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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.

GENERAL INFORMATION

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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 wavier 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 wavier 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 wavier 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 the 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.

CHAPTER 7

NATIONAL FFA

DAIRY CATTLE EVALUATION

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 provide a competitive event for agricultural education students, emphasizing skills in dairy cattle evaluation, selection and dairy herd management.

II. OBJECTIVES

1. To provide agricultural students with interest in dairy cattle a practical experience which will serve them well in industry positions or in management of a modern dairy herd.
2. To develop students' skills in observation, analysis, communication and team collaboration.
3. To provide experience in the evaluation of dairy cattle type, production records and dairy herd management.
4. To encourage agriculture instructors to seek assistance from various resources in the dairy industry. (Example: dairy breed associations, artificial breeding associations, state extension dairy specialists, state DHI Associations, dairy equipment manufacturers, local dairy farmers and breeders, etc.)

III. EVENT RULES

1. Participants will report to the event superintendent for instructions at the time and place shown in the current year's team orientation packet.
2. The most current and updated information, (DHI, Linear, Body Scoring, etc.,) will be used as industry standards change.
3. Computer score sheets will be used in the event to record all responses. These forms

must be completed within the time allotted for each section of the event. No additional time will be permitted to transfer responses to computer scoring sheets. Responses that are not correctly recorded on the computer score sheets cannot be considered due to the large number of participants' responses that must be processed.

IV. EVENT FORMAT

A. EQUIPMENT

Materials student must provide-Each participant must have a clean, free of notes clipboard, two sharpened No. 2 pencils and an electronic calculator. Calculators used in this event should be battery operated, non-programmable and silent with large keys and displays. Calculators should have only these functions- addition, subtraction, multiplication, division, equals, percent, square root, +/- key and one memory register. No other calculators are allowed to be used during the event.

B. TEAM ACTIVITY

1. Herd Record Evaluation

a. Members of a team will collaborate to analyze individual cow production records (DHI) from a 50-75-cow herd. Individual cows are to be selected according to their appropriate status for culling, breeding or other management decision categories. Answers will be recorded on the team's answer form provided. (See sample herd production form and questions at end of Dairy Cattle CDE information.)

b. Each cow will have an assigned point value, which will accumulate points toward team score only. Individual scores and rankings will not be affected.

c. The Herd Record Evaluation exercise is worth a maximum of 150 points. Members will have 30 minutes to complete this exercise.

C. INDIVIDUAL ACTIVITIES

1. Dairy Management Exercise (150 points)

a. The exercise will consist of a 50-question written test involving dairy management practices and DHI records. Students will analyze individual cow production records and/or herd management summaries answering 15 questions concerning their use in making management decisions. The remaining 35 questions will be concerned with various dairy management and industry related topics.

b. Appropriate information necessary to answer the DHI questions will be provided.

c. Participants will have 30 minutes to complete the exercise.

2. Pedigree Class (50 points)

a. One class of pedigrees (no animals present) will be ranked as to their indication of the animals' ability to transmit superior production and type traits to offspring.

b. Other factors include completeness (number of daughters or records), accuracy (reliability), level of performance (type and production) and profitability.

c. See the examples in this handbook. These pedigrees were placed 2-1-3-4 with cuts of 4-3-7.

3. **Sire Selection Exercise (100 points)**
   a. The sire selection exercise requires members to utilize linear descriptive traits for two cows and sire summary information to make corrective mating. Participants will rank four potential mates for each cow.
   b. Linear evaluation and production information on the cows will be provided along with the transmitting ability estimates of the sires.
   c. A maximum of 100 points can be earned in this section.
   d. A minimum of 15 minutes will be allowed for this exercise.
4. **Linear Evaluation (150 points)**
   a. Five Holstein cows will be evaluated using the 15 major traits recognized in the Holstein-Association Linear Descriptive Traits Worksheet.
   b. Cows will be numbered by their scorecard designation 10 to 14.
   c. Participants will be allowed a close-up view of each cow as she is paraded near them. Evaluations will be completed at a distance of approximately ten feet from each cow. Participants will not be permitted to handle the cows.
   d. Participants will be allowed 35 minutes for the linear evaluation.
   e. Correct evaluation of the 15 traits of each cow is worth 30 points.
      (1) Two points will be awarded for each trait scored within four points of the official judges' score. One point will be awarded for each trait scored within five to six points of the official judges' score.
      (2) Example: If the cow's trait is rated 25 by the official judges, points would be awarded to participants as follows:
      - 19-20:1 point
      - 21-29:2 points
      - 30-31:1 point
5. **Evaluation and Selection (300 points)**
   a. 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 judging classes. Classes will consist of heifers, young cows or mature cows.
   b. Participants will be permitted to view the animals from all angles but will not be permitted to handle them.
   c. Animals will be numbered 4-3-2-1 left-to-right as viewed from the rear. The handlers/cattle will wear numbers, which identify the animals.
   d. Each class is allowed 50 points for a correct placing.
   e. Participants will have 12 minutes to place each class. For classes on which oral reasons will be given, participants will be given 15 minutes.
6. **Oral Reasons (150 points)**
   a. Oral reasons will be required on three classes. These three classes will be designated by the event superintendent prior to the actual judging of the class.
   b. Oral reasons will be given in another location immediately following the judging classes.
   c. Participants may not use notes during delivery of reasons, with the exception

of a card showing only their placing order.

d. Each class is allowed 50 points for a perfect set of reasons.

e. Participants will have 12 minutes to prepare each set of oral reasons. No more than two minutes may be used to deliver the reasons before the judges.

V. SCORING

Individual	**Maximum Points**
Dairy Management exercise	150
Pedigree class	50
Sire selection	100
Linear evaluation	150
Judging.	300
Oral reasons	150
Total possible score	**900**

Team	**Maximum Points**
Herd record evaluation	150
Top 3 of 4 members	2,700
Total possible score	**2,850**

VI. TIEBREAKERS

Category awards will include all activities related to each category, i.e., placing and oral reasons if given. If ties occur, the following events will be used in order to determine award recipients:

1. Total oral reasons score.
2. Dairy Management exercise score.
3. Total linear evaluation score.

VII. 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.

The high-scoring participant in each of the following categories will receive a certificate recognizing their accomplishment:

- High Breed total (High individual of each breed- Holstein, Jersey, Guernsey, Brown Swiss, etc.,) with associated oral reasons scores as applicable.
- High Pedigree placing.
- Total oral reasons score.
- Linear evaluations.
- Sire selection.
- Dairy Management exercise.
- Team—Herd record evaluation.

VIII. 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

P.O. Box 801, Fort Atkinson, WI 53538-0801 (920-951-563-5551)

www.hoards.com

Annual Cow Judging Contest official entry form and booklet. Free

"Judging Guide," 1999 edition booklet, featuring Linear, analysis of scorecard, & 15 practice classes. $7.

