

EM4877E



Dairy Cattle and Dairy Goat 4-H Member Advancement

Member Manual



By

Gary R. Fredricks and Jerry A. Newman

THE ADVANCEMENT PROGRAM WILL:

- Make your project more interesting.
- Help you learn more about what animals need to produce milk.
- Help you develop greater skill with dairy animals.
- Provide you with new, enjoyable experiences.
- Allow you to advance according to your ability, interest, and willingness to work.
- Recognize you for work well done.

The Advancement Program can be an important part of your dairy project. Include it as part of your project records. Most answers to the questions asked in the Advancement Program are in your project manual.

In the Advancement Program, you work at your own pace. Your leader and parents can help you complete skill options.

As you do each option, fill in the date and have your leader or parent initial it. When you have completed the required number of options for a step, tell your leader that you are ready to be tested to qualify for that step. If you need an animal to complete a skill option and you do not have one, you must try to obtain an animal to complete the skill. If this proves impossible, your leader may exempt you from completing the skill option. You will be asked questions on the work you have done. When each step is completed, your leader will give you an advancement certificate.

When you have passed Step I, go on in turn to Steps II, III, IV, V, and VI. You can do options for higher steps while you are working on a lower step, but you cannot qualify for a higher step until you have qualified for all the lower ones.

ADVANCEMENT CHECKLIST

STEP 1

You must complete fourteen skill options and three personal development options to pass Step I.

Skill Options	Date Passed	Approved By
1. Spell the names of five breeds of dairy cattle or five breeds of dairy goats and describe two important characteristics of each one.	_____	_____
2. Name, locate, and correctly spell these parts of a cow or goat: muzzle, withers, back, pin bones, rump, hock, pastern, teats, flank, chest floor, heart girth, udder, barrel, loin, chine.	_____	_____
3. Learn the correct spelling, definition, and pronunciation of the following: artificial insemination, brucellosis, colostrum, dairy character, dam, sire, heifer, kid, mammary system, purebred, grade, crossbred, registered, yearling, parturition, lactation, gestation period.	_____	_____
4. Describe six of these desirable characteristics and tell how each may aid productive ability: strong back, width and length of rump, width between pins, long deep barrel, wide deep chest, strong legs, leanness, sound udder, uniform teat size and placement, depth of flank.	_____	_____
5. Describe six of the following undesirable characteristics and tell why each is undesirable: meatiness, undersize, narrow shallow chest, weak pasterns, weak udder attachments, strutted teats, tilted udder, overshot or undershot jaw, pendulous udder.	_____	_____
6. Teach an animal to lead.	_____	_____
7. Learn to show your animal.	_____	_____
8. Make a rope halter (optional for goat projects).	_____	_____

STEP II

You must complete fifteen skill options and three personal development options to pass Step II.

Skill Options	Date Passed	Approved By
1. In addition to the parts of a dairy cow or goat learned in Step I, identify, locate, and correctly spell these parts: ribs, thurls, crops, thigh, brisket, knee, heel, stifle, hoof, poll.	_____	_____
2. Learn the meaning of and how to spell ten of these terms: bacteria, chlorine solution, conformation, contagious, infectious, contaminated, dehorn, inheritance, mastitis, milkfat, naval, offspring, progeny, scours, vaccination, antibiotics.	_____	_____
3. Learn the meaning of and how to spell five of these terms: carbohydrates, green chop, legume, protein, silage, supplement, total dry matter (TDM), crude fiber.	_____	_____
4. Clip an animal for clean milk production or for showing.	_____	_____
5. Describe two methods of removing horns from a dairy animal. Help dehorn at least one animal.	_____	_____
6. Know the purpose and recommended use of five of these pieces of equipment: nipple bottle, strainer, strip cup, farrier's (hoof) knives, hoof trimmers, balling gun, magnets, rotary tattoo.	_____	_____
7. What is a parasite?	_____	_____
8. Describe the recommended methods for control of any three of the following: heel flies, horn flies, stable flies, house flies, lice, stomach worms, lung worms.	_____	_____
9. Try to control one type of parasite and report results and methods.	_____	_____
10. Learn the average TDN and protein values of five of these dairy feeds: linseed oil meal, barley, oats, corn, wheat, cottonseed meal, soybean oil meal, beet pulp, bran, whole cottonseed, corn silage.	_____	_____

STEP III

You must complete fourteen skill options and four personal development options to pass Step III.

