

TABLE OF CONTENTS

General Information	4	Extemporaneous Public Speaking.	151
Philosophy for National FFA		Farm Business Management	157
Career Development Events	5	Floriculture	165
General Rules and Policies	5	Food Science and Technology	195
Selection and Certification	7	Forestry	203
Team and Individual Awards	11	Horse Evaluation.	219
Agricultural Communications.	17	Job Interview	223
Agricultural Issues Forum.	35	Livestock Evaluation	235
Agricultural Mechanics	43	Marketing Plan	241
Agricultural Sales.	61	Meats Evaluation and Technology	247
Agronomy	73	Nursery/Landscape	263
Creed Speaking	99	Parliamentary Procedure.	281
Dairy Cattle Evaluation	103	Poultry Evaluation.	293
Dairy Cattle Handlers' Activity	121	Prepared Public Speaking	305
Dairy Foods.	125	Appendix	311
Environmental and Natural Resources.	133		

FFA makes a positive difference in the lives of students by developing their potential for **premier leadership, personal growth and career success** through agricultural education. National FFA Online, www.ffa.org, FFA's Internet web site, can provide information about the National FFA Organization.

Prepared and published by the National FFA Organization. The National FFA Organization is a resource and support organization that does not select, control or supervise state association, local chapter or individual member activities except as expressly provided for in the National FFA Organization Constitution and Bylaws. The National FFA Organization affirms its belief in the value of all human beings and seeks diversity in its membership, leadership and staff.

©Copyright, National FFA Organization, 2006

GENERAL INFORMATION

Contact Career Development Events
Jessica Scholer
National FFA Center
PO Box 68960
Indianapolis, Indiana
46268-0960
(317) 802-4263

Technical Writer Carol L. Herl
51 Snowbird Trail
Fairfield, PA

The National FFA Career Development Events are educational activities organized by the National FFA Organization and sponsored through the National FFA Foundation and special industry sponsors.

This is your copy of the official rules and regulations for National FFA Career Development Events for 2006–2010. Please retain this manual throughout the five-year period. Refer to the Local Program Resource CD-ROM or FFA online for the most up-to-date edition of the Career Development Event Handbook.

CDE Event	Superintendent	Phone	E-mail
Agricultural Communications	Dr. Cindy Akers	806-742-2816	cindy.akers@ttu.edu
Agricultural Issues Forum	Dr. Jerry Peters	765-494-8423	peters@purdue.edu
Agricultural Mechanics	Dr. Stephen Poe	523-317-6418	spoe@ag.arizona.edu
Agricultural Sales	Mr. Troy Selman	936-661-9195	TLSelman@gmail.com
Agronomy	Mr. Harold Brown	614-836-7694	hbrown@synagro.com
Creed Speaking	Mr. Greg Beard	805-756-2402	gbeard@calpoly.edu
Dairy Cattle Evaluation	Mr. Jim Ertl	651-582-8347	jim.ertl@state.mn.us
Dairy Cattle Handlers' Activity	Ron Tilford	513-293-4180	rtilford2@cinci.rr.com
Dairy Foods	Dr. Freddie Scott	479-575-2035	FScott@comp.uark.edu
Environmental and Natural Resources	Mr. Billy Sumrall	601-785-9602	glbbeef@bellsouth.net
Extemporaneous Public Speaking	Mr. Dennis Wallace	360-458-6543	dennis_wallace@ycs.wednet.edu
Farm Business Management	Dr. James Casey	318-342-1750	jcasey@ulm.edu
Floriculture	Mr. David Kercheval	254-854-2952	KerchBar3@aol.com
Food Science and Technology	Dr. Lori Moore		LMoore@aged.tamu.edu
Forestry	Mr. Marion Fletcher	501-682-2561	marion.fletcher@arkansas.gov
Horse Evaluation	Mr. Joe Cunningham	918-479-6221	jcunningham@lg.k12.ok.us
Job Interview	Ms. Linda Story	270-733-4173	ljstory@bellsouth.net
Livestock Evaluation	Dr. Fred Rayfield	229-896-2293	frayfield@cook.k12.ga.us
Marketing Plan	Mr. John Jeans	503-999-6914	jjeans@astoria.k12.or.us
Meats Evaluation and Technology	Dr. Randy Harp	254-968-9212	harp@tarleton.edu
Nursery/Landscape	Dr. Alan McDaniel	540-231-5781	alanmcd@vt.edu
Parliamentary Procedure	Dr. James Connors	614-292-3386	connors.49@osu.edu
Poultry Evaluation	Dr. Jason Emmert	479-575-3595	jemmert@uark.edu
Prepared Public Speaking	Mr. Dustin DeVries	703-727-9866	ddevries@falconpro.net