"Focus on Linear Scoring," 1998 reference guide to linear instruction.

CEV Multimedia, Inc.

P.O. Box 65265, Lubbock, TX 79464 1-800-922-9965

www.cev-inc.com

"Dairy Cattle Judging: Cows - Video Active" # 486 $95.

"Dairy Cattle Judging: Heifers - Video Active" # 487 $95

"Dairy Cattle Judging: Oral Reasons" # 489 $95.

"Judging Dairy Cows" 1987 # 501 $79

"Judging Dairy Heifers" 1987 # 502 $69.

"Practice Dairy Cow Judging" 1989 # 506 $ 49.

"Practice Dairy Heifer Judging" 1989 # 507 $49.

"Linear Evaluation of Dairy Cattle" #510 $89.

"Practice Dairy Cow Judging" 1993 I-#511; 1994 III-#514, #515; $49. Ea.

"Practice Linear Evaluation I" 1994 # 516 $59.

"Linear Classification: Scoring of Linear Traits" # 517 $ 89.

"Practice Linear Evaluation II" 1995 #520 $59.

NCR (North Central Regional)

Publications Distribution, Printing & Pub. Bldg., Iowa State University,

Ames, IA 50011-3171 (515) 294-5247

pubdist@exnet.iastate.edu

"Learning about Dairy… a Resource Guide for the 4-H Dairy Project"

Extension Bulletin NCR 593

Instructional Materials Service (IMS)

Texas A&M Univ. 2588 TAMUS, College Station, TX 77843-2588 (979) 845-6652, or 6653.

www-ims@tamu.edu

"Dairy Cattle Judging Cows" Video # 9552 $99.

"Dairy Cattle Judging Heifers" Video # 9553 $99.

"Dairy Cattle Judging Fundamentals" Video # 9554A $99.

"Dairy Cattle Judging Oral Reasons" Video # 9554B $99.

Dennis Hartman

2709 Mt. Vernon Lane, Blacksburg, VA 24060 (540) 951-8047; "Techniques of Judging Dairy Cattle" 5th Edition, $8.

Holstein Association

1 Holstein Place, Brattleboro, VT 05302-0808 (802) 254-4551

www.holstein.com"; Linear Classification Program," $2.00

"Pedigree Questions & Answers" and "Build Your Knowledge of Sire Summaries" for pdf files of the workbooks go to www.holsteinfoundation.org and then link to "programs" and then "workbooks" and scroll to "Pedigree Questions & Answers" and "Build Your Knowledge of Sire Summaries."

