

CDE/LDE General Rules

Rules and events are evaluated and changes recommended by CVATA CDE/LDE Committee. The committee should meet at CVATA Summer and Mid-Winter Conference. Major CDE/LDE changes will only happen during event revision cycles.

Event Rules

- All participants must turn in to the State FFA Advisor the following completed (with all signatures) forms:
 - Authorization Form
 - Medical Release Form
 - Parent Consent Form
- All forms are a requirement to participate at the Colorado FFA Career Development Events. This requirement is for CSU liability. Your local liability forms will not be accepted. The form will be available on the website.
- No electronic devices are allowed at the events. These can be cause for disqualification.
- This competitive events activity is approved by the Colorado Community College and Occupational Education System and will be hosted by and held at Colorado State University and the location of the annual State FFA convention.
- Any student is eligible, who is a bona fide FFA member, enrolled in secondary agricultural education. If any ineligible participant competes in any event, the team from which the participant is a member shall be declared ineligible for any awards. If a student is entered and is not a dues-paid FFA member on the state roster, they cannot participate. All protests concerning participant eligibility should be made by an instructor and directed to the Chair of the State CVATA CDE/LDE Committee.
- The FFA awards and events are conducted in order to put to use the skills learned in agriculture/agricultural education and to create interest and provide incentive and recognition to members in the different fields of agriculture. Further, it is the purpose of the Colorado Agricultural Education Career Development Event to:
 - Stimulate interest and enhance the instructional program.

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- Stimulate interest and awareness of agriculture occupations.
 - Recognize FFA members at the local, state and national levels for exceptional accomplishments in progressing toward specific occupational objectives in agriculture.
 - Provide students with experience in developing skills necessary for employment in agriculture.
- Assistance will be provided to students who have special needs if the school notifies the event coordinator by submitting the special needs request form by the deadline.
- Individual departments of Colorado State University will be in charge of the events, which are hosted by CSU. Each department will be responsible for the selection and appointment of an event superintendent and judges. Superintendents will present awards.
- The State CVATA CDE/LDE Committee will reserve the right to change or amend rules. Changes in rules will be coordinated through the contest coordinator at Colorado State University or others facilitating the contest.
- Each event will have a specified number of participants with each school limited to one team per event, but a school may be represented by less than a full team.
- All coaches and other adult advisors, parents, drivers, etc. must remain away from the CDE event and other demonstration events and tabulating areas during the competition, unless volunteering as an Ag Teacher Helper through CVATA. LDEs are open for public observation for particular portions of the events see event coordinator for clarification.
- Members of the State CVATA CDE/LDE Committee and other Ag Teacher volunteers will be present at all events to help in the management of the events. If they cannot be present, they will find a suitable substitution and will communicate this to the CSU Contest Coordinator. These will be the only advisors/coaches present at the events while they are running. Any other advisor attending must be on a pre-determined list.
- Superintendents and teachers who are assisting in the management of the events and witness incidents, which violate the rules, may file the "Incident Report Form" to the contest coordinator or the State FFA Advisor. If issues cannot be resolved, the State FFA Executive Committee will be asked to consult and rule on the incident.

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- As this is a sanctioned FFA Event, all protests regarding CDE/LDEs (participation or scores) shall be made in writing to the State FFA Advisor who will work with the Colorado FFA Executive committee to make any necessary rulings needed.

Participation and Dress

- Any FFA member attending the CSU State Events not competing in one of the events or who is not a state officer, will be disqualified from any further participation. No alternates or other members will be allowed. Requests for exception to this rule must be made to the FFA Advisor (CCCS) prior to the state events occurring.
- Per the CDE/LDE Committee (2/28/18) a team from another state may make a formal request to be allowed to participate in the State CDE Event if their home state does not offer a state qualifying event. Participation will be determined on a case-by-case basis by the CDE/LDE Committee following the formal request and based upon consultation of the superintendent offering the event to determine capacity. The team will pay regular fees, receive scores, but will not be eligible for awards.
- No FFA member may drive a car to, from, or during the events unless accompanied by an adult sponsor approved by the school administration. This does not apply to state FFA officers.
- Advisors are required to stay with their members in the motel or hotel and be with them when members are not competing. The event activities are considered an extension of the classroom.
- Student Attire
 - See Ag Teacher Grid for appropriate attire for each event, since events are held outside and there may be inclement weather, students should bring warm clothing. The official dress will be required for attendance at the awards presentations. All attire disputes will be referred to the State FFA Advisor.
- All livestock, crop samples, or other materials that may be used in the state event will not be available for practice work by any active agriculture student or instructor six weeks prior to the dates of the actual event. In the event that a University-sponsored event involves the use of CSU livestock or material and is scheduled during this six-week period, a determination will be made by the State FFA Advisor whether participation by agriculture students or instructors will be

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permitted. If there is a question as to whether participation in such an event will be permitted, correspondence should be directed to the State Advisor and written permission must be granted before such participation. In the event that this rule is violated, the school will not be eligible for any awards in the event area in which the violation occurred. All determinations of event violations will be made by the event committee upon submission of a written protest to the State FFA Advisor and State CVATA CDE/LDE Committee.

- No supplementary materials that assist a student will be allowed in any event unless approved by the respective event superintendent and/or state Ag Ed staff.
- Any participant who confers with other individuals without authorization while the event is in progress will be immediately barred from the event by the event personnel. This policy will be strictly enforced.
- Late arrivals:
 - Teams arriving after the judging commences will not be scored for official placing.
- If one or more members are unable to continue the CDE due to sickness or accident, the remaining team member(s) will be able to continue and compete for individual awards.
- When a student is registered as an event participant in any state event, the teacher's submission of the entry form shall be considered a certification that the student has received training and safety instruction for that event. When, in the judgement of an event superintendent, a participant in any state finals event demonstrates incompetency or operates in a manner considered hazardous, that participant may be removed from the event. The judgement of the event superintendent shall be final.
- In the event a student is eligible for membership in two or more chapters; the student can compete as a member of one chapter only and compete only for that chapter during that school year. The chapter they are eligible to compete will be the one where they are enrolled at the time of the competition.
- All results are final unless otherwise notified by the State FFA office.
- Schools are to be responsible for having someone pick up awards in their absence per the policy adopted by the State CVATA CDE/LDE Committee (11/5-6/92).

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- Students who have previously been a member (generated a score) of a State Winning team or have competed at national competition in that event are NOT eligible to compete in the same event.
- In events requiring participants to perform in official dress, a 10% overall point deduction will be applied if requirement is not met.

Cancellation of Events

- In order to hold the event the participation levels must be 5 full teams, 20 individuals on CDE's or 10 individuals on LDE's, any less will result in event cancellation. Three years in a row of cancelled events will become permanently canceled and must go through a petitioning process to get reinstated.
- In order to start a new event (or reinstate a cancelled event) the following procedures should be followed:
 - At least one exploratory event should be offered at a district or state-wide level to generate sufficient interest in the event.
 - The exploratory event would include at least 2 components of the proposed state event. After such offering, a written proposal must be presented to the State FFA Executive Committee one year prior to the first offering of the event.
 - The event must meet the minimum participation levels. The event must be approved by the State FFA Executive Committee as a reasonable event to offer in Colorado.
- A final list of CDEs being offered for the year will be announced at the Mid-Winter conference and published in the handbook in the week following Mid-Winter conference.

Responsibility of Conduct: (Please review Colorado FFA Discipline Policy and Procedures Handbook)

- No team will be permitted to register or compete in the event unless chaperoned during the entire stay by the FFA advisor/team coach, principal, or superintendent or other designee of the local high school.
- The person in charge of each FFA group will be responsible for the entire group at all times.
- All team members and coaches will conduct themselves in such a manner that will not bring criticism to their chapter and to Colorado FFA.

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Scoring Rules

- Team and individuals will be scored on a point basis. Individual awards will be as follows:
 - Approximately 15% rated Gold receiving a gold plaque.
 - Approximately 15% rated Silver receiving a silver plaque.
 - Approximately 15% rated Bronze
- CDEs with low participation (fewer than 10 teams) will be awarded with natural breaks.
- State winning teams will each receive special recognition plaques.
- As approved by the State CVATA CDE/LDE Committee, high individual and team awards will be announced and presented in ranked order.

Agriculture Technical and Mechanical Systems

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification.

Event Rules

- Each chapter may enter only one team of up to four participants.
- The Agriculture Mechanics event will be a one-day event, occurring Monday, at the CSU CoBank Center on the CSU ARDEC.
- All general rules for the Colorado FFA Career Development Events apply to this event.
- The event supervisors have the authority to disqualify any participants (not the school) caught cheating or guilty of any other inappropriate conduct. It is the duty of the event supervisors to enforce all rules. At the discretion of the event supervisors, participants may be split into groups with only one member from a school in each group.
- Students must compete in this event to compete in the National Career Development Event.
- Participants must supply the following PPE:
 - Coveralls/shop coat
 - Work shoes or work boots. Tennis shoes will not be permitted.
 - Approved safety glasses (ANSI Z87)
 - Gloves
 - Arc and Oxy Acetylene welding helmets or welding goggles (Sunday only). ***Note: two forms of eye protection will be required for Welding – BOTH safety glasses AND goggles (or face shield)/helmet are required. Shaded safety glasses are NOT sufficient and students will NOT be allowed to participate if this is their only eye covering.***
 - Participants must carry all equipment with them – no toolboxes allowed.
 - **Students without above equipment will be disqualified. An equipment check sheet is included on the last page of the Agriculture Mechanics Events Rules which will be required for check-in and registration.**

- Participants disregarding safety precautions, thereby endangering themselves or others will be disqualified and all earned scores will be nullified. Standards for safety are expected to be followed by participants and may also be included as content in the written examination.