■ PHILOSOPHY FOR NATIONAL FFA CAREER DEVELOPMENT EVENTS

Students are important customers of agricultural education and FFA who recognize quality and value in products and activities. When provided an opportunity to fashion their educational experiences, they generally make wise decisions based on needs. Perceptions, images and opinions of others influence students. They value change based on their perceived personal needs as well as the needs of others. They sometimes value change for the sake of variety. Adults are concerned about the experiences of students and want to help organize experiences that will meet the future needs of students while accomplishing the purposes of agricultural education and the National FFA Organization. The National FFA Organization should assume the leadership role in developing and continuously improving relevant FFA career development events. Although the National FFA Organization should be aware of the needs of state associations and should react to those needs, it should help initiate opportunities that reflect relevant and emerging technology. National FFA Career Development Events should be developed with significant input from FFA members, teachers, partners, respective industry sponsors and others involved in agricultural education.

National career development events should reflect instruction that currently takes place in the entire agricultural education program, including classroom instruction, laboratory instruction, individualized instruction, and/or supervised agricultural experience. However, it is appropriate for the national organization to develop career development events and awards that stimulate instruction in emerging areas that reflect both current and future community, national and global work force needs. The authority for insuring the relevance of an FFA

activity is ultimately vested in the National FFA Board of Directors.

The national organization should promote career development events. Career development events that include team activities should be based on cooperation and teamwork while recognizing the value of competition and individual achievement. The role of career development events is to motivate students and encourage leadership, personal growth, citizenship and career development.

Students should be recognized for achievement in career development events. Quality standards should be used as a basis for achievement. The national organization should ensure that the recognition is appropriate and meaningful. Recognition for achievement should be reflective of the total effort required by the chapter/team/individual and should take place at all levels of participation.

The National FFA Organization shall encourage accessibility and provide opportunities for achievement and recognition for students with diverse backgrounds. High expectations should be consistently communicated to those who are involved in career development events and awards.

■ GENERAL RULES AND OFFICIAL POLICIES

Violations of any of the following rules may be grounds for the event superintendent to disqualify the participants.

National FFA staff and event superintendents will use the published rules and procedures to organize and implement the National FFA Career Development Events. Event activities may not be conducted, modified or substituted due to lack of necessary materials, expertise or extreme impact to event budgets. Every effort will be taken to

maintain the quality and integrity of the event. In this case notification will be provided at the team orientation meeting. Teams that qualify to compete will be mailed the current format for the specific event in a team orientation packet prior to the convention for which they have qualified.

Team Activities

The primary goal of career development events is to develop individual responsibilities, foster teamwork and promote communications while recognizing the value of ethical competition and the value of individual achievement. Where appropriate team activities will be included that requires two or more members from one chapter working cooperatively. Career development events and awards are intended to be an outgrowth of instruction.

Career development events should:

- include problem solving and critical thinking.
- promote an appreciation for diversity by reducing barriers to participation.
- promote new directions and focus on future needs of members and society.
- include cooperative activities, where appropriate.
- encourage broad participation among members and recognize excellence within levels of experience.
- recognize individual and team achievement, develop general leadership and recognize levels of ability.
- provide local recognition for superior performance at the state and national level.

Eligibility of Participants

1. Each participant must be a current bona fide dues paying FFA member in good standing

with the local chapter, state FFA association and the National FFA Organization at the time of his/her certification and at the time of the national career development event in which he/she participates.

If the participant's name is not on the chapter's official roster for the years in which the dues were payable to the National FFA Organization, a past due membership processing fee of \$25, in addition to the dues must be paid **prior** to certification.

2. The participant, at the time of his/her certification as a national team member:
 - a. must be a *high school* FFA member, (a graduating senior is considered eligible to compete in state and national career development events up to and including his/her first national convention following graduation). (High school refers to grades 9–12.)
 - b. must have qualified as either a 7th, 8th or 9th grade member to compete in the creed speaking event.
 - c. while in school, must be enrolled in at least one agricultural education course during the school year and/or follow a planned course of study; either course must include a supervised agricultural experience program, the objective of which is preparation for an agricultural career.

The National FFA Constitution provides flexibility to meet the needs of students enrolled in non-traditional programs. For this purpose a student needs to be enrolled in at least one agricultural education course during the year they qualified for the event.
 - d. must have qualified as a state representative in a respective career development event; if he or she moves to a

different chapter or a different state, they may be allowed to compete in the national event with the school they qualified with during the qualifying year. Certification forms submitted to the national FFA will be the list that will be accepted.

3. A student may not participate more than once in the same official National FFA Career Development Event. No student may participate in more than one National FFA Career Development Event each year.
4. CDE participants who start an event and do not complete the event without notifying event officials at the time of departure will be disqualified. This can affect the overall team rank and position. In some events this will also disqualify the entire team.