Skill Options	Date Passed	Approved By
1. Keep monthly milk and/or fat production records on at least one animal for at least one year.	_____	_____
2. Visit a goat dairy or commercial dairy farm and learn what the operator does to make the operation successful. Report your observations to a club meeting, discussing management techniques used in feeding, breeding, and milking.	_____	_____
3. List five livestock sanitation practices a dairy operator should observe and tell why.	_____	_____
4. Describe a recommended milking procedure.	_____	_____
5. Learn to recognize four of these health problems and identify at least one recommended treatment for each: hoof rot, milk fever, pink eye, ringworm, shipping fever, scours.	_____	_____
6. List four practices a dairy operator should observe to prevent and control mastitis.	_____	_____
7. Describe the symptom leading to parturition, the process of a normal birth, and how to care for the mother and baby following birth.	_____	_____
8. Describe what the dry period is, how the cow or doe is dried off, and how she should be fed during this period.	_____	_____
9. Name and describe three ways to manage pastures. Give benefits or advantages of each, or limitations that may exist in your area.	_____	_____
10. Learn the length of gestation and intervals of heat periods of goats or cattle and how to figure freshening dates.	_____	_____

Skill Options

Date Passed Approved By

11. Describe the conditions necessary for a dairy to meet the Grade A Producer Farm Requirements under the Washington State Uniform Fluid Milk Act.

Reference: Contact the Washington State Department of Agriculture

12. Take a soil sample, have it analyzed, and report the nutrient levels.

Reference: Contact county extension office for soil sampling information

13. List five major products from dairy cows or goats.

14. Report on how to register a purebred animal.

Personal Development Options (select from list on page 13)

1. Give a demonstration or talk to your club. _____

2. _____

3. _____

4. _____

_____ is qualified and has completed all requirements for Step I of the Dairy Advancement Program.

Name of Club Member

_____ Age Club No. _____

_____ Approved by _____

Date

Advancement Chair or Committee

_____ Club Leader

STEP IV

You must complete three skill options and five personal development options to pass Step IV.

Skill Options	Date Passed	Approved By
1. Formulate a ration for a 1,500-pound Holstein, producing 70 pounds of 3.5% milk per day, or a mature doe, producing 10 pounds of milk daily.	_____	_____
2. Write a report on one of the following topics:		
A. Housing arrangement for a herd of dairy cows or goats.	_____	_____
B. Nutritional requirements for a milking cow or doe.	_____	_____
C. Reproduction, breeding, and genetics.	_____	_____
D. Why records are needed to improve livestock income.	_____	_____
E. Plan a waste disposal system for a dairy farm.	_____	_____
3. Set up a herd health calendar for a dairy cow or doe from birth to milking. The calendar should include vaccinations, parasite management, and specific management responsibilities, such as dehorning and hoof trimming.	_____	_____

Personal Development Options (select from list on page 13)

1. Give a demonstration or talk to your club. _____
2. _____
3. _____
4. _____
5. _____

_____ is qualified and has completed
 Name of Club Member all requirements for Step I of the Dairy Advancement Program.

_____ Age Club No. _____

_____ Approved by _____

Date

Advancement Chair or Committee

 Club Leader

STEP V

You must complete four skill options and five personal development options to pass Step V.

Skill Options	Date Passed	Approved By
1. Name the four compartments of a cow or goat stomach.	_____	_____
2. What is the function of the rumen?	_____	_____
3. Describe traumatic gastritis ("hardware disease").	_____	_____
4. Write a report on one of these topics:		
A. Make a drawing of the udder of a cow or goat; explain milk secretion and milk let-down.	_____	_____
B. List the nutritional ingredients of milk.	_____	_____
C. Explain the nutrients that milk-producing animals need for growth, maintenance, and milk secretion.	_____	_____
D. Explain reproduction in the dairy female.	_____	_____

Personal Development Options (select from list on page 13)

1. Give a demonstration or talk to your club. _____
2. _____
3. _____
4. _____
5. _____

_____ is qualified and has completed
Name of Club Member all requirements for Step I of the Dairy Advancement Program.

_____ Age Club No. _____

_____ Approved by _____
Date Advancement Chair or Committee

Club Leader

STEP VI

You must complete all five skill options and five personal development options to pass Step VI.