Event Format

Ag Power

- Content Areas Included in Odd Years
 - Small Gas Engines
 - Diesel Engine
- Content Areas Included in Even Years
 - Hydraulics
 - Electric Motors, controls & sensing devices

Ag Fabrication

- Content Areas included in all years of competition
 - Welding processes
 - Welding blueprint and symbols
 - Bill of materials and construction steps
 - Tool conditioning
 - Metal layout and measuring
- Content Areas included in odd years
 - Stick and/or Oxy/Fuel cutting or welding
 - Metal working (cold and hot)
- Content Areas included in even years
 - Wire-Feed and/or Oxy/Fuel cutting or welding
 - Tool conditioning

Ag Construction

- Content Areas Included in Odd Years
 - Carpentry and building design
 - Residential plumbing
- Content Areas Included in Even Years
 - Concrete and masonry
 - Residential electrical wiring
- Content Areas Included Every Year
 - Building blueprints

Ag Equipment, Technology & Natural Resources

- Content Areas Included in Odd Years
 - Non powered ag equipment operation
 - Adjustment and calibration of equipment
- Content Areas Included in Even Years
 - Surveying and land measurement
 - Soil conservation practices
 - Irrigation technology
 - GIS and GPS

Event Scoring

Knowledge (written test)

- 200 points – Includes all specific and general standards every year.
- Will include identification of tools, equipment, materials and supplies that relate to the individual section.

Problem Solving

- 100 points – Standards included pertain to rotation listed above

Skill or Application

- 200 points – Standards included pertain to the rotation listed above

Total

- 500 points

Total Event

- 2,000 points for individual and 6,000 points for team

Welding Rubric (this will be used to grade all welding skills)

GRADE	POINTS
5+	5.00
5	4.78
5-	4.62
4+	4.45
4	4.28
4-	4.12
3+	3.95
3	3.78
3-	3.62

GRADE	POINTS
2+	3.45
2	3.28
2-	3.12
1+	2.95
1	2.78
1-	2.62
0	0

- A letter grade of 5+ through 3- indicates the welder has performed to at least an industry minimum standard, 5+ being at or above industry standards and 3- being minimum standards.
- A letter grade of 2+ through a 1- indicates the welder has applied a weld with discontinuities exceeding industry minimum standards.
- A letter grade of 0 indicates the contestant has made no attempt at making the weld.

Grades will be given based on the amount of discontinuities in the weld as well as overall appearance.

Discontinuities in weld tests include:

- Excessive arc strikes outside the joint
- Excessive spatter
- Undercut
- Overlap
- Porosity
- Improper bead placement
- Lack of fusion between beads
- Lack of consistency
- Cold start

Competencies

The concepts and skills that students should know have guided the development of the components of this event. Competencies are taken from the Colorado Community College Website Competencies found here.

References:

- **FARM MECHANICS TEXT AD HANDBOOK;** Phipps, et.al.
- **AGRICULTURAL MECHANICS;** Phipps

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- **AGRICULTURE MECHANICS: FUNDAMENTALS AND APPLICATIONS;** Cooper, Published by Delmar
- **MODERN AGRICULTURE MECHANICS;** Wakeman, Published by Interstate
- **FUNDAMENTALS OF SERVICE-WELDING;** John Deere, Published by John Deere
- **ELECTRICAL WIRING;** AAVIM
- **WIRING SIMPLIFIED;** H.P, Richter, et.al.
- **LEVELING: A MANAGEMENT PRACTICE FOR AGRICULTURE (ALONG WITH STUDENT WORKBOOK);** Agricultural Education Dept., University of Arizona or Hobar Publications
- **OXYFUEL GAS WELDING;** Bowditch & Bowditch
- **LINCOLN PROCEDURE HANDBOOK;** James F. Lincoln Arc Welding Foundation, Published by Goodheart-Wilcox Company, Inc.

Student Check List for Personal Protective and other Equipment

All items will be checked on Monday at registration

Items Needed

- Work Boots/Shoes
- 4-function calculator (no cell phones)
- Coveralls or Shop coat
- Safety Glasses
- Pliers
- Tape measure
- No. 2 Pencil
- Coat/gear for outside (in case of bad weather – Monday)
- Welding Helmet
- Welding Gloves
- Oxy-Acetylene Welding Goggles

Questions should be directed to Nathan Clark CSU 970-491-3930

Agricultural Sales

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification.

Event Rules

- No school shall be represented by more than **four** persons. This number shall constitute a team; however, a school may be represented by less than four individuals.
- **Official FFA dress** is required.

Event Format

The event will be composed of three parts. Individual scores will be comprised of the written exam and individual sales activity. The team score will be comprised of the team activity and all individual scores.

- The product(s) utilized in the event and activity examples will be announced in February prior to the event on the CDE webpage. Provided product information may include appropriate company information and price list.
- Each participant will be allowed to bring a one-inch binder to the event containing the provided product information and any other information gathered by the participant.
- All teams will report to take the written exam then be released to report at an assigned time for presentations.

Individual Written Exam – 50 points

- The written exam is designed to evaluate an individual's knowledge of sales skills. The listed resources will be used as a basic resource but the questions will be generated based on basic sales concepts. The test will not exceed 50 questions and 50 minutes. The questions will consist of multiple choice, fill in the blank, short answer and essay format. Point values will be assigned to each question based on the skill level of the question.

Team Activity – 150 points

- Each participant will be provided product information for the products being used in the team activity. This information will be distributed to schools via the state CDE website.
- Team members will work together to demonstrate teamwork, group dynamics, problem solving, data analysis, decision making and oral communications.
- Teams will be allowed to use their one-inch binder for the event.
- The following information will be provided to the team at the event as if they were a group of salespeople working together to develop the pre-call planning prior to conducting a sales call.
 - Product information (before event)
 - Profiles of different customers
- The team will be provided with paper and writing utensils. No presentation equipment such as laptops, flipcharts or dry erase boards will be allowed.
- The team will then develop the strategy (for the product(s) provided prior to the event) necessary to sell the product(s) in a face-to-face sales call. This strategy should include but not be limited to:
 - Determining potential customer needs and wants.
 - Identify features and benefits of the product(s) that address the customer's needs and wants.
 - Identify potential customer objections and prepare to address them.
 - Identify possible related/complimentary products and their suggestive selling strategies.
 - Develop information gathering questions to be utilized in clarifying the customer's needs and wants
- Teamwork and involvement of team members will be judged during this event. Students are expected to justify their decisions based on selling principles.
- The team will be given twenty (15) minutes to analyze the information given and develop a presentation to provide the information listed above. During this twenty (15) minute period the team will be judged using the team activity scorecard found in this chapter.
- At the conclusion of the twenty (15) minutes, the team will present to the judges who are acting as the team's immediate supervisors. The presentation will be no longer than ten (10) minutes to ask questions

of all team members. The questions will be taken from all aspects of the team event.

Individual Sales Activity – 150 points

- Participants will directly sell the product(s) to judge(s). Students will be given a preliminary customer profile and will have at least five minutes to review the preliminary customer profile prior to meeting with the judge(s). The judge(s) will act as the customer which may include not buying the product. Participants will have to establish rapport, ask probing questions to ensure they meet the customer's needs, and clarify customer information as a part of the sales call. Participants will have 10 minutes to interact with the judge(s). Participants are allowed to use their one-inch product information binder during the individual activity.

References

This list of references is not intended to be all inclusive.

- Ditzenberger and Kidney. **SELLING-HELPING CUSTOMERS BUY**. South-Western Publishing Company, Cincinnati, OH, 1986. To order: (800) 543-7972. Stock number: S20. Cost \$14.95
- CRISP Publications, 1200 Hamilton Court, Menlo Park, CA 94025-1427. (800) 442-7477. FAX (650) 323-5800
 - **PROFESSIONAL SELLING**, Rebecca L. Morgan, ISBN 0-931961-42-4
 - **SALES TRAINING BASICS**, Elwood N. Chapman, ISBN 1-56052-119-8
 - **CLOSING**, Virden J. Thorton, ISBN 1-56052-318-2
- Sperich, Woolverton, Beierlein. **INTRODUCTION TO AGRIBUSINESS**. Prentice Hall Career and Technology, 1994. Publisher's address: Englewood Cliffs NJ 07632
- Downey, Jackson, Stevens **AGRI-SELLING**. Century Communications, Inc., 1984 Publisher's address: 5520-G West Touhy Ave., Skokie, IL 60077.

Event Scoring

- Written Test – 50 points
- Individual Sales Call – 150 points
- Team Activity – 150 points
- Team Total – 750 points

Evaluation Criteria

National FFA Agricultural Sales rubrics will be used.

Tiebreakers

Individual

In the event of a tie in individual scores, the following events will be used in order to determine award recipients:

1. Written Exam
2. Individual Sales Call
3. Team Activity

Team

In the event of a tie in team scores, the following events will be used in order to determine award recipients:

1. Written Exam
2. Team Activity
3. Total Individual Sales Activity

Dairy Cattle Judging

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification.

Event Rules

- Prior to boarding the bus, participants shall report to the event superintendent to be assigned a number and group. The participant shall be known by this **number** throughout the event and **shall number all cards with this number only.**
- No school shall be represented by more than four persons. This number shall constitute a team; however, a school may be represented by less than four individuals.
- Each participant shall hand in a card, bearing the assigned number, the descriptive name given the class of animals and placings to the clerk in charge of group immediately after finishing with each class. While the event is in progress, there shall be no conferring between participants or with anyone else. Participants having questions to ask shall consult the event Superintendent or his representative.

Event Format

- It will be the duty of the Superintendent to take charge of the participants during the event. He will divide the participants into such groups as may be necessary. The superintendent will be responsible for the order in which the classes of stock shall be judged, and the order in which the various groups shall judge these classes. The superintendent will appoint such assistants as may be necessary to take charge of the various groups. The superintendent will enforce the rules, and will be responsible for the distribution and collection of the placing cards. The superintendent shall also collect and compile the placings and scores assigned by the judges.
- Full instructions will be given to the participants at the opening of the event.
- Four animals shall constitute a judging class. Cattle shall be identified during the class, and will be tied and standing. They shall be

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numbered 1, 2, 3 and 4 from **right to left**. Classes shall be selected from the breed available.

- o Classes may change due to availability of livestock.