Official Dress

1. Participants are expected to observe the National FFA Code of Ethics and the Proper Use of the FFA Jacket during the career development events. (Please see the latest edition of the Official FFA Manual.) Official dress is highly recommended for all participants where appropriate and is required for the awards presentation and recognition.

SELECTION AND CERTIFICATION OF STATE TEAMS

1. Each state team may be composed of four members except for agricultural communications, agricultural issues, marketing plan and parliamentary procedure. The members of a state team must be from the same chapter. Members must qualify in the career development event in which they are to participate at the national level. With extenuating circumstances a teacher may substitute another

student from the chapter who may not have participated at a state qualifying event.

2. Each team will be composed of the number of members determined by the specific event committee. See chart on next page for number of team members and number of scores used to comprise the team score.
3. Teams must be selected at a state or interstate career development event held between the immediate previous National FFA Career Development Event Convention and prior to the National FFA Convention in which they are participating. States that qualify more than one year out must request and submit a written waiver for approval at least 110 days prior to the national event.
4. Each state will submit a team declaration form by June 1st prior to the national FFA convention. A \$25 entry-processing fee will be charged for participation in each declared event with the exception of the Dairy Cattle Handlers' Activity. Processing fee must be paid in conjunction with certification of each team.
5. The state supervisor of agricultural education or the executive secretary must certify that participants are eligible. If an ineligible student participates in any career development event, the member will be disqualified and may result in the disqualification of the team as well.
6. All students must be certified by the designated deadline. Once original certification has been completed, no member may be added without first deleting a member.
7. Certification forms will be made available each year to the state supervisor of agricultural education and the executive secretary through the National FFA CDE website and National Agricultural Education Inservice CD-ROM. States must certify participants to the National FFA Organization 110 days

**OFFICIAL DRESS RECOMMENDATIONS, NUMBER OF PARTICIPANTS
AND NUMBER OF SCORES FOR TEAM TOTAL**

Event	Official Dress Appropriate	Number of Participants Allowed(per team)	Number of Scores for Team Total
Agricultural Communications	Yes	5	5
Agricultural Issues	Optional	3–7	Team Score Event
Agricultural Mechanics	No	4	Top 3 Scores
Agricultural Sales	Yes	4	4
Agronomy	Yes	4	4
Creed Speaking	Yes	1	N/A
Dairy Cattle	Yes	4	Top 3 Scores
Dairy Handler	Yes	1	N/A
Dairy Foods	Yes	4	Top 3 Scores
Environmental and Natural Resources	Yes	4	4
Extemporaneous Speaking	Yes	1	NA
Farm Business Management	Yes	4	Top 3 Scores
Floriculture	Yes	4	4
Food Science and Technology	Yes	4	4
Forestry	No	4	Top 3 Scores
Horse	Yes	4	Top 3 Scores
Job Interview	Yes	1	N/A
Livestock	Yes	4	Top 3 Scores
Marketing Plan	Yes	3	Team Score Event
Meats Evaluation and Technology	No	4	Top 3 Scores
Nursery/Landscape	Yes	4	Top 3 Scores
Parliamentary Procedure	Yes	6	Team Score Event
Poultry	Yes	4	Top 3 Scores
Prepared Speaking	Yes	1	N/A

prior to the start of the national convention. The names of all participants may be submitted after the 110 day certification deadline, but must be in the National FFA Center at least ten (10) business days prior to the career development event in which they are to participate. Any additions or deletions of participants less than ten (10) business days prior to the career development event must be done at the national FFA convention within one (1) hour prior to the time of each respective career development event team orientation meeting.

8. To certify at the convention, advisors are to complete an on-site add/delete form. Membership of those participants listed on the on-site add/delete form will be verified after the convention. If at that time, a member is found to be inactive, the team may be disqualified, if the member who is in question had an effect on the team placing. Regardless, the member in question will be disqualified. These participants must also meet all other requirements of eligibility printed in this handbook. When possible membership checks will be done at the time the on-site add/delete form is processed on site. If at this time the participant is not a member the chapter advisor will have the opportunity to pay membership processing fees, state dues and national dues.
9. Each member participating in a National FFA Career Development Event must submit the proper Waiver, Release of Liability and Consent to Medical Treatment Form. The form must be sent to the National FFA Center within 30 days prior to the event. If a team does not qualify for participation in the national event until after this deadline, the waiver form must be submitted with the certification form. Participants who do not submit this form will not be allowed to participate.

National FFA staff highly recommend that all liability waiver forms be submitted with the event certification form prior to the certification deadline. Liability waivers must be submitted with all add/delete forms.