Agri-Graphics

109 5th Ave., New Glarus, WI 53574 (608) 527-5663

"Judging Slides and Audio Tapes, 15 classes" $80 per set; $150 for both sets

Additional Website Resource List

American Dairy Science Association
www.adsa.org

National Association of Animal Breeders
www.naab-css.org

Dairy Herd Improvement
www.dhia.org

DAIRY CATTLE EVALUATION - HERD RECORD EVALUATION - COLLABORATIVE TEAM EXERCISE

		X-b		.....Test Day Production.....							.....Current Lactation.....							....Mature Equivalent....							.....PTA.....	
scc	date bred	r H e P d O	BCS	milk	fat %	protein %	pers	s c s	$value	Cows No.	date	code	days bred	age @ calving	#	days in milk	milk	fat #	prot #	milk #	fat #	prot #	Rel. Value %	milk	$$$
1000's																										
	1-3	2 O								**333**	4-25	8	0	6-9	5	180	16180	551	457	21290	725	607	93	+632	+74
67			2.5	26.4	4.3	2.5		2	3.43	**349**	4-22	1	0	5-9	4	20	840	38	22	12130	486	331	55	+1131	+94
974	11-12	2 P	4.5	42.2	3.4	3.4	84	6	5.74	**374**	6-9	1	181	6-7	5	337	18570	692	611	17120	643	564	76	+113	+14
	8-3	3 P	4.0							**377**	3-5	6	282	6-3	5	359	28590	983	946	25490	857	832	114	+353	+40
8		0 O	2.0	81.9	3.8	3.0	83	0	11.13	**402**	3-5	1	0	4-10	3	66	6940	286	213	18810	751	598	85	+2118	+276
81	2-19	2 P	1.5	90.7	3.0	2.8	83	3	12.12	**404**	11-19	1	82	4-5	3	174	19400	658	549	27490	897	790	120	+1932	+209
2267	3-9	2	1.0	92.8	3.1	2.9	120	8	12.46	**405**	11-23	1	64	4-5	3	170	19280	626	546	27770	686	798	121	+2134	+216
38	1.29	6 P	3.5	55.2	3.3	3.6	91	2	7.48	**419**	6-9	1	103	3-5	2	337	26150	907	875	26950	931	874	119	+1362	+152
223	1-2	2 P	3.5	43.9	2.4	3.0	69	4	5.70	**420**	8-8	1	130	3-7	2	277	22600	643	659	26800	750	763	114	+2096	+198
	2-16	4								**428**	4-25	8	54	3-3	2	262	18570	618	618	23360	779	762	102	+1339	+157
122	1-4	2 P	4.0	31.7	5.8	4.1	75	3	4.79	**430**	9-10	1	128	3-3	2	244	14960	683	526	18570	856	639	86	+782	+114
77	2-20	3	3.5	48.9	3.4	3.4	61	3	6.66	**431**	9-23	1	81	3-2	2	231	16780	712	540	22050	899	688	100	+1618	+203
37	3-31	3 O	3.0	61.3	2.5	3.1	62	2	8.00	**432**	11-17	1	0	3-2	2	176	16120	531	482	23870	734	704	103	+1694	+170
130	2-24	2 O	2.5	68.0	4.4	3.5	125	3	9.68	**433**	10-2	1	0	3-1	2	222	17700	705	586	24310	970	784	110	+1172	+194
	9-20	4	5.0							**434**	4-28	6	234	2-5	1	455	23190	922	786	22570	800	689	89	+1676	+191
22	1-10	1 P	2.0	86.9	4.0	3.5	112	1	12.16	**435**	11-21	1	122	3-2	2	172	16970	663	558	27460	1066	890	123	+1412	+176
166	2-11	1 P	2.0	96.8	2.8	3.3	94	4	12.81	**437**	11-12	1	90	3-1	2	181	18770	583	608	30060	893	959	129	+1799	+200
9			2.0	106.6	3.7	3.0	101	0	14.42	**439**	3-8	1	0	3-3	2	65	7370	290	221	23870	903	724	107	+1896	+189
	7-29	4 P	3.5							**443**	2-7	6	287	2-0	1	362	17790	842	636	19930	929	676	96	+1628	+206
	8-10	1 P	4.0							**445**	3-23	6	260	2-2	1	322	15960	582	536	19250	698	633	86	+1507	+189
186	3-12	4	3.0	48.3	3.9	3.4	124	4	6.73	**448**	9-22	2	61	2-5	1	232	12840	509	417	18510	720	596	83	+1561	+190
153	12-10	1 P	2.0	79.1	2.5	3.2	97	4	10.32	**449**	6-29	2	153	2-2	1	317	21980	574	719	25270	662	808	107	+1881	+187
	9-17	3 P	3.5							**450**	4-2	6	238	2-1	1	288	13380	417	387	17560	548	492	76	+1406	+120
22	2-5	2 O	3.0	64.9	3.3	3.0	94	1	8.79	**452**	10-4	2	0	2-2	1	220	14390	492	428	22370	745	656	98	+1979	+209
27	2-4	2 O	2.5	51.4	3.6	3.1	84	1	7.06	**453**	10-7	2	0	2-2	1	217	14450	488	431	21610	727	634	95	+1779	+182
17	12-24	1 P	2.5	63.0	3.5	3.2	90	0	8.61	**455**	10-9	2	139	2-0	1	215	14800	603	481	23600	919	751	106	+2133	+215
19	3-1	2 P	2.0	76.4	3.4	3.3	109	1	10.40	**460**	11-20	2	72	1-11	1	173	13090	492	406	25730	925	792	114	+2200	+239
75	1-7	1 P	2.5	66.3	2.8	3.0	94	3	8.77	**461**	10-31	2	125	1-10	1	193	14300	394	424	25470	703	763	109	+1911	+192
21	2-6	2 P	4.0	26.9	3.9	3.5	61	1	3.75	**463**	9-30	2	95	1-9	1	224	10570	414	344	16300	639	517	73	NA	
71			2.5	54.8	2.7	3.0		2	6.52	**464**	4-20	2	0	2-1	1	22	1830	51	58	18660	603	569	81	NA	
262	4-30	1	2.5	63.6	3.6	3.1	122	4	8.74	**465**	2-18	2	12	1-11	1	83	4690	223	144	18830	767	576	85	NA	
273			1.5	70.9	3.3	2.8		4	8.59	**467**	4-23	2	0	2-0	1	19	2150	74	64	22020	739	620	96	NA	
12	4-8	3	1.5	91.3	2.4	2.7	86	0	11.85	**479**	1-6	1	34	3-4	2	126	12940	420	374	24750	747	720	107	+1456	+142
16	3-2	1 P	1.0	91.5	2.1	2.9	96	0	11.70	**481**	12-21	1	71	3-1	2	142	14930	433	432	26760	729	782	114	+1868	+198
27	2-17	1 P	2.5	43.9	2.0	3.5	52	1	5.59	**482**	12-30	1	84	3-2	2	133	11150	268	374	18270	466	616	77	+1318	+148
152	1-27	1 O	2.5	58.6	3.8	3.6	73	4	8.12	**505**	11-9	1	0	3-9	2	184	15710	653	535	21550	866	728	97	+1458	+182
188	12-16	1 P	2.0	72.4	3.2	3.3	117	4	9.76	**517**	9-17	2	147	2-0	1	237	16420	510	549	25430	777	828	110	+1028	+153
55	1-15	1 P	3.0	47.0	4.2	4.0	116	2	6.63	**526**	10-30	2	117	2-4	1	194	9340	395	365	15800	652	609	72	+1792	+217
199	1-20	1 P	3.0	47.4	3.9	3.3	113	4	6.60	**527**	10-31	2	112	2-4	1	193	9350	375	307	15910	621	516	71	+694	+82
548	4-13	3	2.5	56.0	3.3	3.4	98	5	7.59	**528**	10-4	2	29	2-3	1	220	15360	504	528	22730	730	769	99	+1536	+183
9	2-6	2 P	1.5	82.9	3.1	3.4	100	0	11.13	**529**	10-7	2	95	2-3	1	217	16090	566	546	25790	857	860	113	+1452	+179
39	1-6	1 P	2.0	74.9	3.1	3.5	93	2	10.05	**530**	10-11	2	126	2-3	1	213	15770	530	545	25080	804	853	109	+1325	+156