Skill Options	Date Passed	Approved By
1. Report on how milk is processed from the farm to the store, according to regulations.	_____	_____
2. Grade A milk is marketed in three classes. Explain which dairy products come from each class.	_____	_____
3. Each month the Federal Milk Order Administration publishes a price for each class of milk and an average price for all milk. How does each producer's receipt per 100 pounds relate to the average price?	_____	_____
4. Indicate which of the following functions are performed by the Federal Milk Order Administration, the Milk Stabilization Division of the State Department of Agriculture, or the producer marketing cooperative.	_____	_____
A. Determines the Class III price of milk.	_____	_____
B. Collects money from milk processors and handlers.	_____	_____
C. Determines the price of quota milk.	_____	_____
D. Performs butterfat testing service for producers.	_____	_____
E. Determines the percent of parity at which to support manufactured products.	_____	_____
F. Collects and processes surplus milk.	_____	_____
G. Coordinates movement of milk to its logical destination of highest value.	_____	_____
H. Provides the trucking to move producer milk.	_____	_____
I. Determines the amount of base and excess milk for each producer.	_____	_____
5. Describe the functions of the following agencies:		
A. Washington Dairy Products Commission	_____	_____
B. Washington Dairy Council	_____	_____
C. Washington Dairy Association	_____	_____
D. Dairy and Consumer Service Division of the State Department of Agriculture	_____	_____

PERSONAL DEVELOPMENT OPTIONS

1. Lead the Pledge of Allegiance and 4-H Pledge at a 4-H meeting.
2. Lead a song or a game at a 4-H meeting.
3. Preside at a meeting of your 4-H club.
4. Write a news story for a local paper.
5. Participate in a radio or television program.
6. Present a demonstration or illustrated talk to your club.
7. Present a demonstration or illustrated talk to a group other than your 4-H club.
8. Host a 4-H meeting. See that everyone is welcomed and made comfortable.
9. Participate in a community service project.
10. Chair a club committee.
11. Participate in a judging contest.
12. Serve as a junior leader.
13. Serve as a teen leader.
14. Attend 4-H camp.
15. Attend a Statewide 4-H Teen Workshop.
16. Serve as clerk, chair, or apprentice judge at a 4-H show.
17. Develop and exhibit a science display related to dairy cattle or goats.
18. Serve as a camp counselor.
19. Make arrangements for a tour by your club.
20. Arrange for a film to be shown at your club meetings.
21. Secure a speaker to talk at your club meeting.
22. Develop some options of your own with your parents' and leader's guidance.
23. Participate in a "bowl" contest.
24. Visit an agricultural processing plant.
25. Complete your 4-H Record Book.
26. Attend a field day.
27. Explore a career and report back to your club or leader.
28. Be a big brother or sister to a new 4-H member.

REFERENCES

Use these references to get information for the skill options.

Dairy Cow References

Dairy Cow Unified Score Card

<http://www.extension.umn.edu/youth/mn4-H/projects/docs/PDCA.pdf>

Tying Rope Halters

http://pubs.ext.vt.edu/404/404-280/404-280_pdf.pdf

Working with Dairy Cattle

<http://www.holsteinfoundation.org/education/workbooks.html>

Dairy Goat References

Tying Rope Halters

http://pubs.ext.vt.edu/404/404-280/404-280_pdf.pdf

EM4425E, Goat Project, Leader Guide

<http://cru.cahe.wsu.edu/CEPublications/em4425/em4425.pdf>

EM4894E, Your Dairy Goat

<http://cru.cahe.wsu.edu/CEPublications/em4894/em4894.pdf>

EM4781E, Dairy Goat Show Procedures

<http://cru.cahe.wsu.edu/CEPublications/em4781/em4781.pdf>

Agency References

Washington Dairy Products Commission

<http://www.havemilk.com/>

Washington Dairy Council

<http://www.eatsmart.org/>

Washington State Dairy Federation

<http://wastatedairy.com/>

Dairy and Food Division

<http://agr.wa.gov/FoodAnimal/Dairy/>



4-H 

WASHINGTON STATE UNIVERSITY
EXTENSION

Written by Gary R. Fredricks, Clark County Extension Agent, Large Animal Development Committee, and advised by Jerry A. Newman, Extension 4-H/Youth Specialist.

The committee thanks the Oregon State University 4-H/Youth program for developing the conceptual outline.

Issued by Washington State University Extension and the U.S. Department of Agriculture in furtherance of the Acts of May 8 and June 30, 1914. WSU Extension programs and policies are consistent with federal and state laws and regulations on nondiscrimination regarding race, sex, religion, age, color, creed, national or ethnic origin; physical, mental or sensory disability; marital status, sexual orientation, and status as a Vietnam-era or disabled veteran. Evidence of noncompliance may be reported through your local WSU Extension office. Trade names have been used to simplify information; no endorsement is intended.

Published June 1994.
Revised October 2014.

EM4877E