Emergency Conditions

1. Under emergency conditions, a state team participating in a National FFA Career Development Event may be made up of less than the required members. States must still certify teams prior to the national FFA convention, but fewer than the required number could compete if an emergency condition such as illness, death in the family or an act of God would occur. Those individuals competing would still be eligible to qualify for individual awards.
2. Event committees will strive to divide teams into groups so that no two participants from a team will be in the same group. In any case no two members will be placed side-by-side.

Disqualification

1. Any communication, verbal or non-verbal, between participants during a career development event will be sufficient cause to eliminate the team member involved from the career development event. The only exception to this would be communication between team members during the team activity portion of a given career development event.
2. Teams or participants arriving after the career development event has begun may be disqualified or penalized.
3. Any assistance given to a team member from any source other than the career development event officials or assistants will be sufficient cause to eliminate the team from the career development event.

4. Event superintendents may stop any participant if they deem their manner to be hazardous either to themselves or others. Such stoppage shall deem the individuals disqualified for that section of the career development event.
5. CDE participants who start an event and do not complete the event without notifying event officials at the time of departure will be disqualified. This can affect the overall team rank and position. In some events this will also disqualify the entire team.
6. Participants will not be allowed to utilize personal electronic communication devices, other than those approved by the event officials, during the entire course of the event. Participants who access personal electronic communication devices without prior approval of the event officials will be disqualified.
7. No team, participant, advisor or coach shall visit the event facilities from September 1 to the end of the event. Any team, participant, advisor or coach reported and proven to do so will cause the elimination or disqualification of that team from the national event.
8. Assess a penalty of 10% of the total points allotted for the written documents postmarked after the postmarked deadline in the following events; Agricultural Communications, Agricultural Issues, Job Interview, Marketing Plan and Prepared Public Speaking. If the document is still not received seven days after the postmarked deadline, the team/individual may be subject to disqualification.

Waiver of FFA Rules

Any local chapter seeking a waiver of a National FFA Board Policy or Procedure must submit in writing to the chapter's state FFA association office. If the request is approved at the state level,

it must be forwarded, under the signature of the state FFA advisor or executive secretary, to the national FFA advisor. After study by the appropriate staff, the waiver request must be submitted to the national FFA staff at least 30 days prior to the scheduled event or due date for which the waiver is requested. This policy does not supersede any current FFA policy for appeals already established for a particular FFA program.

Rules Committee of the National FFA Award, Recognition and Career Development Events Advisory Committee

1. The committee will meet only when needed at the national FFA convention and will make all final decisions on interpretation of the rules and regulations of the National FFA Career Development Events. The committee will be chaired by the National FFA Awards, Recognition and Career Development Events Advisory Committee chairperson who will in turn appoint a representative of each of the following organizations: National Association of Supervisors of Agricultural Education (NASAE), National Association of Agricultural Educators (NAAE) and the American Association for Agricultural Education, (AAAE). The program manager responsible for career development events will also serve. All five committee members will have one vote each.
2. The rules committee will resolve detailed written appeals associated only with scoring errors. Official judges' decisions are final. The announced results are the official results and awards may be duplicated as a result of the appeal. The written appeal must be filed with the education division staff responsible for career development events within seven (7) calendar days of the results announcement and accompanied with a \$50 filing fee. The fee will be returned if the appeal is justified.

Additional Operational Procedures and Policies

Check-in

Participants will report at the national FFA convention as indicated in the annual team orientation packet. Dates, hours and location will be sent annually to the state supervisor of agricultural education and to each team advisor in the team orientation packet. All participants will be given an identification number by which they will be designated throughout the event.

Assistants, Group Leaders and Officials

Each state agricultural education department is encouraged to provide staff and students to help administer and conduct specific National FFA Career Development Events. *States with prepared, extemporaneous and creed speaking participants must provide a judge.* States entering a team may recommend a person or persons to serve as an assistant in the career development event in which a team will participate. These persons may be supervisors, teacher educators, teachers of agriculture or other qualified individuals. A person designated as an assistant, group leader or official for a career development event must neither be the coach, advisor or agricultural instructor of a team/individual in that same career development event; nor shall they have had any direct part in training/coaching the team/individual in preparation for the event after qualification for nationals has occurred. If an individual wishes to train/coach their team/individual, they must excuse themselves from the committee and event preparation for that convention year.

Special Need

Accessibility for all students—All special needs requests and appropriate documentation as outlined in the special needs request procedure must be submitted with appropriate career

development event certification form by certification deadline. National FFA staff and the event superintendent will be responsible for scheduling assistance from a different state association to assist participants.

Scoring

Continuous revisions of scoring sheets, due to computer scoring, will be necessary. Copies of any revised sheets will be sent to the state supervisor/executive secretary of agricultural education 60 days prior to the career development event.