General Knowledge Exam

- The exam will consist of a 50 question exam involving dairy management practices and DHI Records.
- Forty questions will cover various dairy management and industry related topics.
- Ten questions will be answered using a dairy herd record evaluation data sheet to analyze individual cows.
- Participants will have 40 minutes to complete the exam.

Evaluation and Selection

- Six classes of four dairy animals will each be placed on type.
- Classes will be selected from the recognized breeds of dairy cattle. The class selection committee, however, shall give priority to selecting quality cattle in the breeds available and not be obligated to having all breeds represented in the evaluation classes. Classes will consist of heifers, young cows or mature cows.
- Class or classes may contain production/pedigree data as part of the evaluation process.
- Participants will be permitted to view the animals from all angles but will not be permitted to handle them.
- The dairy cattle handlers will wear numbers which identify the animals.
- Each class is worth 50 points maximum for a correct placing.
- Participants will have 15 minutes to place each class. For classes on which oral reasons will be given, participants will be given 15 minutes.

Oral Reasons

- Oral reasons will be required on two classes. These two classes will be designated by the event superintendent prior to the actual evaluation of the class.
- Oral reasons will be given in another location immediately following the evaluation classes.
- Participants may not use notes during delivery of reasons. Points will be deducted for the use of notes.
- Each class is worth 50 points maximum for each set of reasons.

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Event Scoring

- Placing Classes
 - 6 classes @ 50 points each – 300 points
- Reasons Classes
 - 2 classes @ 50 points each – 100 points
- Evaluation/Pedigree/Performance Class – 50 points
- Questions Class – 50 points
- Test
 - 50 problems @ 3 points each – 150 points
- Total Points – 650 points

Tie Breakers

Individual

- Oral reasons score
- General knowledge exam score
- Evaluation score

Overall Team

- Total oral reasons score
- Total general knowledge exam score
- Total evaluation score

Employment Skills

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification.

Event Rules

- The FFA Employment Skills Career Development Event will be limited to **one participant per school**.
- The FFA Employment Skills Career Development Event will be for students who are regularly enrolled in agricultural education during the calendar year, have a planned course of study, or who are still in high school, but have completed all the agricultural education offered. When selected, participants must be active members of chartered FFA chapter and the National FFA Organization.
- Participants should be in official FFA dress.
- Each participant's cover letter, resume, and application will be the result of his/her own efforts.
- Participants shall be ranked in numerical order on the basis of their score in interview, technical and overall points. The judge's ranking of each participant then shall be added, and the winner will be that participant whose total ranking is the lowest.
- All items (application, cover letter and resume) must be submitted by the official due date.
 - A point deduction will occur for late materials.

Event Format

- Equipment
 - Students must provide their own writing utensils (black or blue pen recommended).
- Activities
 - The event is developed to help participants in their current job search (for SAE projects, part-time and full-time employment). Therefore, the cover letter, resume and references submitted by the participant must reflect their current skills and abilities and must be targeted to one of the three job descriptions that they

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are applying for. In other words, participants cannot develop a fictitious resume for a fictitious job. Instead, they are expected to target the resume towards a real job that they qualify for.

- The student will apply for one of three position descriptions announced and posted February 15th.

Items to be Submitted Prior to Event

- The participant **must upload** documents to Judging Card in either Microsoft Word or Adobe PDF format. Each upload contains a cover letter, resume and reference page, not to exceed four total pages
 - Cover Letter
 - In addition to the cover letter being a formal cover letter, it must also identify the position in which they are applying for. The letter is to be one page, left justified and typed with 12 pt. font.
 - Letter is to be addressed to: Employment Skills Superintendent, Career Development Events, Colorado State University, Ft. Collins, CO 80523-1101
 - Please note: There is a different address to be used for the National CDE.
 - Resume
 - The resume is to be single-sided only, typed not to exceed two pages total. Suggested formats can be found in the Greggs Manual or on the [CSU Career Center website](#).
 - Resume must be non-fictitious and based upon the participant's actual work history.
 - Make resume relevant to job focusing on skills learned, including all relevant experiences and involvements.
 - Employment Application
 - Participant will complete and submit a standard on-line job application by the due date.

Items to be completed at the Event

- Personal Interview
 - The personal interview will consist of an interview in front of a panel of judges. Each interview will last approximately twenty minutes.

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- Follow-Up Letter
 - Thirty minutes will be given.
 - Participant will submit a follow up letter after the interview. Participant will be provided a computer with Office XP – Microsoft Word 2007 to compose and type a follow up letter. A printer will also be furnished. Follow-up letters should be written in direct response to the interview and should not be pre-written. Letter is to be addressed to the Job Interview Superintendent as in the cover letter.
- Networking Activity
 - Participants will be given a networking scenario in which they will be expected to formulate a two to three minute extemporaneous response to one or more judges. Scenarios may include, but are not limited to meal function, a mixer, career show, an elevator pitch, etc.

Event Scoring

Section Points

- Cover letter – 100 pts
- Resume & Reference Page – 200 pts
- Application – 100 pts
- Personal Interview – 500 pts
- Follow up Letter – 50 pts
- Networking – 100 points
- **Total Possible – 1050 pts**

Tie Breaker

- Personal Interview
- Resume
- Networking

References

The list of references is not intended to be inclusive. Other sources may be utilized and teachers are encouraged to make use of the very best

instructional materials available. The following list contains references that may prove helpful during event preparation.

- [CSU Ag Education](#)
- Greggs Manual, Elements of Style-Struck and White, Microsoft Word resume templates
- 101 Toughest Interview Questions...and Answers That Win Jobs, Daniel Porto, Daniel Porto/Paperback/Published 1999
- 25 Reasons Why I Won't Hire You! What You Did Wrong Before, During & After the Interview! Zenia Glass/Paperback/Published 1998
- Best Answers to the 201 Most Frequently Asked Interview Questions, Matthew J. DeLuca, Matthew J. DeLuca/Paperback/Published 1996
- The Complete Employment Skills Handbook, John J. Marcus/Paperback/Published 1994

Job Sites

Jobs should be relevant to your age and skill set and must be a real job description. Check your local newspaper, journals and magazines.

- Websites
 - [All majors](#)
 - [Animal Nutrition, Business Grain](#)
 - [Banking, Finance](#)
 - [General Ag](#)
 - [All majors](#)
 - [All majors](#)

Farm and Agribusiness Management

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification.

Event Rules

- Each team will consist of four members; however less than four members can participate.
- Only calculators that are furnished by Colorado State University can be used for the event.
- Please contact the Event Superintendent for copies of old exams and/or to answer any questions with regard to the Farm Business Management event.

Event Format

- The Farm Business Management event will consist of two parts
 - Written Test
 - Team members work as individuals and each will complete the written test.
 - There will be 50 multiple-choice questions with 60 minutes allowed for completion of this section of the event.
 - Problem Solving Analysis
 - Team members work as individuals and complete all problems assigned.
 - One hundred fifty minutes are allowed or completion of this section.

Part I – Written Test

- The written test of the Farm Business Management event is designed to test team members' understanding of economic principles in farm management.
- Multiple choice questions, some related to problem situations, form the basis for testing this understanding. In general, questions are designed for the understanding of the application rather than definition identification.

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Part II – Problem Solving Analysis

- The problem solving analysis portion of the Farm Business Management event is designed to determine the team members' ability to apply principles of farm business management to decision making process by actual problem analysis and to justify the decisions made.

Event Scoring

- Written Test- 100 points
- Problem Solving Analysis – 200 points
- Total Points – 300 points

Tie Breaker

- Written Test
- Problem Solving

References

- Bulletin No. 4, **NATIONAL FFA CONTESTS 1991-93**
- **DOANE'S FARM MANAGEMENT GUIDE**, 1985. Doan Publishing, 1701 Borman Drive, St. Louis, MO
- Jobs & Steward, 1987. **FARM & RANCH BUSINESS MANAGEMENT**, Deere & Company, Moline, IL
- **SOURCE UNIT IN AGRICULTURAL MANAGEMENT 1987**. CCOES-CSU, Ft. Collins, CO
- **SOURCE UNIT IN AGRICULTURAL FINANCE 1986**. CCOES-CSU, Ft. Collins, CO
- **SOURCE UNIT IN AGRICULTURAL MARKETING**, 1986, CCOES-CSU, Ft. Collins Kay, R.D. and W.M. Edwards, Farm Management, McGraw Hill, Inc.

Field Crops

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification.

Event Rules

Field Crops Team

- A field crop team consists of four (4) individuals. The top three scores will be counted toward the team score. Awards will be given based on individual and team accomplishments.

Instructions to Students

- Team members shall report to the Superintendent to receive detailed instructions. Participants may bring a magnifying glass, and forceps. Each participant **MUST** have a No.2 pencil. CSU will furnish calculators. No other materials are allowed.

Event Format

Procedure for Event

- Students will be allowed 45 minutes for each phase of event.

Quality of Samples

- The quality of the samples will be governed by the quality of materials available for preparation.

Review of Event

- If possible, a review of the event will be held. Time and place for the review will be announced.

Seed Analysis – Total Time: 45 minutes

- There will be four (4) samples of seed for analysis on the basis of seed purity. These four samples are to be chosen from the following groups:
 - Wheat
 - Barley
 - Oats

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- Alfalfa
- Sweetclover
- Crested Wheatgrass
- Bromegrass
- The seed quantities before the addition of impurities shall be 30 grams for small grain and 10 grams for alfalfa, clover, crested wheatgrass and bromegrass.
- The participant must classify and name, according to common names, all seeds mixed with the base sample. The classification shall be:
 - Other crops
 - Prohibited noxious weeds
 - Restricted noxious weeds
 - Other common weeds
- No less than three seeds of another crop or five seeds of any weed will be added to a sample. Additions will be limited to items on the list of identification materials for the field crops event. No limits on additions.
- Like or similar crops such as wheat in wheat, oats in oats, barley in barley or sweet clover in alfalfa, shall not be used as additions to a sample. If wheat is used as an add-mixture, it need only be identified as "wheat".
- A seed analysis form will be available for the student to use and evaluate each sample. This form will not be scored. However, ten multiple choice questions will be asked about each of the four seed analysis samples and scored. It is possible that a pure sample may be included for seed analysis.