		X-b		Test Day Production						Current Lactation						Mature Equivalent						PTA	
scc	date bred	r H e P d O		milk	fat %	protein %	pers	s c s	$value	Cow No.	ıs date	code	days bred	age @ calving	#	days in milk	milk	fat #	prot #	milk #	fat #	prot #	Rel. Value %	milk	$$$
1000's																									
254	2-3	1 O	3.0	50.4	4.2	3.4	89	4	7.11	**536**	11-11	2	0	2-2	1	182	9080	406	279	16430	714	503	75	+1044	+169
415	3-5	1 P	2.0	74.1	3.8	3.3	107	5	10.27	**537**	12-5	2	68	2-6	1	156	11910	452	407	22740	858	806	102	+1153	+129
177	1-19	1 P	2.0	73.0	3.4	3.0	116	4	9.94	**538**	12-6	2	113	2-4	1	157	10510	375	314	21360	745	656	94	+1213	+126
1320	3-22	1	3.0	54.4	3.9	3.6	102	7	7.58	**539**	12-26	2	51	2-5	1	127	9130	368	309	18490	741	635	83	+995	+130
75	2-24	2 P	3.0	50.4	3.8	3.3	78	3	6.99	**541**	12-11	2	77	2-4	1	152	10630	412	334	19140	752	612	86	+1137	+144
	3-31	1								**542**	4-11	9	12	2-3	1	126	7880	274	233	18020	661	544	80	+1753	+188
73	3-12	2	1.5	82.7	2.8	2.9	105	3	10.94	**543**	12-8	2	61	2-3	1	155	12870	383	382	25470	755	777	110	+721	+61
30	3-31	1 O	2.0	82.5	2.6	3.0	71	1	10.81	**645**	2-4	1	0	7-11	6	97	10060	355	289	20190	662	587	88	+262	+19
122	3-1	4 P	4.5	30.2	4.0	3.4	75	3	4.22	**660**	7-5	1	72	6-6	5	311	19760	733	635	20300	750	652	90	+907	+73
81	1-20	1 P	3.0	56.0	2.6	2.9	55	3	7.34	**681**	11-22	1	112	5-0	4	171	16250	471	515	21020	595	681	90	+1110	+109
39	1-16	2 O	2.0	89.6	3.3	3.1	93	2	12.14	**688**	9-17	1	0	4-6	3	237	21920	875	654	27220	1046	812	122	+971	+97
39	4-8	4 P	3.5	42.8	3.6	3.0	62	2	5.88	**690**	8-15	1	34	4-5	3	270	22520	872	643	25560	979	722	114	+1014	+106
53	5-5	3	2.5	77.7	3.4	3.3	94	2	10.58	**691**	9-26	1	7	4-6	3	228	19500	807	621	24570	977	782	111	+250	+59
98	1-15	2 P	2.5	60.6	3.3	3.4	93	3	8.21	**694**	7-22	1	117	4-2	3	294	21850	810	705	24250	899	774	108	+1228	+145
110	1-20	1 P	1.5	98.0	2.9	2.9	105	3	13.03	**698**	11-10	1	112	4-3	3	183	19660	599	556	28040	836	802	121	+1788	+189
27	3-7	2	1.5	99.3	3.0	3.1	88	1	13.27	**708**	11-4	1	66	3-5	2	189	21720	760	671	31920	1057	977	140	+1943	+239
506	3-19	3 O	3.0	51.8	3.9	3.6	116	5	7.21	**710**	8-16	1	0	3-0	2	269	20910	790	685	26460	991	843	118	+1412	+171
384	1-17	2 P	1.5	92.1	2.9	3.2	106	5	12.25	**711**	9-25	1	115	3-1	2	229	23630	750	773	33040	1012	1053	143	+1557	+172
57	3-7	2 P	3.0	59.6	3.6	3.6	80	2	8.19	**712**	9-23	1	66	3-0	2	231	17850	644	621	24350	863	822	108	+1000	+111
86			1.0	105.8	2.4	2.9	79	3	13.46	**713**	3-19	1	0	3-6	2	54	7280	212	223	23950	717	746	103	+1423	+170
358	3-31	3	2.5	84.8	2.7	3.1	91	5	11.17	**714**	12-11	1	0	3-1	2	152	16510	444	505	27230	754	839	116	NA	
113	1-20	1 P	2.5	97.6	2.9	3.0	123	3	12.98	**715**	12-12	1	112	3-0	2	151	14230	454	419	26120	818	776	113	+1478	+148
36			3.0	57.7	2.0	3.5	76	2	7.34	**717**	1-2	1	0	3-0	2	132	12280	338	372	21270	579	630	90	+1571	+180
28			3.0	102.6	4.3	3.2		1	13.59	**719**	4-30	1	0	3-3	2	12	2580	113	84	24210	894	734	108	+1045	+99
	1-18	2 O								**721**	4-11	8	0		1	267	13050	518	430					NA	
33	3-7	4 P	3.0	64.8	3.3	3.4	94	1	8.78	**726**	8-22	2	66	2-0	1	263	17420	634	538	25340	904	765	112	NA	
0	3-2	1								**729**	4-11	8	26	2-0	1	221	11550	359	367	19310	590	600	83	+1054	+110
22	3-11	3 P	3.5	62.1	3.7	3.6	100	1	8.57	**730**	9-11	2	62	2-0	1	243	16480	675	543	23380	917	762	105	NA	
11	2-24	2 P	3.0	44.3	2.9	3.0	74	0	5.89	**732**	10-13	2	77	1-11	1	211	14940	483	443	22860	719	664	99	NA	
27	4-18	2	3.0	50.8	3.1	3.1	81	1	6.82	**735**	12-5	2	24	1-10	1	158	10170	366	308	19610	685	615	86	+1477	+154
92			3.5	50.8	4.3	2.7		3	6.47	**737**	4-25	2	0	2-2	1	17	1450	65	41	18190	699	468	82	NA	
29			2.0	83.5	3.4	3.0	138	1	11.37	**738**	2-7	2	0	1-11	1	94	6570	271	194	23650	875	696	105	NA	
1100	5-2	1	2.0	73.2	2.2	3.1	72	6	9.41	**739**	2-10	2	10	1-9	1	91	8080	224	247	25120	686	763	107	NA	

Somatic Cell Count (1000's)

H Heat Date
P Pregnant
O Open

Body Condition Score

Somatic Cell Score (linear)

Status Codes

1 Cow freshened
2 Heifer Freshened
3 Enter Herd Dry
4 Enter Herd in Milk
5 Aborted
6 Dry
7 Sold for Dairy
8 Sold for Beef
9 Died

"BEST ANSWERS" FOR
DAIRY CATTLE EVALUATION - HERD RECORD EVALUATION

(Collaborative Team Exercise)

After evaluating the individual cow records which are provided, select the best answers for the following questions. Cows may be listed in any order within an answer.

A. Select those cows which will be the next five to calve, assuming that breeding dates are accurate.

1. 377 2. 434 3. 443 4. 445 5. 450

B. Indicate the cows which are most likely to become candidates for culling due to their reproductive status.

6. 433 7. 452 8. 453 9. 688 10. 710

C. Indicate the cows most likely to be considered as donors in an embryo transfer program when their reproductive status is appropriate.

ll. 708 12. 404 13. 405 also: 455, 460

D. Indicate those cows which are significantly overweight.

14. 374 15. 430 16. 434 also: 660

E. Indicate which cows are most significantly underweight.

17. 405 18. 467 19. 481 20. 713

F. Indicate which cows may become candidates for culling because their current production level is significantly low.

21. 349 22. 374 23. 527

G. Indicate those cows which are contributing the most to a high somatic cell count in the bulk tank.

24. 405 25. 739

DAIRY CATTLE EVALUATION - HERD RECORD EVALUATION

Rationale

Note: The answers provided would yield the maximum points for this activity. Other answers would yield lesser values or partial credit.

A. This question asked specifically for the next 5 cows expected to calve. This is rather straight forward to solve since the "days bred" indicates the time since the last service, i.e. the gestation length to date. (If no breeding date has been reported or if the cow was declared "open", this figure is "zero".) Since the expected gestation length is 279 days for Holsteins, #337 and #443 are "overdue" as of the reported date (5-11-94) and those cows expected to calve within the next 45 days beyond that date are #434, #445 and #450. None other is due within over 90 days so no other cow (answer) will generate points. This question could also be answered directly from the reported breeding dates, but with greater difficulty as the Pregnant or Open status would also have to be checked.

B. The answers to this question can also be found most easily in the "days bred" column IF there are "Open" cows with high "days in milk". Cows with a high discrepancy between "days in milk" and "days bred" but currently "Pregnant" would be less likely to be culled as the days bred gets higher. They were "problem breeders" but are currently pregnant. Answers which would generate fewer points than those given above include #432, #505, #528, #536, #714 and #717. Cow #721 would not generate any points because she was reported "sold for beef' on 4-1 1, possibly because she was not pregnant.

C. To answer this question, one should look to the genetic statistics (Predicted Transmitting Ability for Milk/Dollars) and possibly adjust for current Relative Value. Since this is additional information (more current) to the cow's records included in the index, they may modify the PTA's to some extent, especially for those cows with only one (or a partial) record available when the PTA's were calculated nearly 6 months previous. Cow #708 ranks high in both PTA$ and in current Relative Value. The highest PTA$ cow, #402, is producing at 15% below herd average in her current lactation with a significant portion of the lactation completed. Other cows which may be candidates are #404, #405, #455 and #460. Fewer points would be earned with answers of #420, #437 or #481. #542 died so she could not be considered. Minor points could be earned for answers including #43 1, #443, #452, #526 and #717 whose indexes are relatively high but current production is mediocre or poor. #710 and #711 are doing well currently but each has a modest PTA$.