TEAM AND INDIVIDUAL AWARDS

The ranking of teams and individuals in each of the career development events will be on the basis of three logical groups within the total range of scores. These groups will be designated as gold emblem, silver emblem and bronze emblem. Teams and individuals participating in each of the career development events will be rated gold, silver and bronze emblem through a specific procedure that will be predetermined. However, officials will honor natural breaks in scores. In the final written announcement of results, teams and individuals will be ranked from top to bottom in the order of their placing. Awards will be distributed to the winning teams and individuals at award programs following the completion of the career development events.

1. All awards will be provided by a cooperating industry sponsor(s) as a special project, and/or by the general fund of the National FFA Foundation.
2. The team having the highest ranking in each career development event will receive an award and members will receive individual high team awards provided they are present at the time of the awards ceremony.

3. The high individual in each of the National FFA Career Development Events will be announced at the time the awards are distributed and presented with a special award.
4. Results of all National FFA Career Development Events will be released through the education division, National FFA Organization office at the appropriate event award ceremonies.

Career Development Event Scholarships

1. Scholarships may be awarded in the National FFA Career Development Events, *as funding is available*.

Scholarships will be held for a full year beyond the student's graduation date. If the scholarship is not requested within one year after graduation from high school, the scholarship will be forfeited. Information on availability of scholarships will be sent annually along with the "Program for National FFA Career Development Events" to state participating teams and state agricultural education officials. Only one career development event scholarship may be awarded per student per year.

2. Additional scholarships may be available to top FFA members who have participated in National FFA Career Development Events at local, state and/or national levels through the National FFA Collegiate Scholarship Program. Students must meet the criteria for each specific area as outlined in the national scholarship application and complete the application that is mailed to each chapter in order to be considered for these scholarships.
3. Farm Business Management Career Development Event Fellows Program is for the advisors of the top two National FFA Farm Business Management Career Development Event teams. The advisor of

the first place team will receive a \$1,500 award and the advisor of the 2nd place team will receive a \$1,000 award. The advisors may use the awards for **a)** in-service or continuing education **b)** farm business management instructional materials **c)** a scholarship fund for the local FFA chapter. The Fellows awards will be awarded on an "as available" basis. Fellows awards may only be awarded to a FFA advisor for a total lifetime amount of \$2,500. These awards are provided by the National FFA Organization through National FFA Foundation sponsorship by the career development event sponsor.

Written Tests

All written tests used in National FFA Career Development Events will be available for sale through the National FFA Catalog effective the January following each career development event. Please request Item NCQ (year).

Career Development Events Additions/Deletions

- a. National FFA staff in cooperation with the National FFA Board of Directors is expected to be proactive in developing new or initiating changes within existing career development events to ensure they meet the needs of FFA members.
- b. Three years following the initiation of a new career development event, 15 states should be participating and 26 states should be participating after the next three-year period in order to retain the event at the national level.
- c. In addition, if 15 state supervisors/executive secretaries develop a proposal for a new career development event, the national FFA staff will conduct a study for the validity of the career development event and make a recommendation to the National FFA Board of Directors. Representatives of these states

must be from each of the FFA regions. The same process may be used to eliminate a national career development event.

- d. The national organization will certify National FFA Career Development Event winners for international competition when states request, with the understanding that the state team will provide their own travel expenses.
- e. The National FFA Board of Directors and national officers shall approve all changes in the general plan, rules and methods of selecting winners.

NATIONAL FFA AWARD, RECOGNITION AND CAREER DEVELOPMENT EVENTS ADVISORY COMMITTEE

Purpose: To advise the National FFA Board of Directors on issues impacting both National FFA Career Development Events and Awards to ensure:

1. all activities are consistent with industry needs.
2. all activities are available to all members.
3. all activities are conducted openly, fairly and in a quality manner.
4. cooperation among various activities occurs, to the degree possible, to promote the interconnectedness of agriculture (i.e. forestry and agricultural mechanics or farm business management and dairy or livestock) and agricultural education (classroom, SAE, FFA).
5. new and innovative activities are being put forward for consideration.
6. as many students as possible have the opportunity to participate.

7. a constant process of local advisor in-service on proper use of these activities as tools for learning is being championed.
8. all activities are operated consistently with national FFA board policy.
9. activities are conducted within available budgets approved by the FFA board and, if appropriate, FFA foundation board.