Written Test and Problem Solving – Total Time: 45 minutes

- Written test – 30 minutes
 - Fifty multiple choice questions will be selected from a pool of questions provided by Agricultural Education teachers. These questions will reflect common crop production problems and/or practices encountered in the major crops of Colorado. Where necessary to visualize the question for the participant, pictures, models, plant samples, or slides will be displayed.
 - Insects covered in "The Pesticide User's Guide" are suggested as possible ways in which slides could be employed. Corn, small grain, alfalfa, bean, potato or sugar beet insects considered as major pests may be used in this section.

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- Participant answers will be recorded on machine-scored sheets; therefore, each participant must have a number 2 pencil.
- Problem Solving – 15 minutes
 - The ten problems will be chosen from a pool of problems provided by the Agricultural Education teachers. As in the previous section, participants will respond with their answer on machine-graded forms.
 - Problems will be developed around the production practices of the major crops in Colorado. Hand-held calculators may be a valuable tool but will not be provided by the event superintendent.

Insect Identification and Pesticides – 45 minutes

- Insect Identification – 25 minutes
 - Each participant will identify 20 insects. The participant will have 60 seconds to identify each insect.
 - Insects will be identified by common name. The insect may be in adult or larvae/nymph form.
 - The list of common insect pests that will be included in the event are as follows (A=Adult Stage & B=Adult or Larvae/Nymph Stage):
 - Alfalfa weevil (B)
 - Grasshopper
 - Redlegged (A)
 - 2-striped (A)
 - Migratory (A)
 - Differential (A)
 - Pea aphid (B)
 - Western corn rootworm (A)
 - European corn borer (A)
 - Banks grass mite (B)
 - Western bean cutworm (B)
 - Army cutworm (B)
 - Sunflower head moth (A)
 - Banded sunflower head moth (A)
 - Greenbugs (A)
 - Colorado potato beetle (B)
 - Codling moth (B)

- Potato psyllid (A)
 - Russian wheat aphid (A)
 - White grub (B)
 - Thrips (A)
- Stored Grain Insects
 - Indian meal moth (A)
 - Saw-toothed grain beetle (A)
 - Lesser grain borer (A)
 - Flour beetle (A)
- Beneficial Insects
 - Green lacewing (A)
 - 7-spotted lady beetle (A)
 - Convergent lady beetle (A)
 - Ground beetle (A)
 - Flower fly (A)
 - Lady beetle (B)
- Pesticides – 20 minutes
 - Each participant will be given 20 minutes to complete the pesticide application/safety section of this event.
 - The pesticide application section will include 25 questions dealing with general pesticide information and 15 questions concerning the understanding of a pesticide label. All information included in a product label may be used.
 - Safety in application and use of pesticides will be included in this section. Personal safety as well as environmental safety will be included.
 - Problems dealing with calibration and use of pesticides will be included.

Identification of Crops and Weeds – Total Time: 45 minutes

- The identification phase of the field crops will comprise of total of 120 samples to identify on which a total of 600 points may be scored. A time limit of 45 minutes will be allowed for this part of the event. The event will be broken down into identification of grain crops, forage crops, other crops and weeds. Seeds, head (or ears) may or may not be included on any specimen. Green growing plants may be used for some of the samples.

- Fifteen species are listed for the seedling identification portion of this event. Eight of the 15 will be displayed as either picture or live seedlings. These eight species will be judged and scores recorded as a separate part of the identification portion of the event.

Event Scoring

Seed Analysis

- 400 total points

Written Test and Problem Solving

- 300 total points
 - Written Test – 200 points
 - Problem Solving – 100 points

Insect Identification and Pesticides

- 300 total points
 - Insect Identification – 100 points
 - Pesticides – 200 points

Identification of Crops and Weeds

- 600 total points

Total Points

- 1600 total points

Tie Breakers

- Exam
- Seed Analysis
- Identification

References

Pesticides

- Private Applicators Training Manual
- US Environmental Protection Agency – Region VIII
- 1985 Product Guide, Agricultural Chemicals. COOP

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- 1991 Pesticide Guide – Field Crops
- 1991 Pesticide Guide – Commercial and Vegetable crops
- 1991 Tree Fruit Pest and Crop Management Guide
- Plant an seed samples may be ordered from the Agronomy Club of the CSU Soil and Crop Sciences Department
- Seedling identification photographs may be ordered from the CSU Bioagricultural Sciences and Pest Management Department

List of Identification Materials – Crops Event

Key:

- (e) = plant or head or seed or both
- (p) = plant, head or ears
- (s) = seed only
- (b) = both plant or head and seed

Grain Crops	Forage Crops
Spring wheat (b)	Alfalfa (e)
Winter wheat (b)	Red clover (e)
White wheat (b)	Alsike clover (e)
Rye (e)	White clover (e)
Oats (e)	Sweetclover (e)
Two-rowed barley (e)	Strawberry clover (e)
Six-rowed barley (e)	Sundangrass (e)
Dent corn (e)	Timothy (e)
Popcorn (e)	Kentucky bluegrass (e)
Sweetcorn (e)	Crested wheatgrass (e)
Proso millet (e)	Intermediate wheatgrass (p,b)
Foxtail millet (e)	Western wheatgrass (b)
Grain sorghum (e)	Buffalograss (e)
Fieldpeas (e)	Blue grama (p)
Great northern fieldbean (s)	Smooth brome grass (e)
Pinto fieldbean (s)	Orchardgrass (e)
Flax (s)	Tall fescue (e)
Sugarbeet (s)	Perennial rye-grass (e)
Safflower (e)	Reed canary-grass (e)
Castor (s)	Redtop (e)
Soybean (e)	Big bluestem (p)
Triticale (e)	Little bluestem (p)
	Russian wildrye (e)
	Side-oats grama (e)

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Grain Crops	Forage Crops
	Canada wildrye (e)

Weeds and Weed Seeds Identification

- Prohibited Noxious Weeds
 - Leafy spurge (e)
 - Russian knapweed spotted and/or diffuse (e)
 - Field bindweed (e)
 - Canada thistle (e)
 - Whitetop (e)
 - Woollyleaf bursage (poverty weed) (p)
 - skeletonleaf bursage (silverleaf poverty weed) (p)
 - Johnsongrass (e)
 - jointed goatgrass (e)
 - musk thistle (e)
 - perennial sowthistle (e)
 - Saint Johnswort (e)
 - perennial pepperweed (e)
- Restricted Noxious Weeds
 - wild oats (e)
 - puncture vine (e)
 - curly dock (e)
 - poverty sumpweed (p)
 - dodder (e)
- Common Weeds
 - common sunflower (e)
 - green foxtail (e)
 - yellow foxtail (e)
 - Russian thistle (e)
 - redroot pigweed (e)
 - lambsquarters (e)
 - foxtail barley (e)
 - prickly lettuce (e)
 - sandbur (e)
 - wild buckwheat (e)
 - downy brome (e)
 - barnyardgrass (e)
 - buffalo bur (e)

- Kochia (e)
- Common mallow (e)
- Shepherdspurse (e)
- Crabgrass (e)
- Cocklebur (e)
- Poison milkweed (p)
- Low larkspur (p)
- Tall larkspur (p)
- White locoweed (p)
- Chicory (p)
- Tansy mustard (p)
- Flix-weed (mustard) (p)
- Field pennycress (fanweed) (e)
- Yellow toadflax (e)
- Dalmatian toadflax (e)
- Wild proso millet (e)
- Burdock (e)
- Marshelder (p)
- Mullen (p)
- Seedling Identification
 - Common sunflower
 - Crabgrass
 - Dalmatian toadflax
 - Puncture vine
 - Musk thistle
 - Jointed goatgrass
 - Lambsquarter
 - Russian knapweed
 - Leafy spurge
 - Canada thistle
 - Downy brome grass
 - Russian thistle
 - Redroot pigweed
 - Field bindweed
 - Kochia

Floriculture

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification.

Event Rules

No refunds on the Floriculture event after the entry deadline. Portions of this event may be conducted on Sunday evening before the normal CDE day at CSU. Make sure to check the master event schedule on the state CDE webpage to find time and locations.

- All general rules for the Colorado FFA Career Development Events apply to this event.
- The event supervisors have the authority to disqualify any participants (not the school) caught cheating or guilty of any other inappropriate conduct. It is the duty of the event supervisors to enforce all rules. At the discretion of the event supervisors, participants may be split into groups with only one member from a school in each group.
- Team will consist of up to four members with three members' scores counting toward total team score.
- Students must compete in this event to compete in the National Career Development Event.

Event Format

- Content for this event will be based on student outcomes for floriculture and greenhouse management found in the [Colorado AFNR content standards](#).
- Each participant will be provided with a single score scan sheet. This scan sheet will be used for all phases of the event. In the event of its loss, that participant will be disqualified. Each team shall use their official Colorado FFA Chapter Number for their team number.
- The general guidelines for this event have been developed from the [National Career Development Events Handbook](#).

Identification of Plant Materials

- Fifty specimens from the Floriculture Plant Identification List will be displayed for participants to identify by technical and common names.
- A number will designate each specimen. Four points will be awarded for each specimen that is correctly identified.
- Each participant is allowed 50 minutes to complete this event, or one minute per specimen.
- No specimen may be touched or handled in any way.

General Knowledge Examination

- Fifty objective-type questions will be selected from the bank of questions.
- The questions will be taken equally from the Floral Designing and Greenhouse Study Packets.
- This phase of the event will test participants' knowledge and understanding of basic biological and scientific principles of producing and marketing flowers, plants and foliage.
- Each participant will be allowed 50 minutes to complete this event.