D. Overweight cows can be identified by the "Body Condition Scores" which are too high. Any lactating cow greater than 3.5 is considered overweight. Dry cows in this range are also considered overweight by most nutritionists, although some managers are not concerned unless the score exceeds 4. Cows (#374, #430, #434 and #660) earn maximum points with #377 at slightly fewer points because she is dry and overdue.

E. Lactating cows which are scored below 1.5 are generally considered too thin. Cows scoring at 1.5 are also considered too thin, especially if they are past their early lactation period and should be in positive energy balance and gaining weight. Cows should score about 3.5 at calving time. Cows (#405, #467, #481 and #713) earned maximum points while cows (#404, #479, #529, #543, #698, #708 and #71 1) earned slightly lower values as answers (they were too thin but not as extreme as others.)

F. Culling on current production should begin with those cows significantly below the current herd average, i.e. low Relative Value. It is generally agreed that cows about 75% Relative Value and lower should be scrutinized severely when making up a culling list. Cows (#349, #374, #527) earned maximum points, but meriting consideration were #450, #463, #526 and #536. A lesser case could be made for other cows ranked in the 80's in Relative Value.

G. Contributions to the Somatic Cell Count in the bulk tank result from a combination of production level and somatic cell count of the individual cow's milk. Cow #405 is contributing the greatest level of somatic cells and is a high producing cow. Similarly high levels of SCC are found in #539 and #739. However, #739 is out producing #539 by about 50% (73.2 vs. 54.4 lbs.) so she is contributing a greater number of cells to the bulk tank.

SAMPLE

NATIONAL FFA DAIRY CATTLE EVENT
DAIRY MANAGEMENT EXERCISE

For questions 1 through 15, use the herd reports attached to the quiz.

1. Which herd currently has the lowest average genetic level for protein yield?
2. Which herd shows the greatest change in genetic milk producing ability from current sires to service sires?
3. In which herd will calves born over the next year have the highest estimated genetic merit for fat yield?
4. In which herd did the cows have the lowest average milk fat test for the last year?
5. Which herd has the highest percentage of cows with low somatic cells?
6. Which herd currently has the most successful breeding program in terms of getting cows pregnant again in the least time after calving?
7. Which herd shows the poorest mammary health within the oldest cows?
8. Which herd has had the least success in getting heifers to calve at an early age?
9. Which herd is projected to have the longest calving interval for the coming year?
10. Which herd produced the most energy-corrected milk per lactating cow in the month of September?
11. Which compartment of the dairy cow's stomach is known as the "manyplies"?
    a) abomasum, b) reticulum, c) rumen, d) omasum, e) duodenum.
12. The hormone which "kills" the corpus luteum is called
    a) Adrenalin, b) Estrogen, c) Oxytocin, d) Progesterone, e) Prostaglandin.
13. Which system of the cow's body is most affected by Johnes' disease?
    a) Circulatory, b) Respiratory, c) Reproductive, d) Endocrine, e) Digestive.
14. Which system of the cow's body is most affected by BSE?
    a) Nervous, b) Respiratory, c) Reproductive, d) Endocrine, e) Digestive.
15. What product is the result of rapid degradation of adipose tissue in the cow's body?
    a) Amino acids, b) Ammonia, c) Fatty acids, d) Peptides, e) Ketones

SAMPLE FORM

(5 herd summaries provided to answer test questions)

Herd Number: **A**

Average ALL Cows — Lactation — Month of Test: Sep

	1st	2nd	3rd	Total	365-day Herd Average
Total Cow Months	91	80	121	292	205
% Days in Milk	85	90	87	87	87
Pounds Milk	63.9	72.3	70.7	69	26,301
% Fat	3.3	3.29	3.41	3.34	3.49
Pounds Fat	2.11	2.36	2.41	2.3	918
% Protein	3.47	3.33	3.31	3.36	3.18
Pounds Protein	2.22	2.4	2.34	2.32	836
Pounds 3.5% FCM	61.8	69.6	69.6	67.2	

Ave. Milking Cows — Lactation — Genetic Information (PTA)

	1st	2nd	3rd	Total
Cow Months	78	72	105	255
Pounds Milk	75.1	80.7	80.9	79.1
Pounds Fat	2.48	2.64	2.76	2.64
Pounds Protein	2.6	2.68	2.68	2.66
Pounds 3.5% FCM	7		79.7	7

Cow	Ist	2nd	3rd	Total
Milk	356	276	28	191
Fat	22	3	-4	5
Prot.	17	11	4	10

Ext. 305 day Ave. — Lactation — Sire

	1st	2nd	3rd	Total
Pounds Milk	23511	26193	27077	25713
Pounds Fat	828	888	935	889
Pounds Protein	783	846	883	842
ME Pounds Milk	29303	29134	27588	28554
ME Pounds Fat	1026	985	952	984
MEounds Protein	1019	981	921	968

	Ist	2nd	3rd	Total
Milk	670	708	357	557
Fat	41	15	8	21
Prot.	30	21	16	22

SCC Summary — Lactation — Service Sire

	1st	2nd	3rd	Total
% Cows				
Low 0-4	83	87	76	81
Med 5-6	12	13	21	16
High 7-9	5	0	3	3

	Ist	2nd	3rd	Total
Milk	1359	1227	1291	1297
Fat	49	31	40	40
Protein	42	40	40	41

Reproductive Status — Lactation

	1st	2nd	3rd	Total
Days @ I st Brdg	90	88	98	92
Svcs./Conception	2.31	2.41	1.71	2.11
Days Open	171	149	150	156
Last Calving Int.	---	15	13.9	14.3
Next Calving Int.	15.2	14.5	14.7	14.8
Age @ Last Calving	26.7	42.3	68.6	48.2

NATIONAL FFA DAIRY CATTLE EVALUATION

Official reasons for placing pedigree class:

This class of pedigrees for high quality, Holstein heifers is placed 2-4-3-1 with cuts of 6-4-2.

In placing # 2 over # 4, the pedigree shows an advantage in the overall PTPI (average of the sire's TPI and the CTPI of the dam) for # 2. The TPI values for the dam and sire of #2 are significantly higher than those for # 4. These reflect the genetic values (PTA) for the various production and type traits for themselves, which are an accumulation of their ancestors, collateral relatives and their own performance.

In placing # 4 over # 3, when the overall PTPI's of the pedigrees are calculated they show favor for # 4. The sire's TPI value is higher with the PTAs being higher in nearly every category and the dam's transmitting values are higher in every category (except FLC) than those for the dam of # 3. The individual records for # 3's dam appear very impressive at first glance, due to her longevity and final type score at 6 years of age. However, most of the transmitting values are not as high as for the dam of #4.