Membership

1. Two members of the National FFA Board of Directors, selected by the board, one of which will be a state supervisor (preference may be given for the second position to be held by the teacher acting as the USDE representative).
2. Two members, who are agricultural education instructors, selected by National Association of Agricultural Educators, (NAAE) through a process of their choosing.
3. Two members, who are state staff, selected by National Association of Supervisors of Agricultural Education, (NASAE) through a process of their choosing.
4. Two members, who are teacher educators, selected by American Association of Agricultural Education, (AAAE) through a process of their choosing.
5. Two FFA members who are or were delegates selected by the FFA national officers through a process of their choosing.
6. One member who is a career development event superintendent selected by the CDE superintendents through a process of its choosing.

Consultants

The current superintendent of each FFA career development event area will serve as a consultant.

Term

Members serve a three-year term except for the two FFA member representatives who will serve a one-year term.

Chair

The chair of the national advisory committee on awards and career development events will be the state staff member selected by the National FFA Board of Directors.

Meeting Schedule

1. Annual national convention meeting will be held to report on the completion of activities at convention and provide input into the winter meeting agenda.
2. The annual winter meeting will allow for most of the committee's work to be conducted as a whole group and in sub-groups focused on specific issues or specific types of activities (e.g., team career development events, individual awards, chapter awards).

Costs for all official members and consultants:

- convention meeting cost is borne by each participant.
- the winter meeting cost will be borne by the National FFA Organization, education division budget and the National FFA Foundation special project budgets for career development events.

National FFA Career Development Event Committee Responsibilities

The National Career Development Event Committee should:

1. broadly represent agriculture teachers, agriculture educators, subject matter specialists and industry personnel.
2. be appointed/confirmed by the chief operating officer with authority to manage the team activities and events.
3. build on the principles of volunteerism and individual members should be recognized for their contributions.
4. elect a superintendent to a five-year term that is confirmed by the FFA chief operating officer.
5. develop and propose a three-year budget to be approved by the appropriate FFA staff subject for submission to the National FFA Board of Directors.
6. develop committee assignments cooperatively with FFA staff.
7. be structured to encourage member development within the committee and be sensitive to, and represent the needs of diverse populations and cultures.
8. be large enough to adequately manage the team activities.
9. be responsible for the identification of the number of teams eligible to participate at the national level. They should encourage equal opportunity for members of teams to participate from across the states.

Conflict of Interest

Any career development event committee member who has a team qualify for or choose to train a team that qualifies for national competition in the event related to their committee assignment shall excuse themselves from their committee duties and event preparation for that convention year to eliminate the conflict of interest. It is the committee member's responsibility to inform the event superintendent and national FFA staff of

their involvement with a team that has qualified for national competition. A person designated as an assistant, group leader or official for a career development event must neither be the coach, advisor or agricultural instructor of a team/individual in that same career development event; nor shall they have had any direct part in training/coaching the team/individual in preparation for the event, after qualification for nationals has occurred.

9 CHAPTER

NATIONAL FFA

DAIRY FOODS

CAREER DEVELOPMENT EVENT

A Special Project of the National FFA Foundation

IMPORTANT NOTE

Please thoroughly read the Introduction Section at the beginning of this handbook for complete rules and procedures that are relevant to all National FFA Career Development Events.

I. PURPOSE

To enhance learning activities related to milk quality, federal milk marketing, attributes of milk products and substitutes for them.

The focus of this Career Development Event is on achievement of high quality raw milk, federal milk marketing orders and attributes of selected products of milk.

There are four general areas or functions in the network of persons who make possible the enjoyment of high quality dairy foods by consumers. These are:

1. Milk production.
2. Milk quality and safety.
3. Milk processing or manufacturing.
4. Marketing of either raw milk or finished products.

The production of high quality raw milk requires the following:

- Clean and healthy cows.
- Equipment that is constructed appropriately from approved materials.
- Proper installation and operation of the equipment.
- Rapid cooling of the milk to not more than 41°F (3°C).
- Delivery of the milk to the processor within 48 hours.
- Prevention of contamination of the milk with added water, antibiotics, pesticides, cleaning and sanitizing chemicals, medicinal agents and any other foreign matter.

Fresh raw milk should possess a sweet bland flavor, be free of flavors from the feeds the cows

eat and be low in numbers of somatic cells and bacteria. Mixed milk from several cows (herd milk) is expected to contain at least 3.5% milk fat, 3.1% protein and 4.8% lactose, the main characterizing constituents. It is the most important source of calcium in the diet of the average American, supplying approximately 75% of the dietary calcium.

Young persons 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: own, manage and milk the 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 equipment and service it.

Suppliers of chemicals used in cleaning and sanitizing: provide chemicals and advice on their proper use.

Veterinarians: treat diseased animals and advise producers on disease prevention.

Officials and technicians of the USDA Federal Milk Marketing Orders: sample, test and account for milk marketed under Federal orders; apply regulations to marketing of raw milk.