Practicum

- Floral Design
 - Make a \$35 floral arrangement (The \$35 cost will include both labor and tax and be within fifty cents either way of the \$35) using the materials provided.
 - The event superintendent will announce the type of arrangement during the team orientation meeting.
 - Participants will be allowed 40 minutes to complete their arrangement and itemized bills.
 - The event retail price of the flowers and foliage that they will use in their arrangements. The markup will be built into the retail price. When the participant has determined the total arrangement cost, he or she has included the markup.
 - Judges will be professional designers from the local community.
 - Scoring criteria are presented on the floral arrangement practicum scorecard which will be recorded by a judge.
 - Explanation of Floral Arrangement Terms
 - Design: Category Interpretation: Design follows objective/scenario given

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- Balance: Physical and visual
- Creativity: Artistic inventiveness
- Depth: Placement of materials at different levels throughout the arrangement
- Focal Emphasis: Design has one area of design that attracts the eye to it.
- Line: Movement
- Mechanics: Professional techniques and application
- Scale: Proportion
- Unity: Cohesiveness of design
- Identifying and Controlling Plant Disorders
 - Pest and disorder items may be presented as an intact specimen, photograph or preserved specimen (herbarium sheet, insect mount, etc.) Each specimen will be designated by a station number. The participant must identify the item and its classification (nutritional/environmental, insect/pest, or disease). The participant then must determine the damage location as well as chemical and culture controls for the disorder. Each participant will identify 15 specimens total for this event.
 - No specimens or items may be touched or handled in any way. 20 minutes will be allowed for this event. Refer to the Disorder Practicum Scorecard for additional details.
 - The plant disorders will come from the following list of disorders.
 - Nutritional and Environmental Disorders
 - Cold temperature (freeze)
 - Cold water damage
 - Ethylene damage
 - Insufficient water damage
 - Iron deficiency
 - Nitrogen deficiency
 - Phosphorus deficiency
 - Diseases
 - Botrytis-Gray mold
 - Damping-off
 - Downy mildew
 - Leaf spot (Black)
 - Powdery mildew
 - Root rot

- Rust
- Stem rot
- Tospovirus (INSV and TSWV)
- Insects and Pests
 - Aphids
 - Fungus gnats
 - Leaf miner
 - Leafhopper
 - Mealybugs
 - Scale
 - Shore flies
 - Snails/Slugs
 - Spider mites
 - Thrips
 - Whiteflies
- Identification of Growing Equipment and Procedures
 - 25 items of equipment (or pictures) will be displayed for participants to identify from the provided equipment list.

Event Scoring

Identification of Plant Materials

- 200 points

General Knowledge Examination

- 100 points

Practicum

- 200 points
 - Floral Arrangement – 100 points of the 200
 - Identifying Plant Disorders – 75 points of the 200
 - Identification of Growing Equipment & Procedures – 25 points of the 200

Tie Breakers

- Written Exam
- Plant and Equipment Identification
- Floral Arrangement Practicum

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References

The plant identification list, equipment and supply identification list and rubrics can be found on the National FFA CDE webpage and on Colorado Ag Ed Moodle.

Food Science and Technology Career Development Event

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification

Event Rule

- Teams will consist of up to four members. Team ranking is determined by combining top three members' scores for the team score.
- All general rules for the Colorado FFA Career Development Events apply to this event
- Official FFA Dress is required for this event.
- Each participant must provide; a clipboard that is clean and free of notes, two sharpened No. 2 pencils and an electronic calculator — Calculators used in this event must be non-programmable and non-graphing. Calculators should have only basic functions such as addition, subtraction, multiplication, division, equals, percent, square root, +/- key. No other calculators can be used during the event including cell phones.
- Any participant in possession of an electronic device in the event is subject to disqualification.

Allergy Information: Food products used in this event may contain or come in contact with potential allergens. Any participant in need of a reasonable accommodations for their participation in the Food Science and Technology CDE should complete the online Reasonable Special Needs Request Form upload during registration. Questions may be directed to the State FFA Advisor or the CSU CDE contest coordinator.

Purpose

The food science and technology career development event is designed to promote learning activities in food science and technology related to the food industry and to assist students in developing practical knowledge of principles used in a team decision-making process.

Objectives

The food science and technology career development event provides the opportunity for the participant to

- Gain an awareness of career and professional opportunities in the field of food science and technology.
- Experience individual participation, group scoring and leadership responsibilities in a competitive food science and technology program.
- Develop technical competence and personal initiative in a food science and technology occupation.

Event Format

The event is composed of four parts that are each completed individually. The four individual scores of the objective test, problem solving/math practicum, food safety and quality practicum and the sensory evaluation practicum will all be comprised together to create the team score

Objective Test (150 points possible per individual)

The objective questions administered during the food science and technology examination will be designed to determine each team member's understanding of the basic principles of food science and technology. The test will be created using the textbooks and websites specified in the reference section.

Team members will work individually to answer each of the 50 questions. Each person will have 60 minutes to complete the examination. Each question will be worth three points, for a total of 150 points.

Problem Solving/Math Practicum (25 points possible per individual)

- Participants will answer a series of five mathematical calculations based on common food science themes. Questions may include nutrition calculations, ingredient quantity, cost benefit analysis, estimation of cost/margin of goods sold, conversions, processing conditions, etc.
- Example Question: The perfect glass of sweet tea is 20 percent sugar. Jim is making a one-gallon container of sweet tea. How many cups of sugar should he add?
 - a. 2.4 cups
 - b. 3.2 cups
 - c. 3.4 cups
 - d. 4 cups

Food Safety and Quality Practicums (50 points)

Customer Inquiry

- Each participant will be given five scenarios representing general consumer inquiries. Participants must determine if the consumer inquiry reflects a quality or safety issue (two points per scenario) and determine if it is a biological, chemical or physical concern or hazard (three points per scenario).

Product Specification Compliance (25 points)

- Students will be given sample sets (actual products and/or data sets) and will be responsible for determining compliance with the provided specification

requirements. This may include, but is not limited to, determining if the products are within the net weight standards, product sizing requirements, pH, color analysis, viscosity measurement, fill level tolerances, packaging specification compliance, etc. Participants will be asked five questions regarding potential compliance violations presented within the sample set.

Sensory Evaluation Practicums (40 points)

Triangle Tests (20points)

- Four different triangle tests will be conducted. Participants are expected to identify the different samples through flavor, aroma, visual cues and/or textural differences. Answers will be given on the sheet provided. No list will be provided for this segment of the practicum. Each test is worth five points.

Aromas (20points)

- Each participant will be asked to identify four different aromas from vials provided at each station and record the answer on the sheet provided. A list of potential aromas will be provided to each person. Each sample is worth 5 points.

10. Apple	21. Ginger	32. Peach
11. Banana	22. Grape	33. Peppermint
12. Basil	23. Lemon	34. Raspberry
13. Butter	24. Licorice (anise)	35. Sage
14. Cherry	25. Lime	36. Smoke (liquid)
15. Chocolate	26. Maple	37. Strawberry
16. Cinnamon	27. Molasses	38. Vanilla
17. Clove	28. Nutmeg	39. Watermelon
18. Coconut	29. Onion	40. Wintergreen
19. Coffee	30. Orange	
20. Garlic	31. Oregano	

Scoring

- Problem Solving/Math Practicum (25 points possible per individual)
- Food Safety and Quality Practicums (50 points)
- Sensory Evaluation Practicums (40 points)
- Objective Test (150 points possible per individual)

Activities	Individual Points	Team Points
Math/Problem solving	25	75
Food safety and quality	50	150
Sensory evaluation	40	120
Objective test	150	450
MAXIMUM POINTS	265	795

Tiebreakers

In the event of a tie, the following events will be used in order to determine award recipients:

1. Written Exam
2. Food safety and quality
3. Sensory Evaluation

Horse Judging

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification.

Event Rules

- Four students shall compose a team. No alternatives will be allowed, but a school may be represented by less than four persons.
- Halter horses will be judged "as sound" and performance horses will be judged "as is".
- Horses will be shown at walk and trot for the halter classes.
- Refer to the rules for the Livestock Event for more detailed discussion of operational procedures.
- There will be no talking during judging or while waiting to give reasons. This will serve as the only warning:
 - **If participants are caught talking, they will be disqualified and ask to leave. Additionally, if participants are caught with any electronic device during the event it will be confiscated and the participant will be disqualified and asked to leave. The device will be returned to the instructor in charge following the completion of the event.**
- There will be no one in the reasons room at any time except designated participants and event officials.

Event Format

Written Test & Identification

- 25 questions based on AFNR content standards
- Participants will identify breeds and/or colors and markings of horses, tack and equipment as well as leg deviations (i.e., toed out, toed in, sickle hocked etc...) items. Each problem will be worth two points each, 25 items total.

Horse Classes

- Six classes of light horses will be placed

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- Four individuals will constitute a class. Classes may be mares, stallions or geldings. Breeds of horse may consist of all breeds found in Colorado, but predominately Quarter Horse, Paint and Arabian.
- Performance or class or classes will be judged. All tack and attire will be considered legal. Classes will be placed in accordance with the rules of the American Quarter Horse Association or the respective breed association rules.
- Oral reasons will be given on one class.
- Questions will be asked on one additional class
- Classes chosen for reasons and questions shall be:
 - 1 halter class announced at the start of the event
 - 1 performance class announced after the class has shown

Conduct of Classes

- Two or three (2 or 3) halter classes will be judged at the same time.
 - Fifteen (15) minutes will be allowed on all non-reasons classes and 17 minutes on reasons classes.
 - Two (2) minutes – horses head to tail facing left – side view
 - Two (2) minutes – front view – horses facing participants
 - Two (2) minutes – rear view – horses facing away from participants
 - Two (2) minutes – close inspection – no handling
 - Two (2) minutes – horses head to tail facing right
 - Two (2) minutes – final placing – fill out cards – Reasons class – notes
 - Horses will also be seen at the walk and trot
- Two or three (2 or 3) groups of participants judge each class at the same time.

Oral Reasons/Questions

- There will be at least one but no more than two classes designated for oral reasons.
- There may be a class designated for questions.

Event Scoring

- Placing Classes
 - 6 classes @ 50 points each – 300 points

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- Written Exam and Identification
 - 50 Questions/Items – 100 points
- Reasons/Questions
 - 2 Classes @ 50 points each – 100 points
- Total Points
 - Total 500 points

Tie Breaker

- Reasons/Questions
- Test
- Performance Placings

Land Judging

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification.