In placing # 3 over # 1, the TPI values of the sires are similar but they are dissimilar in the specific genetic values which make up the calculated indexes; each set gains strength from opposite areas (type versus production.) The PTA values for most yield traits are superior for # 1, while the type traits are higher for # 3. The genetic values for the dam of # 1 are not listed in the pedigree but the PTPI for the heifer (pedigree) is given. The calculated value of the PTPI for # 3 (sire's value +1121 plus dam's +937 divided by 2) indicates a value of +1029 which exceeds the stated value for #1 by 65.

NATIONAL FFA DAIRY CATTLE EVENT

Pedigree #1

PTA +I486M +31F +40PTPI +964
PTA +.04T +.02UDC . .02FLC 8/99

SIRE
EX-90-5y "GM"

PTA +2264M +38F +55P TPI +1141
PTA +211$MFP -.20%F -.07%P
PTA +147NM -0.0PL +3.21SCS
PTA +.65T +.24UDC -.49FLC 8/99

DAM
EX-90-8Y VEVEE

	AGE	X	DAY	MILK	%	FAT	%	PRT
DHR	3-04	2	365	29620		3.7 1084	3.1	933
DHR	6-07	2	357	29130		4.0 1151	3.2	930
DHR	4-06	2	350	6020		3.8 995	3.2	838
DHR	5-07	2	328	23140		3.9 907	3.4	779
***	8-09	2	293	24940		3.7 920	3.3	814
***	7-09	2	305	24010		3.8 919	3.1	747
LIFE:	2368179,440				3.8	6,867	3.25,766	

PATERNAL GRANDSIRE
EX-93-Y"GM"

PTA +858M +21F +29P TPI +1052
PTA +I.85T +I.30UDC +76FLC 8/99

PATERNAL GRANDDAM
VG-86+3Y VVVVDOM

	AGE	X	DAY	MILK	%	FAT	%	PRT
DHR	2-02	2	365	21748		3.6 787	3.2	693

MATERNAL GRANDSIRE
EX-92-10Y"GM"

PTA +959M +49F +33P TPI +969
PTA +.13T +.03UDC +.62FLC 8/99

MATERNAL GRANDDAM
GP-84-5Y+E++

	AGE	X	DAY	MILK	%	FAT	%	PRT
DHR	6-00	2	329	27480		2.9 790	3.0	811
DHR	5-00	2	304	25550		3.1 797	2.9	731
DHR	4-00	2	282	23430		3.0 713	2.9	682
DHR	3-01	2	302	20450		3.1 634	2.9	603
DHR	2-00	2	315	17860		3.3 591	2.9	516
LIFE	15322114,770				3.1	3,525	2.93,343	

Pedigree #2

SIRE
EX-95-8Y"GM"

PTA +2164M +34F +50P TPI +1369
PTA + 1944$MFP -.19%F -.08%P
PTA +157NM +1.7PL +3.14SC
PTA +2.65T +2.29UDC +1.94FLC 8/99

DAM
VG-86-5Y VE++V

	AGE	X	DAY	MILK	%	FAT	%	PRT
DHR	1-11	3	365	28480		3.3 950		3.3 930
***	3-05	3	365	35720		3.5 1265	3.11	107
***	4-09	3	299	32960		3.6 1190	3.11	010

PTA +1826M +56F +61P CTPI +1270
PTA +.64T +.52UDC +1.05FLC 8/99

PATERNAL GRANDSIRE
EX-933-7y "GM"

PTA +858M +21F +29P TPI +1052
PTA +1.85T +1.30UDC +.76FLC 8/99

PATERNAL GRANDDAM
VG-88-4y +EEE DOM

	AGE	X	DAY	MILK	%	FAT	%	PRT
DHR	3-07	2	365	31400		3.4 1080		3.0 941
DHR	2-04	2	365	29530		3.4 1018	2.9	64
LIFE:	1639109,130				3.5	3,794	3.03,235	

MATERNAL GRANDSIRE
EX-96-13y"GM"

PTA +1180M +19F +43P TPI +1100
PTA +1.09T +1.07UDC +1.02FLC 8/99

MATERNAL GRANDDOM
GP-82-4y+E++G

	AGE	X	DAY	MILK	%	FAT	%	PRT
DHR	3-00	3	295	26900		3.5 934		3.3 883
DHR	4-00	3	316	26410		3.6 945	3.2	838
DHR	2-00	3	313	22120		3.6 793	3.3	730

PTA +1043M +44F CTPI +1077

NATIONAL FFA DAIRY CATTLE EVENT

Pedigree #3

SIRE
EX-ST

PTA +204M +40F +27P TPI +1121
PTA +92$MFP +.15%F +.10%P
PTA +91NM +2.9PL +3.41SCS
PTA +2.23T +1.32UDC +1.47FLC 8/99

DAM
EX-94-6yEEEEE 2E DOM

	AGE	X	DAY	MILK	%	FAT	%	PRT
APS	7-09	2	365	34300	3.1	1065	3.0	1033
APS	5-04	2	365	32340	2.5	811	3.0	983
APS	3-11	2	365	29140	2.9	845	2.9	892
APS	2-01	2	365	21630	2.9	633	2.9	630

PTA +968M +10F +25P CTPI +937
PTA +1.11T +.82UDC +1.35FLC 8/99

PATERNAL GRANSHIRE
EX

PTA +318M +25F +19P TPI +909
PTA +1.50T +.47UDC +.08FLC 8/99

PATERNAL GRANDDAM
VG-85 7*

	AGE	X	DAY	MILK	%	FAT	%	PRT
CAN	4-05	2	305	21938	4.3	937	3.3	728
CAN	3-03	2	305	18448	4.2	778	3.6	659
CAN	2-03	2	319	17807	3.8	681	3.3	584

MATERNAL GRANSIRE
VG-88-7y"GM"

PTA +788M +43F +28P TPI +864
PTA -.46T -.72UDC +1.64FLC 8/99

MATERNAL GRANDAM
VG-87-7yWVV

	AGE	X	DAY	MILK	%	FAT	%	PRT
DHR	8-03	2	365	21650	4.3	940	3.7	806
DHR	2-07	2	365	19650	4.1	811	3.6	712

Pedigree #4

SIRE
EX-91-6y"GM"

PTA +1521M +32F +36P TPI +1157
PTA +145$MFP -.10%F +.05%P
PTA +106NM +0.8PL +3.37SCS
PTA +1.79T +1.40UDC +2.01FLC 8/99

DAM
VG-85-5yW+W

	AGE	X	DAY	MILK	%	FAT	%	PRT
DHR	2-02	2	365	28390	3.3	950	3.2	902
DHR	4-05	2	305	24190	3.5	936	3.2	767
DHR	3-05	2	300	22890	3.8	865	3.1	710