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; provides grading services to manufacturers of butter, cheese and nonfat dry 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.

II. OBJECTIVES

A. Develop abilities to utilize knowledge of high quality milk production.

1. Quality Milk Production
 - a. Regulations
 - b. Grades and classes of milk
 - c. Factors necessary to produce quality milk
2. Cleaning and Sanitizing
 - a. General types of cleaners and sanitizers
 - b. Water hardness
 - c. Milkstone
 - d. Equipment, teats and udders
3. Cooling Milk
4. Diseases Transmitted to Man via Milk
5. Causes of Off Flavors in Milk

B. Develop abilities to utilize knowledge of milk marketing.

1. Developing Marketing and Marketing Concepts
 - a. Trends
 - b. Economics

- c. Supply and demand
 - d. Nutrition
- 2. Federal Milk Marketing Orders, Economics and Distribution
 - a. Transportation
 - b. Cooperatives
 - c. Pricing
- C. Develop abilities to utilize knowledge of the composition and quality characteristics of raw and pasteurized milk.**
 - 1. Nonfat solids portion
 - 2. Milkfat
 - 3. Adulterants, including water
 - 4. Bacterial standards and usual methods of estimating their numbers
- D. Develop an understanding of the causes and control of mastitis, its influences on milk quality and yield and the use of mastitis detection methods in controlling the disease in production of abnormal milk.**
 - 1. Causes
 - 2. Prevention
 - 3. Detection (California mastitis test and electrical conductivity)
 - 4. Treatment
 - 5. Regulatory programs
- E. Be able to identify cheese varieties.**
- F. Be able to identify and evaluate the flavor quality of milk.**

- G. Be able to identify dairy products and non-dairy products (imitations and substitutes).**
- H. Be able to identify defects of milker unit parts affecting milk quality.**

III. EVENT RULES

- A. Team make-up- Teams may consist of three or four members. Team ranking is determined by combining the scores of the top three students from each team. Teams that, for whatever reason, have fewer than three members are not eligible for team awards, but students may receive individual awards.
- B. It is highly recommended that all participants be in official FFA dress for all events.
- C. Participant will report for instructions to the Event Superintendent at the time and place shown in the current year's team orientation packet.
- D. Participants will be allowed three (3) hours and forty-five (45) minutes for the event.
- E. Participants are not to use strong deodorant, perfume, chewing gum or other detractors to the taste and smell senses.

IV. EVENT FORMAT

- A. Equipment**
 - 1. **Materials provided by the student-** two #2 pencils only
 - 2. *Optional - students may wish to bring a non-programmable calculator, flashlight, bottled water and an apple.*
 - 3. **Provided** - all paper and other supplies will be provided. Participants are not to bring clipboards, paper, etc., to the event. **Participants are not to bring glass of any kind to the event.**

B. Flow of Event

- Milk Flavor Identification and Evaluation - 36 minutes
- California Mastitis Test - 18 minutes
- Milker Units - 18 minutes
- Cheese Identification - 18 minutes
- Dairy and non-dairy product identification - 18 minutes
- Written exam - 36 minutes
- Problem Solving - 36 minutes
- Team Activity - 36 minutes

2. Participants are to use whole numbers when scoring "Flavor" of milk. Check only the one most serious defect in a sample even if more than one flavor is detected. If no defect is noted check, "No defect" and score as a ten (10) (See Scoring Guide.)
3. Apples or saltwater will be allowed for refreshing. *Only those cups provided* at the event may be used.

Scoring Guide – Refer to the current scorecard being used at the national level.

Scores may range from 1 to 10. On a quality basis:

10	excellent (<i>no defect</i>)
8 to 9	good
5 to 7	fair
2 to 4	poor
1	unacceptable/ un-salable

V. TEAM ACTIVITY

Team problem solving (36 Minutes) (25 points)

All team members will be responsible for solving from the following:

- Sanitation: for example, concentrations of chemicals in solutions
- Marketing: for example, values and compositions of milk and dairy foods
- Distribution: for example, costs of operations

VI. INDIVIDUAL ACTIVITIES

A. Milk Flavor Identification and Evaluation (36 minutes) (120 points)

1. 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.

Example: Milk Flavor

DEFECTS	SCORES ^a		
	<i>Slight</i>	<i>Definite</i>	<i>Pronounced</i>
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

^a Suggested scores are given for 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.

B. California Mastitis Test (18 minutes) (64 points)

1. The California Mastitis Test will be scored using computerized scorecard. Samples should be scored using even numbers from

0 to 8 inclusive. See below “Scoring Guide for the California Mastitis Test.”