Event Rules

- Each school may field a team of up to four members. Each team member participates in all three event exercises.
- The top three individual scores will be used to determine team scores.
- The contest superintendent will provide specific instructions/information pertaining to the individual exercises, a measuring tape in-place in both soil pits and Munsell color books.
- The student will provide their personal copy of "Land Judging in Colorado (revised 2017)", pencils, clipboard, water for soil texturing, soil knife (or other suitable instrument), slope finder (instructions for constructing slope finders are on page 37 of the manual), and calculator (if so desired for the soil survey exercise).

Event Format

- The Colorado State Land Judging Event consists of three parts:
 - Soil characterization and agricultural interpretations
 - Homesite evaluation
 - Soil survey exercises
- All parts of the Land Judging Event will be held in the field; therefore, students should dress appropriately and prepare for inclement weather and the possibility of sitting on the ground for the soil survey exercise.
- Scantron sheets will be used for each exercise. Each exercise will be reviewed in the field after the scantron sheets are collected and prior to proceeding to the next exercise.
- Students are encouraged to ask questions during the review session.
- The time to complete each exercise will not exceed 45 minutes.

Soil Characterization and Agricultural Interpretations

- The purpose of this exercise is to describe various soil attributes important to agricultural management. This information will then be

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used to determine appropriate management practices for the particular soil type. Soil test values, climate and other necessary information will be provided. See pages 4 through 24 of "Land Judging in Colorado (revised 2017)".

Homesite Evaluation

- The purpose of this exercise is to describe various soil attributes used to determine the suitability of the soil as a family dwelling site. The scantron sheet indicates the degree of limitation assigned to each soil attribute. The student is asked to make the final evaluation for the site given the limitations of the various attributes. Water table and flooding information may be given if not obvious at the site. See pages 25 through 31 of "Land Judging in Colorado (revised 2017)".

Soil Survey

- The purpose of this exercise is to give the student experience in using a soil survey. Students will be using the Web Soil Survey, which has been the official source for soil survey information since 2006. In addition, the test will not use the old scantron but instead be a hand graded test. Examples of the new test are included the Soil Survey section of "Land Judging in Colorado (revised 2017)".

Event Scoring

- Soil Characterization and Ag Interpretations – 100 points
- Homesite evaluation – 100 points
- Soil Survey – 100 points
- Total – 300 points

Tie Breakers

- Soil Characterization
- Homesite Evaluation
- Soil Survey

Livestock Evaluation

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification.

Event Rules

- No school shall be represented by more than four persons, which number shall constitute a team; however, a school may be represented by less than four individuals.
- Four animals shall constitute a placing class. Livestock will be identified by appropriate marking devices and shall be numbered 1, 2, 3, and 4. If animals are held or placed in a rack, the animals will be numbered 1 through 4 from left to right, when the animals are on a rear view to the contestants. If a contestant has any doubt, they are to ask the group leader.
- The participants shall be divided into groups by the Superintendent. In no group shall there be more than one participant from one school.
- Each group shall have fifteen (15) minutes to place each class. To obtain unobstructed view of each class as a whole, each group of participants will be required to stand back from the class at least 15 feet for four minutes, except in the case of sheet when only three minutes will be allowed. Participants shall be notified three minutes before time is up.
- Each participant shall hand in their scantron upon completion of the written exam, team activity and the placing and grading of classes. It is the contestant's responsibility to ensure their individual identification number, contestant name and all appropriate placings and scores are marked on their sheet before turning it in.
- While the event is in progress, there shall be no conferring between participants, or with anyone else. Participants having questions to ask shall consult the Superintendent or his representative.
- The classes of livestock will be selected by the Superintendent and judges. No team coach will be allowed to select classes or serve as a judge.

- The livestock herds and flocks of Colorado State University will not be available for judging work six weeks prior to the event date.
- Appropriate outerwear shall be provided by each participant in case of inclement weather.
- Please refer to the National FFA Career Development Handbook for additional information regarding this event.

Event Format

- Participants shall report to the even superintendent to be assigned a number and a group. The participant shall be known by number throughout the event and shall number all cards with this number only.
- Lunch is furnished for all students entered in the Livestock Evaluation event.
- Full instructions will be given to the participants at the opening of the event.
- Duties of the Superintendent include:
 - Take charge of the participant during the event
 - Be responsible for the order in which the classes of stock shall be judged and the order in which the various groups shall judge these classes.
 - Appoint such assistants as necessary to take charge of the various groups.
 - Enforce all rules
 - Be responsible for the distribution and collection of the placing and evaluation cards.
 - Collect and compile the scores assigned by the judges for each participant.

Written Exam

- A written 100 point exam made up of 50 multiple choice questions. Contestants will have 60 minutes to complete the exam.

Team Activity

- The students will work as a team and each student will mark their Scantron cards individually.
- The team activity will consist of keep and cull set of females from beef, sheep and/or swine. Performance data based upon industry standards

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will be given for all keep and cull activities. Performance data that may be given includes:

- o *EPD = Expected Progeny Difference

Beef	Sheep	Swine	Goat
Birth Date	Lambing Date	Farrowing Date	Market or Breeding Doe
Birth Weight	Birth Type	Number of Pigs Born	
Birth Weight EPD*	Rearing Type	Number of Pigs Weaned	
Weaning Weight EPD*	60 Day Weight	21 Day Litter Weight	
Yearling Weight EPD*	120 Day Weight	Days to 250 Pounds	
Milk EPD*	Codon 171 Status	Adjusted Backfat	
Marbling EPD	Spider Syndrome Status	Adjusted Loin Eye Area	
Rib Eye Area EPD		Sow Productivity Index	
Back Fat EPD		Maternal Line Index	
\$ Feedlot		Terminal Sire Index	
\$ Weaning			
\$ Grid			
\$ Beef			
\$ Energy			

Placing Classes

- Seven classes of livestock will be placed. This will include at least one breeding class and one market class from each specie (beef, sheep goats and swine).

Slaughter Cattle Grading Class

- One class of 5 slaughter cattle will be graded individually, according to the latest industry standards, using the official livestock scantron sheet. **These grading classes will be offered contingent upon the availability of these animals to Colorado State University. If these animals are not available, these classes will not be offered.**

Oral Reasons

- Three sets of oral reason will be given immediately following the placing of classes. Students will not be allowed to use notes during their presentation of oral reasons. The reasons classes will include at least one class from each of the three species (beef, sheep & swine). Individual awards will be presented for individual reasons scores.

Questions

- One class will be used for questions. The questions will be given prior to the students giving reasons.

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Event Scoring

- Written Exam – 100 points
- Placing Classes
 - 7 @ 50 points – 350 points
- Slaughter Cattle Grading – 50 points
- Reasons – 150 points
- Questions – 50 points
- Team Activity 50 points
- Total Points – 750 points

Tie Breaker

- Reasons
- Test
- Placings

Estimating Yield and Quality Grades of Live Market Cattle

J.D. Tatum

Yield Grade

USDA yield grades are used to reflect differences in cut-ability (combined yields of closely trimmed, boneless retail cuts from the round, loin, rib and chuck). The expected carcass yield corresponding to each yield grade is presented below:

USDA Yield Grade	% Cut-ability
1	>52.3%
2	50.0-52.3%
3	47.7-50.0%
4	45.4-47.7%
5	<45.4%

Steps in Determining Yield Grade:

- Estimate fat thickness over the ribeye and convert your estimate to a preliminary yield grade (PYG)

Fat Thickness	PYG
Very Lean 0.10	2.25
Lean 0.20	2.50
Lean 0.30	2.75

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Fat Thickness	PYG
Average 0.40	3.00
Average 0.50	3.25
Fat 0.60	3.50
Fat 0.70	3.75
Very Fat 0.80	4.00
Very Fat 0.90	4.25

- Adjust the PYG for differences in muscling

Degree of Muscling	Adjustment (in YG units)
Very thickly muscled	< (0.60)
Thickly muscled	(-0.30)-(-0.50)
Slightly better than average	(-0.10)-(-0.20)
Average	No adjustment
Slightly worse than average	0.10-0.20
Thinly muscled	0.30-0.50
Very thinly muscled	>0.60

- Adjust for differences in % kidney, pelvic and heart (% KPH) fat. KPH fat percentage can be estimated using your estimate for fat thickness

Fat Thickness Estimate	Estimated % KPH	PYG Adjustment
0.10	1.50	-0.40
0.20	1.72	-0.35
0.30	2.00	-0.30
0.40	2.25	-0.25
0.50	2.50	-0.20
0.60	2.75	-0.15
0.70	3.00	-0.10
0.80	3.25	-0.05
0.90	3.50	No adjustment

- Combine the preliminary yield grade (PYG) and the adjustments to obtain the final yield grade.

Quality Grade

- USDA quality grades are used to reflect differences in expected eating quality among slaughter cattle and their carcasses. The quality grade of a beef carcass is determined by its maturity and marbling score. Young steers and heifers typically qualify for one of the following four quality grades:

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- Prime
- Choice
- Select
- Standard

Determining Quality Grade

- Among cattle that are similar in age, genetic background and management history, finish is a good indicator of marbling score and quality grade. The following guidelines are useful for estimating marbling and quality grade in live cattle.
- Adjust these estimates for known effects of genotype, age and nutritional history.

Fat Thickness Estimate	Estimated Marbling Score	Estimated Quality Grade
0.10	Slight- or Lower	Low Select or Lower
0.20	Slight	Average Select
0.30	Slight+	High Select
0.40	Small-	Low Choice
0.50	Small	Low Choice
0.60	Small+	Low Choice
0.70	Modest-	Average Choice
0.80	Modest	Average Choice
0.90	Modest+	Average Choice

Meats Evaluation and Technology

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification.