PTA +1031M +40F +34P CTPI +1135
PTA +1.51T +1.86UDC +.91FLC 8/99

PATERNAL GRANSIRE
EX-96-13y"GM"

PTA +1180M +19F +43P TPI +1100
PTA +1.09T +1.07UDC +1.02FLC 8/99

PATERNAL GRANDAM
EX94-4yEEEE GMD DOM

	AGE	X	DAY	MILK	%	FAT	%	PRT
DHR	3-02	2	365	43982	4.2	1857	3.3	1460
DHR	2-00	2	365	30149	4.1	1242	3.4	1031
DHR	8-00	2	365	37870	3.9	1480	3.21204	
LIFE	1019106,951				4.2	4,520	3.23,472	

MATERNAL GRANDSIRE
EX-93-7y"GM"

PTA +877M +31F +44P TPI +1091
PTA +.68 +.78UDC +.91FLC 8/99

MATERNAL GRANDDAM
VG-87-6yGEEV DOM

	AGE	X	DAY	MILK	%	FAT	%	PRT
DHR	5-08	2	365	28320	4.6	1289	3.3	940
DHR	3-05	2	365	24580	4.6	1132	3.5	854
DHR	2-04	2	361	20910	4.5	947	3.5	723
LIFE	1764105,690				4.7	4,978	3.63,772	

NATIONAL FFA DAIRY CATTLE EVENT

SIRE SELECTION PROBLEM No. 1

Situation: Semen from these four bulls has been purchased. The bulls were selected to improve the next generation of this herd. RANK the four bulls as they best meet the following objectives in mating with the cow described below. This herd owner has a purebred Holstein herd of 250 cows which is operated as a commercial herd The lactation herd average is currently 25,650M, 1,022F and 798P. Milk is marketed in an area that pays a bonus for protein yield. Type considerations revolve around sound udders and correct feet and legs.

COW TO BE MATED			BULLS TO CONSIDER			
CURRENT RECORD		TRAITS	1	2	3	4
(2yr 2+A51mo ME)						
RPT			71	77	81	81
	27960	MILK	3267	2645	3055	3109
	4.42	FAT %	-0.34	-0.19	-0.04	-0.19
	1237	FAT	39	52	102	69
		MFP$	328	292	340	368
	3.11	PROT %	-0.02	0	-0.06	0.04
	870	PROT	98	84	82	108
		cm	235	218	252	275
		TPI	1618	1561	1626	1794
LINEAR SCORE						
	27	STATURE	0.83T	0.66T	1.74T	1.53T
	18	STRENGTH	0.615	0.01 F	0.145	1.535
	1.9	BODY DEPTH	0.7	0.16	0.58	1.44
	26	DAIRY FORM	2.08	1.57	3.18	2.81
	22	RUMP ANGLE	0.055	0.28H	1.325	1. 1 8H
	1.2	RUMP WIDTH	1.26W	0.15N	0.50W	1.93W
	20	LEGS-SIDE VIEW	0.695	0.08C	1.025	0.42C
	35	FOOT ANGLE	2.575	1.895	1.385	1.545
	20	FORE ATTACHMT	0.23L	1.355	0.955	0.235
	18	REAR UDDER HT	0.82H	1. 1 9H	2.34H	1.65H
	22	REAR UDDER WD	1.29W	1.32W	2.57W	2.86W
	26	UDDER CLEFT	0.605	2.665	0.575	2.905
	26	UDDER DEPTH	0.71	1.185	0.145	1.08
	25	T AT PLACEMENT	0.22C	2.28C	0.05W	1.23C
	25	TEATLENGTH	0.89L	0.10L	0.51 L	0.09L

STATURE (T-TALL,S-SHORT)- STRENGTH(S-STRONG,F-FRAIL) BODY DEPTH (D-DEEP,S-SHALLOW) DAIRY FORM(O-OPEN, T-TIGHT RIB)-, RUMP ANGLE (H-HIGH, L-LOW PINS)-, THURL WIDTH (W-WIDE,N-NARROW):REAR LEGS (C-CURVED,S-STRAIGHT)-l FOOT ANGLE (S-STEEP, L-LOW)-l FORE ATTACHMENT(S-STRONG,L-LOOSE)-,REAR UDDER HEIGHT(H-HIGH,L-LOW)-, REAR UDDER WIDTH(W-WIDE,N-NARROW);UDDER CLEFT(S-STRONG,W-WEAK);UDDER DEPTH (D-DEEP, S-SHALLOW); F TEAT PLACEMENT (W-WIDE, C-CLOSE)-l TEAT LENGTH (L-LONG, S-SHORT)

NATIONAL FFA DAIRY CATTLE EVENT

SIRE SELECTION PROBLEM No. 2

Situation: Semen from these four bulls has been purchased. The bulls were selected to improve the next generation of this herd. RANK the four bulls as they best meet the following objectives in mating with the cow described below. This herd owner has a purebred Jersey herd of 394 cows in which production and type traits are emphasized equally because many offspring are sold through consignment sales. Milk is marketed for cheese production. The main type traits emphasized are udder support and attachments plus correct structure (including stature). Current rolling herd average is 18195M, 85OF and 690P.

COW TO BE MATED CURRENT RECORD		BULLS TO CONSIDER			
	TRAITS	1	2	3	4
(2yr 10mo ME)					
	RPT	87	86	84	95
20560	MILK	2064	2070	1688	2068
4.5	FAT %	-0.14	-0.3	0.5	-0.14
934	FAT	75	49	87	75
	PROT$	264	263	250	242
3.8	PROT %	-0.05	0.01	0	-0.12
781	PROT	70	80	64	59
	CY$	279	290	270	243
	PTI	315	346	324	311
LINEAR SCORE					
38	STATURE	-1.3	1.7	4.6	3.1
32	STRENGTH	-0.3	1.7	2.8	2.1
33	BODY DEPTH	0.5	2.3	3	2.6
20	DAIRY FORM	3	4	4.7	5
25	RUMP ANGLE	H2.6	LO. 1	L3.4	L2.6
26	THURL WIDTH	0.3	1.7	2.2	1.9
29	REAR LEGS	52.1	PO.4	50.1	50.5
2.1	FOOT ANGLE	LI.0	51.2	50.4	50.7
45	FORE UDDER	-0.2	1.7	0.1	0.7
38	REAR UDDER HT	1.6	3.3	2.9	2.9
36	REAR UDDER WD	1.8	3.5	3.7	3.8
33	UDDER CLEFT	0.3	0.4	1.3	2.1
38	UDDER DEPTH	2.2	1.2	1.5	1.4
14	TEAT PLACEMENT	CO.9	Cl.9	C1.1	C2.5
26	TEATLENGTH	LO. 8	L2.5	S0.2	S0.5

RUMP ANGLE (H-HIGH, L-LOW) ' REAR LEGS (S-SICKLE,P-POSTY),
FOOT ANGLE (S-STEEP, L-LOW),- UDDER DEPTH (D-DEEP, S-SHALLOW);
TEAT PLACEMENT (W-WIDE, C-CLOSE), TEAT LENGTH (L-LONG, S-SHORT)

NATIONAL FFA DAIRY CATTLE EVALUATION
Sire Selections Rational
Official reasons for placing *sire selection* classes:

PROBLEM # 1:

From the scenario, it is determined that the breeder is concerned particularly with protein yield, but type traits become important from a soundness standpoint. They emphasize udders and correct feet and legs.