2. Eight samples of milk will be evaluated for abnormality, using the California Mastitis Test method.

Scoring Guide

CMT Test Score	Appearance	Participant Score*
Negative	Mixture liquid, no precipitate	0
T	Slight precipitate tend to disappear with paddle movement	2
1	Distinct precipitate but does not gel	4
2	Distinct gel formation	6
3	Strong gel formation, which tends to adhere to paddle. Forms distinct central peak	8

* Participant scores only even numbers for CMT test

C. Milker Unit Parts (18 Minutes) (40 points)

1. Five sets of milker unit parts to be scored on defects using the computerized scorecard. The flexible plastic parts are to be scored as rubber parts and rigid plastic or glass parts are to be scored as metal parts. Participants will be permitted to bring and use flashlights. Students are to utilize a 0.5-point deduction for each defect identified. Units may have multiple defects.
2. In accordance with the dairy foods industry, the score made by each participant is the number of points deducted when compared to the official score; therefore, the lower the score, the higher the rating.

Defects

Rubber parts - dirty or milkstone	0.5
Rubber parts - checked or blistered	0.5
Rubber parts - leaky	0.5
Rubber parts - poorly fitted	0.5

Defects

Metal parts - dirty or milkstone	0.5
Metal parts - dented or damaged	0.5
Metal parts - pitted or corroded	0.5
Metal parts - open seam	0.5

A combination of undesirable factors may score the milker unit zero. Each display of milker parts is scored as a unit, both inside and outside. Display boards are not to be handled. Participants will score each item and indicate the defect in the proper column on the score sheet.

D. Cheese Identification (18 Minutes) (20 points)

1. Ten cheese samples for identification will be selected from those listed below. Cubes of the cheeses will be available for tasting. See references for cheese identification. Note: More than one sample of a given cheese may be used.

2. A score of two points is given for each variety incorrectly identified. Uncolored cheeses may be used.

- Bleu
- Brie/Camembert
- Brick
- Cheddar (mild)
- Cheddar (sharp)
- Colby
- Cream/Neufchatel
- Edam/Gouda
- Feta
- Havarti
- Monterey(Jack)
- Mozzarella/Pizza
- Munster
- Processed American
- Provolone
- Romano
- Swiss

E. Dairy and Non-dairy products (18 minutes) (20 points)

Students will identify dairy and no-dairy (imitation – artificial) products and/or ingredient labels. Samples will come from the following list. (May also include new products as they are developed.)

- Butter
- Coffee Whitener
- Cheese
- Cottage Cheese
- Cream Cheese
- Imitation Cheese
- Frozen Desserts
- Ice Cream
- Half and Half
- Margarine
- Milks

- Sour Cream
- Whipped Cream
- Whipped Non-dairy Topping

F. Problem Solving (36 Minutes) (25 Points)

1. Decisions about the quality and acceptability of milk.
2. Calculations of the value of milk and components of milk.
3. Decisions about nutritional value of milk and milk products.
4. Decisions about the use of chemicals in cleaning and sanitizing operations.

G. Written Test (36 Minutes) (100 points)

The written test will be comprised of a total of fifty (50) multiple - choice items. The test will be given in two parts with one part consisting of twenty-five (25) questions on quality milk production and a second part of twenty-five (25) questions on milk marketing. An increased emphasis will be placed on general marketing and promotion.

VII. TIEBREAKERS

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

1. Milk Production Written Exam
2. Milker Parts
3. Cheese Identification

VIII. SCORING

Dairy Foods is a negatively scored event, lowest score wins. Each incorrect answer has a value of n points. Correct answers carry no value.

Points

- Milk Flavor Identification and Evaluation (ten samples) 120
- California Mastitis Test (eight samples) . . 64
- Milker Units (five sets) 40
- Cheese Identification (ten samples) 20
- Dairy and non-dairy product identification (ten samples). 20
- Written exam (fifty two-point questions). 100
- Problem Solving 25

Team Activity. 25

Total Points per individual (x 3 members) 389

Total Points per team 1,192

IX. AWARDS

Awards will be presented at an 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.

X. REFERENCES

This 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.

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.

Dairy Handbook, TETRA Pak Processing Systems 8101 Corporate Woods Parkway Vernon Hills, IL 60061.

Dairy Foods: Producing the Best, Dr. Robert Marshall; Instructional Materials Laboratory, 1400 Rock Quarry Road, Q139, University of Missouri; Columbia, MO 65211

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– www.idfa.org

Agricultural Marketing Service www.ams.usda.gov

Judging and Scoring Milk and Cheese, Farmers bulletin # 2259, United States Department of Agriculture, Washington DC, 20250 – Phone 202-447-7473

Judging, Identifying and Scoring Dairy Products – Bulletin 7250c, University of Illinois, 1401 S. Maryland Drive, Urbana, IL 61801 Phone – 217-333-3871