Event Rules

- Participants must come prepared to work in a cold storage facility (approximately 0°C) for approximately two hours. Each participant will be required to wear a hard hat, hair net, warm clothing and foot wear and a clean white frock. Participants who arrive without these requirements will not be allowed to participate.
- Each participant must bring two sharpened No. 2 pencils, clipboard and an electronic calculator. Calculators used in the event should be battery powered, non-programmable and silent. Participants must not bring any blank paper, notes, training aids other electronic items, purses or backpacks. Students with special needs must contact the event superintendent prior to the event.
- Participants are expected to be prompt at the stations throughout the event. No conversation will be allowed between participants during the event. Conversation among participants constitutes disqualification.
- Participants and official judges are to make their placings and identifications without handling the meat.
- Two minutes stand back time on placing classes will be utilized when possible.

Event Format

Individual Activities

Meat Formulation Problem Solving and Written Test

- Meat Formulation Problem Solving
 - Students will complete a meat formulation problem solving exercise. An example is at the end of this section. Nine questions are to be answered using the computerized scorecard. The one solution to the meat formulation problem will be worth 10 points.

The other 8 questions based on the correct formulation will be valued at 5 points each.

Written Exam

- Each participant will be given a written test relating to meat storage and handling, cookery, nutrition, food safety (HACCP principles, bio-security and personal safety), animal welfare and animal identification systems. Questions could include multiple choice, true/false or situation based questions. Value per question will be based on question type. The maximum points possible on the exam are 80 points. All questions will be based on materials taken from the "Meat Science and Food Safety" DVD available through CEV Multimedia as listed on the resource material list. Identified chapters of the DVD will be publicized for the written exam.

Retail Meat Cuts Identification

Participants will identify 30 retail meat cuts found on the "Meats Identification Card". The official key (Retail Cuts Coding) is located at the end of this chapter of the handbook. Only the cuts listed are eligible to be used in this event. Participants will be given one point for correct species identification, one point for correct primal cut identification, one point for correct cookery and three points for correct retail trade name. Answers will be recorded on a computerized scorecard.

Beef Quality and Yield Grading

- Participants will quality and yield grade six beef carcasses.
- Quality Grading
 - Using Training Aid II (located at the end of Meats Evaluation section), the student may give the carcass a maturity score and marbling score based on USDA standards and then determine the quality grade. The student should complete the section of answers for quality grading on the computerized scorecard.
- Yield Grading
 - Using Training Aid II, students may write in the carcass weight which is given for each carcass, give the carcass a preliminary yield grade based on USDA Standards, and then adjust the preliminary yield grade using "Ribeye Area" and "% Kidney, Pelvic and Heart Fat". After completing these steps, the student may write in the final "Yield Grade". The student should

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complete the section of answers for yield grading on the computerized scorecard.

- A deduction of two points will be made for a one-third grade above or below the official grade; five points will be deducted for two-thirds grade above or below the official grade; eight points will be deducted for one full grade above or below the official grade. A perfect score will be sixty points for Quality grading and sixty points for Yield grading

Placing Classes

- Six classes from the following list will be placed with selected placings completed on the computerized scorecard. All classes will consist of four exhibits per class.
 - Beef carcasses
 - Retail cuts
 - Pork carcasses
 - Wholesale/subprimal pork cuts
 - Lamb carcasses
 - Wholesale/subprimal beef cuts

Questions on Placing of Two Classes and Ten Questions

- Two selected classes listed in "Individual Activities, Item 4 Placing of Four Classes" will be placed. A total of ten questions will be asked covering both classes. Answers will be transferred to the appropriate computerized scorecard. Notepaper will be provided for this section. Students will not be able to use their notes when answering questions.
 - Sample Question: "Which beef carcass had the highest percentage of KPH fat?"

Event Scoring

Scoring

The event will be divided in the following sections and scored as follows:

Individual Activities	Possible Maximum Points
Written test	100
Meat formulation problem solving	50
Retail meat cuts identification (30 cuts)	210
Beef Quality & Yield Grading (5 carcasses)	80
Placing of 6 classes (may include keep/cull class)	300
Ten questions (from two of the placing classes)	50
Total points possible per individual	790

Tie Breakers

If ties occur, the following events will be used in order to determine award recipients:

- Identification Retail Meat Cuts
- Questions About Classes Score
- Total Score Carcass Grading

Objectives

- To develop employment skills for students who are interested in exploring or pursuing career opportunities in the meat animal industry.
- To assist the local agricultural education instructor in motivating students to become knowledgeable consumers of meat and meat animal products and/or involved in the industry of meat animal marketing and merchandising.
- To encourage the development of broader analytical skills, critical thinking strategies and an understanding of appropriate meat terminology for high school students.
- To develop the ability to evaluate meat animal products in order to optimize economic returns to producers and industry as well as to meet the needs of the consumer.
- To develop good cooperation and communication skills in working together to accomplish a goal.

Resources

- CEV Multimedia – 1020 SE Loop 289, Lubbock, TX 79404, (800)922-9965
- Retail Cuts Identification DVD
- Meat Science and Food Safety DVD (written exam resource)

Milk Quality and Products Career Development Event

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification.

Event Rules

- Teams will consist of up to four members. Team ranking is determined by combining the scores of the top three team participants.
- It is highly recommended that all participants be in official FFA dress for this event.
- Participants will report for instructions to the event superintendent at the time and place shown in the current year's team orientation packet.
- Participants are not to use strong deodorant, perfume, chewing gum or other detractors to the taste and smell senses.
- Any participant in possession of an electronic device in the event area is subject to disqualification.

Event Format

Equipment

- Materials to be provided by the student
 - Two no.2 pencils
 - Clipboard
- Optional – students may wish to bring a non-programmable calculator, bottled water and/or palette cleanser.
- Materials provided:
 - All paper and other supplies
- Participants are not to bring glass of any kind to the event.

Flow of Event

- Milk Flavor Identification and Evaluation – 20 minutes
- Fat Content Identification – 20 minutes
- Cheese Identification – 20 minutes
- Written Exam – 40 minutes

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Individual Activities

Milk Flavor Identification and Evaluation

- Ten milk samples will be scored on flavor (taste and odor) using the computerized scorecard. All samples of milk are prepared from pasteurized milk intended for table use and will score 1 to 10 (See Scoring Guide). Milk samples will be tempered to 60°F. Only those cups provided at the event may be used.
- Participants are to use whole numbers when scoring “defect intensity” of milk and to check only the most serious defect in a sample even if more than one flavor is detected. If no defect is noted, Participants should check, “No defect” and score as a ten (See Scoring Guide).
- Palette cleansers (e.g. apples or soda crackers) will be allowed for refreshing.
- Scoring Guide – Scores may range from 1 to 10. On a quality basis:
 - 10 – excellent (no defect)
 - 8 to 9 – good
 - 5 to 7 – fair
 - 2 to 4 – poor
 - 1 – unacceptable/un-salable

Example: Milk Flavor Scores

Defects	Slight	Definite	Pronounced
Acid	3	2	1
Bitter	5	3	1
Feed	9	8	5
Flat/Watery	9	8	7
Foreign	5	3	1
Garlic/Onion	5	3	1
Malty	5	3	1
Oxidized	6	4	1
Rancid	4	2	1
Salty	8	6	4

- Suggested scores are given for the three intensities of flavor. All numbers within the range may be used. Intermediate numbers may also be used: for example, a bitter sample of milk may score 4.

Product Identification-Dairy versus Non-Dairy

- Ten samples consisting of dairy and non-dairy products will be identified and assigned a milk fat content score.

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- The following products may be included among the samples:
 - Dairy Products: nonfat (skim) milk (.05%), low-fat milk (1.0%), reduced fat milk (2%), milk (3.25%), half and half (10.5%), butter (80%), sour cream (18%), flavored milk (6.05%-3.25%) light whipped cream (30%), heavy cream (36%).
 - Non-Dairy Products: Margarine, non-dairy creamer, non-dairy sour cream, non-dairy milk, non-dairy flavored beverage and non-dairy whipped topping all of these are to be categorized as non-dairy fat.

California Mastitis Test

- The California Mastitis Test will be scored using even numbers from 0 to 8 inclusive. (See below for the Scoring Guide for the California Mastitis Test)
- Five samples of milk will be evaluated for abnormality, using the California Mastitis Test method.

CMT Test Score	Appearance	Participant Score	Somatic Cell Count
Negative	Mixture liquid, no precipitate	0	0
T	Slight precipitate tends to disappear with paddle movement	2	200-300,000
1	Distinct precipitate but does not gel	4	400-500,000
2	Distinct gel formation	6	1,200,000 – 1,500,000
3	Strong gel formation, which tends to adhere paddle. Forms distinct central peak.	8	Over 5,000,000

Cheese Identification

- Ten cheese samples for identification will be selected from those listed below. Cubes of the cheeses will be available for tasting. Note: More than one sample of a given cheese may be used. A score of 4 points is

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given for each variety correctly identified. Uncolored cheeses may be used.

- In addition to identifying cheese samples, participants will classify characteristics of identified cheeses using the following matrix. Participants will have six characteristics to select based on the ten identified cheese samples. An example cheese characteristic problem can be found in the reference section of the National FFA CDE handbook.

Cheese Characteristics Matrix

Variety	Moisture % (Max)	Fat % (Min)	Pasta Filata	Brine/surface Salted	Ripened by	Origin
Bleu	46	50	No	Yes	Mold	France
Brie	52.5	20	No	No	Bacteria & Mold	France
Cheddar	39	50	No	No	Bacteria	England
Colby	40	50	No	No	Bacteria	US
Cream	55	33	No	No	Unripened	US
Feta	60	42	No	Yes	Bacteria	Greece
Gouda	45	48	No	Yes	Bacteria	Netherlands
Gruyere	39	45	No	Yes	Bacteria	Switzerland
Havarti	54	30	No	No	Bacteria	Denmark
Monterey Jack	44	50	No	No	Bacteria	US
Mozzarella	60	45	Yes	Yes	Bacteria	Italy
Muenster	46	50	No	No	Bacteria	France
Parmesan	32	32	No	Yes	Bacteria	Italy
Processed American	40	50	No	No	Bacteria	US
Provolone	45	45	Yes	Yes	Bacteria	Italy
Queso Fresco	59	18	No	No	Unripened	Mexico
Ricotta	73	4	No	No	Unripened	Italy
Romano	34	38	No	Yes	Bacteria	Italy
Swiss	41	43	No	Yes	Bacteria	Switzerland

Written Test (40 minutes)

The written test will be comprised of a total of 60 multiple choice items. The test will be given in two parts with one part consisting of thirty (30) questions on quality milk production and a second part of thirty (30) questions on milk marketing.