The cow to be mated is above the herd's rolling herd averages for fat, milk and protein yield. According to her linear information she is average in stature, tends to be narrow and weak in frame and is fairly shallow bodied. Her rump is narrow and her legs tend to be straight, but her foot angle is somewhat above average. Her fore udder attachment is somewhat loose and the rear udder attachment is not very high or wide with cleft and depth that are about average.

Considering the available bulls, # 4 has the highest PTA-P, followed by # 1, with # 2 and 3 being quite similar. All but # 2 are improvers in the fore udder, to a varying degree, and all four are improvers in rear udder attachments. # 4 and # 2 also sire daughters that have strong clefts. # 4 is likely to sire stronger and deeper cattle, # 3 and # I are somewhat so, but # 2 is nearly average (no change) in both categories. Additionally # 4 and # I will improve rump width while # 3 is less likely but # 2 is negative in this category.

Bull # 4 is the strongest in type components for this mating which adds to the strength of his being the best choice for the sire to be used. # I has some lesser type advantages but still remains the second best choice because of his production levels. The type advantages for # 3 are enough to place him over # 2 in the final ranking, but not enough to move ahead of # 1. In placing last, bull # 2 has less advantage in rear udder values and is particularly low in secondary areas of strength and depth, moving him into a close last place.

For these reasons, the best placing for this class of sires is 4-1-3-2, with cuts of 6-3-2.

PROBLEM # 2:

In the scenario, it is indicated that the. dairyman is equally concerned with production and type. His milk market pays on cheese yield and his type market calls for udder support and attachments and correct overall structure (stature, feet and legs.)

The cow to be mated is above average for milk, fat and protein yields. According to her linear traits, the cow is fairly tall showing above average strength and depth. She is below average in dairy form with a level rump. Her legs are somewhat set and the foot angle is below average. Her fore udder is very strong and the rear udder attachment is quite high and wide with a good cleft, keeping the udder well above the hocks. Her teat placement is wide.

The Cheese Yield-$ values for these four bulls are all fairly high, ranking 2-1-3 and 4 a bit behind the others. The type components for the bulls show that daughters of # 2, 3 and 4 all have exhibit above average stature, strength and depth of body, while # I does not. All bulls have strong numbers in dairy form. In leg set, bull # I shows strong tendency towards being sickled while the other three are near breed average. Foot angle is low for bull # 1, but the others are all steep in varying degrees. With equal emphasis on production and type, this moves # 3 over # 1. All of the differences in udder traits for these bulls become non-significant when viewing the high numbers for the cow.

Considering these points, the official placing for these sires is 2-3-14 with cuts of 5-2-6.

CONTESTANT NUMBER: NAME:

	FORM				RUMP		LEGS & FEET		UDDER					TEATS	
Cow	Stature	Strength	Body Depth	Dairy Form	Rump Angle	Thurl Width	Rear Legs Side View	Foot Angle	Fore Udder Attachment	Rear Udder Height	Rear Udder Width	Udder Depth	Udder Cleft	Front Teat Placement	Teat Length

DESCRIPTION OF TRAITS AND MEASUREMENT SCALE

FORM

Stature

50
45 - Extremely tall (59")
40
35 - Tall
30
25 - Intermediate (55")
20
15 - Short
10
5 - Extremely short (51")

Strength

50
45 - Extremely strong and wide
40
35 - Very strong
30
25 - Intermediate strength & width
20
15 - Narrow and frail
10
5 - Extremely narrow and frail

Body Depth

50
45 - Extremely deep body
40
35 - Deep body
30
25 - Intermediate in body depth
20
15 - Shallow body
10
5 - Extremely shallow body

Dairy Form

50
45 - Extremely open
40
35 - Open
30
25 - Intermediate
20
15 - Tight
10
5 - Extremely tight

RUMP

Rump Angle

50
45 - Extremely sloped from hooks to pins (4.5")
40
35 - Moderate slope
30
25 - Slight slope, hooks to pins (1.5")
20
15 - Pins slightly higher than hooks
10
5 - Pins clearly higher than hooks (1.5")

Rump Width

50
45 - Extremely wide pins (6.5")
40
35 - Wide pins
30
25 - Intermediate width of pins (4.5")
20
15 - Slightly narrow pins
10
5 - Extremely narrow pins (2.5")

LEGS & FEET

Rear Legs, Side View

50
45 - Extremely sickled in hock
40
35 - Slightly sickle hocked
30
25 - Intermediate set in hock
20
15 - Nearly straight in hock
10
5 - Posty and straight legged

Foot Angle

50
45 - Extremely steep foot angle
40
35 - Steep angle
30
25 - Intermediate angle (45°)
20
15 - Low angle
10
5 - Extremely low angle

UDDER

Fore Udder Attachment

50
45 - Extremely snug & strong attachment
40
35 - Very strong attachment
30
25 - Intermediate strength attachment
20
15 - Loose attachment
10
5 - Extremely loose attachment

Rear Udder Height

50
45 - Extremely high (7.7" from vulva)
40
35 - Very high
30
25 - Intermediate height (10.5")
20
15 - Low
10
5 - Extremely low (13.3")

Rear Udder Width

50
45 - Extremely wide (7.5")
40
35 - Very wide
30
25 - Intermediate width (5.5")
20
15 - Narrow
10
5 - Extremely narrow (3.5")

Udder Cleft

50
45 - Extremely strong (2.5")
40
35 - Strong
30
25 - Intermediate (1.25")
20
15 - Weak
10
5 - Extremely weak (flat)

Udder Depth

50
45 - Extreme height of udder floor above hocks and shallow udder floor (6")
40
35 - Udder floor well above hocks
30
25 - Udder floor above hocks (2")
20
15 - Udder floor at point of hocks
10
5 - Very deep, udder well below hocks (2")

TEATS

Front Teat Placement

50
45 - Extremely close, base of teats on inside of quarter
40
35 - Placement on inside of quarter
30
25 - Centrally placed on quarter
20
15 - Placement toward outside of quarter
10
5 - Extremely wide, placement is on outside of quarter

Teat Length

50
45 - Extremely long (3.25")
40
35 - Long
30
25 - Intermediate (2.25")
20
15 - Short
10
5 - Extremely short (1.25")