's website. Judging start time will be posted in the convention program. Critique sheets will be available following announcement of results.
- Each agriscience fair participant will receive one ticket. Each **entry** will also receive one additional complimentary banquet ticket. Extra tickets may be purchased at set-up on an 'available only' basis.

14. A student may not represent the state at the national level more than once in the same category and division (i.e. Animal Systems, Division I) of the agriscience fair.
15. In cases of question, National FFA rules will prevail. A three-person committee may be used to settle disputes. Policies regarding protests will be in effect.

Texas FFA

Agriscience Fair Written Project Score Sheet

Student(s) : _____ Chapter: _____

Category: _____ Division: _____

Each category should be scored separately as determined by point values listed. The total possible score for the entire sheet is 100 points.

- _____ **5 pts. Title Page:** Title precisely describes the work with no more than 3 lines and 15 words maximum. All numbers, chemical elements and compounds should be spelled out. Page should include Agriscience Fair category and division, student name, grade, school and school address.
- _____ **5 pts. Abstract:** Abstract is brief and concisely describes the purpose, methods, results and conclusion. Abstract should not include the title or cited references. It should be no longer than one page. Arrangement of information should make the purpose, procedure and conclusion clear.
- _____ **10 pts. Introduction:** Introduction should answer the question “Why was the work done?” It should clearly state the problem that justifies conducting the research, the purpose of the research, the findings of earlier work and the general approach and objectives. It should include the objectives.
- _____ **10 pts. Literature Review:** Literature Review should detail what information currently exists concerning the research project. Information listed should be materials used in the research. Material cited would include articles about similar studies, similar research methods, history of the research area and other items that support the current knowledge base for the topic and how the project might complement existing information.
- _____ **20 pts. Materials and Methods:** The materials and methods section should enable others to reproduce the results by duplicating the study. It should be written in third person, encompass all of the materials required, and state the hypothesis. It should include statistical procedure if employed.
- _____ **20 pts. Results:** This section should be a summary of the results the project has produced. Trends and relationships are clearly addressed, but no conclusions should be made. Section should include data (tables, figures) that can stand alone and include headings, labels and proper units of measure. Captions for each table are placed above the table and a caption for a figure is placed below the figure. Both are at least two point sizes smaller than the point size of the figure’s text and are single spaced.
- _____ **20 pts. Discussion and Conclusions:** This section should show that the conclusions were drawn from the results of the study and how the results relate to the hypothesis. It should contain a brief recap of the results and show how the results were a foundation for the study. Explanations should be clear if the results were not as expected. Sound reasoning is used to make conclusions that rely on both literature and results. Discussion should reference facts and figures from results section. Conclusion should be editorial in nature.
- _____ **5 pts. References:** References should contain significant, published and relevant sources. APA style recognized citation is used throughout the report.
- _____ **5 pts. Acknowledgements:** This section should include a list or paragraph acknowledging anyone who helped in any aspect of the project and how they helped.

_____/100 Written Project Score

Texas FFA Agriscience Fair Score Sheet

Student(s) : _____ Chapter: _____

Category: _____ Division: _____

_____ **10 pts. Knowledge Gained** - Is there evidence that the student has acquired scientific skills and/or knowledge by doing this project? Does the exhibitor recognize the scope and limitation of the problem he/she has selected?

_____ **10 pts. Scientific Approach** - Has the problem been clearly stated? Has the exhibitor solved the problem by using scientific facts as a basis for new conclusions? Is the exhibitor aware of the basic scientific principles that lend support to the methods used and the conclusions reached?

_____ **10 pts. Experimental Research** - Has data been gathered from work done by the student, rather than the results from the work of others? Is the exhibitor's equipment effective? Does it do what it was intended to do? Can the research be the basis for further experimentation? Is the project actually a model or demonstration? Have variables been clearly identified and controlled for in the research process?

_____ **10 pts. Individual/Team Work** - Has material been gathered and cited using an appropriate format? Is the logbook present for examination? Does the log book contain detailed information about the research process? If this was a team project, is there evidence of collaboration present? Identify the portions of the presentation representing the work of others.

_____ **10 pts. Thoroughness** - Is the exhibitor aware of the empirical method (the necessity of repeating trials) and the importance of controlling the variables in the experimentation in order to reach valid conclusions? Has the analysis of the problem been orderly? Have procedures been outlined in a step-by-step fashion? How successfully was the original plan carried through to completion?

_____ **10 pts. Information** - Are known facts and principles stated correctly and used accurately? Have the results of experiments been reported accurately even though faulty experimental methods or conditions may have made the data unreliable? If so, have these errors been noted?

_____ **10 pts. Results/Conclusions** - Has the exhibitor started with known facts and drawn their own conclusions? Are the conclusions consistent with the data and/or observations? Is information provided as to what was learned as a result of research?

_____ **15 pts. Interview** - Is the exhibitor able to communicate their knowledge of the project?

_____ **15 pts. Visual Display** - Has the data been presented in the best manner for the particular type of information involved? Are spelling errors present? Does the exhibit demonstrate a general neatness and attractiveness? Is the display presented in a logical and interesting manner?

_____/100 Presentation Score

_____/100 Written Project Score

_____/200 TOTAL SCORE

In the event of a tie, winner will be determined based on the score of the written project report. If a tie still exists, the tie will be broken on scores received in the following sections in order: Interview, Thoroughness, Information and Results/Conclusions.