Problem Solving

The problem solving test will consist of a total of 20 critical-thinking, multiple choice questions. Topics may include, but are not limited to:

- Decisions about the quality and acceptability of milk.
- Calculations of the value of milk and components of milk.
- Decisions about components of milk and milk products (including processing procedures).
- Decisions about the use of chemicals in cleaning and sanitizing operations.

Event Scoring

The event will be worth 1,740 total points per team based on positive-type scoring.

Activity	Points/Sample	Samples	Points
Milk Flavor Identification & Evaluation	12	10	120
Product Identification	10	10	100
Cheese Type Identification	10	10	100
California Mastitis Test	8	5	40
Problem Solving	5	20 questions	100
Written Exam	2	60	120
Total Possible Individual Points			580
Total Points per Team			1740

Tiebreakers

If ties occur, the following events will be used in order to determine award recipients:

- Team
 - Milk Identification
 - Cheese Identification
- Individual
 - Milk Identification
 - Cheese Identification
 - Product Identification
 - Problem Solving

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Awards

Awards will be presented at the awards ceremony. Awards are presented to teams as well as individuals based upon their rankings. Awards are sponsored by a cooperating industry sponsor(s) as a special project, and/or by the general fund of the National FFA Foundation.

References

This list of references is not intended to be all-inclusive. Other sources may be utilized and teachers are encouraged to make use of the very best instructional materials available. The following list contains references that may prove helpful during event preparation.

- National FFA Core Catalog; [National Career Development Event Questions and Answers](#)
- Hoard's Dairyman, PO Box 801, Fort Atkinson, Wisconsin 53538. Phone (414) 563-5551. Issues used are from September of previous year to August of current year.
- Using the California Mastitis Test published by the University of Missouri-Columbia Extension Division, Columbia, Missouri 65211. (Single copy free; write for price quote for multiple copies).
- California Mastitis Test can be ordered from NASCO. Toll free 1-800-558-9595 or toll call, 1-414-563-2446. NASCO, 901 Janesville Avenue, Fort Atkinson, WI 53538.
- The Cheese Reporter (Publication Number: ISSN 0009-2142), published weekly by Cheese Reporter Publishing Co., Inc. 4210 Washington Ave., Madison, WI 53704. Phone (608) 246-8430, Fax (608) 246-8431.
- Dairy Facts – [International Dairy Foods Association](#), 1250 H Street, N.W. Suite 900, Washington, DC 20005. Phone – 202-732-4332
- [Agricultural Marketing Service](#)
- Dairy Foods: Producing the Best, Dr. Robert Marshall; Instructional Materials Laboratory, 1400 Rock Quarry Road, Q139, University of Missouri; Columbia, MO 65211
- Pasteurized Milk Ordinance – Link is broken
- [Code of Federal Regulations Title 21, Part 133 – Cheeses and Related Cheese Products](#)

Milk Production and Related Careers

- The production of high quality raw milk requires the following:
 - Clean and healthy cows.
 - Equipment that is constructed appropriately from approved materials.
 - Proper installation, cleaning, sanitizing and operation of the equipment.
 - Rapid cooling of milk in compliance with regulatory requirements.
 - Delivery of milk to the processor within 48 hours.
 - Prevention of milk adulterants such as water, antibiotics, pesticides, cleaning and sanitizing chemicals, medicinal agents and any other extraneous materials.
 - Application of tests for acceptability of milk.
- Fresh raw milk should possess a sweet bland flavor, be free of feed flavors and contain low number of somatic cells and bacteria. Mixed milk from several cows (herd milk) is expected to contain approximately 3.5% milk fat, 3.1% protein and 4.8% lactose, the main characterizing constituents. Milk is the most important source of calcium in the diet of the average American, supplying approximately 70% of the dietary calcium.
- Students considering a career related to the subject matter in this CDE may wish to consider that persons of the following groups contribute to the successful production of high quality milk and milk products:
 - Dairy farmers and herd managers manage and milk cows and prepare milk for dealers.
 - Field representatives of the buying and/or selling organizations provide advice to producers and promote milk quality for buyers.
 - Milk sanitarians enforce public health regulations.
 - Food technologists apply chemical, physical, microbiological and sensory tests to determine the quality and safety of milk and milk products.
 - Manufacturers and dealers of dairy equipment supply and service equipment.
 - Suppliers of chemicals used in cleaning and sanitizing provide chemicals and advice on proper use.
 - Veterinarians treat diseased animals and advise producers on disease prevention.

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- Milk plant operators process milk into finished product for consumers.
- U. S. Food and Drug Administration manages the regulation of grade A milk.
- U. S. Department of Agriculture manages the regulation of manufacturing grade milk and provides grading services to manufacturers of butter, cheese and nonfat dry milk.
- Officials and technicians of the USDA Federal Milk Marketing Orders sample, test and account for milk marketed under federal orders. They also apply regulations to marketing raw milk.
- State departments of agriculture and/or public health manage the public health regulations applied to milk at the state level.
- State dairy extension agents provide advice to dairymen regarding production and sale of milk.

Veterinary Science

NO ELECTRONIC DEVICES ALLOWED AT THE EVENTS (CELL PHONE, IPOD, TABLET, ETC.). These can be cause for disqualification.

Event Rules

- Teams will consist of up to four members with three members' scores counting toward total team score.
- Dress Code
 - All participants must wear scrubs or polos and slacks. All participants must wear closed toe, closed heel and flat shoes (no clogs, sandals or flip flops). No jewelry may be worn including: rings, bracelets, earrings and exposed body piercing. Wrist watches are permitted.
- Tools and Equipment
 - Students must provide pencils and clipboards.
 - Calculators and paper will be provided.
 - Colorado FFA will provide the specific tools and equipment needed to complete the practicums. For sanitation reasons, there may be materials that individuals must provide. That materials list will be available April 15th, if there are any materials.
- Any participant in possession of an electronic device in the event area is subject to disqualification.

Event Format

Written Exam

- The objective exam is designed to determine team members' broad understanding of the veterinary science field. The written exam will consist of 50 questions. See sample questions below. Sixty minutes will be given for the exam. Topics may include:
 - Behavior
 - Disease (causes and sources, signs and symptoms)
 - Medical terminology
 - Medical records

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- Anatomy/physiology
- Regulations (federal OSHA/MSDS)
- Patient Management
- Facility Management
- Practice Management
- Genetics
- Nutrition
- Husbandry

Sample Written Exam Questions:

Which of the following is the intermediate host for the dog tapeworm?

- A. Mosquito
- B. Rodent
- C. Flea
- D. Tick

What is the primary body defense against bacteria that may cause disease?

- A. Skin
- B. Antibiotics
- C. Antigens
- D. Lymph nodes

What is one benefit of using a modified live vaccine?

- Possible answers:
 - High level of protection
 - Longer duration of protection
 - Booster not always needed

Current Events Scenario Questions

The questions associated with the scenarios will allow students to utilize critical thinking and problem-solving skills. The questions will be posted by April 1st and the team essay must be uploaded by April 15th. The points will be added to the team total not to each individual. The response should not exceed four pages.

Sample Scenario Question

Write a persuasive letter on the issue below to portray your point of view using the provided resource.

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- In 2006 a nationwide ruling was established banning the slaughter of horses. Since the ruling there have been serious growing concerns with the welfare and high number of unwanted/neglected horses in the United States. Currently several states are considering reversing the 2006 ban. What are the pros and cons of the original ban and the proposal to reverse it?

Identification

Participants will identify equipment, parasites and breeds/species. Fifty minutes will be given for this activity. Identification lists are located on the National FFA CDE webpage.

- Equipment
 - Participants will identify pieces of equipment (actual equipment and photos). They will also need to have general knowledge about the use for each item.
- Parasites
 - Participants will identify parasites (specimen and photos) and explain the life cycles of selected parasites.
- Breeds
 - Participants will identify breeds of small and large animals (photos).

Practicums

- Math Applications Practicum
 - The number of practicum questions will vary based on the type of activity that is assigned. Participants will have 30 minutes to complete the entire math application practicum. Questions may include conversions, dose calculations, dilutions, cost calculations and invoices.
 - Example: Sophie, a golden retriever and her owner have just moved from out-of-state and are reestablishing veterinarian relations at your clinic. Sophie's owner has provided you with her health records from their previous veterinarian. Sophie had been prescribed a diet plan by the previous veterinarian and had been coming into the clinic for weekly weight checks with you. You weigh Sophie and record her weight as 19 kg. The owner would like you to tell her how much weight Sophie has lost. Sophie's last

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recorded weight was 43.2 lb. How many pounds did Sophie lose since the last weighing? ANSWER: Sophie has lost 1.4 lb. since the last recorded weighing.

- Handling and Restraining Practicum
 - Participants will be given one handling/restraint activities to complete. Fifteen to thirty minutes will be allotted for this section depending on the activity selected each year. Participants are expected to talk through the handling and restraining steps to a judge as they are being scored. Judges may speak and ask questions to the participant at the end of each activity, if time allows.
- Clinical Procedure Practicum
 - Participants will be given one clinical procedure activities to complete. Fifteen to thirty minutes will be allotted for this section depending on the activity selected each year. Participants are expected to talk through the clinical procedure steps to a judge as they are being scored. Judges may speak and ask questions to the participant at the end of each activity, if time allows.

Event Scoring

Event	Individual Points
Written Exam	100
Current Event Scenario Questions	100 (toward team score)
Identification	100
Math Application Practicum	100
Handling/Restraining or Clinical Procedures Practicum	100
Total Score	400 per individual

Tiebreakers

- Team tiebreaker will be settled in the following order:
 - Combined individual practicum total score
 - Combined individual written exam total score
- Individual tiebreakers will be settled in the following order:
 - Combined practicum
 - Written Exam Score

References

All identification lists and rubrics can be found on the National FFA CDE webpage.