

SYMPOSIUM: HOW WILL WE PROVIDE DAIRY EDUCATION FOR TOMORROW'S YOUTH?

Dairy Youth Programming: Where We've Been, and Where We Go from Here

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ABSTRACT

Total enrollment for the dairy project and 4-H was analyzed using the USDA *Annual 4-H Youth Development Enrollment Report* from 1985 to 1994. Enrollment of 4-H youth in the dairy project over this period has generally increased in a manner similar to that of total 4-H enrollment. Enrollment in the dairy project has increased from 77,937 in 1985 to 83,742 in 1994; enrollment in 4-H has increased from 4,728,549 to 5,600,087 during the same period. A review of historical data for dairy programming provided the basis for development of current activities and educational efforts for dairy youth. Many programs, such as dairy judging, continue to involve many youth. Enhancements to these traditional programs, such as more competitive sections in the national FFA dairy judging contest, have expanded the number of clientele reached by those programs. New programs and learning methods have allowed more youth from nonfarm backgrounds to participate and learn about dairy subjects. Managerial projects allow nonfarm youth to show dairy cattle. Video and CD-ROM formats allow youth to see material visually without using a dairy animal. Shifts in program delivery, such as incorporation of life skills in resource and educational materials, have met the needs of a changing clientele. There also has been increased emphasis on inclusion of biological and biotechnological components in programming efforts. Some high school youth now receive biology credit for agriculture classes. Staff and financial resources for dairy youth programming have tended to shrink over time, and many states have reacted to this decrease by increasing cooperative programming and by developing dairy funding programs through endowment funds or foundations. (**Key words:** youth, education, 4-H)

INTRODUCTION

The first National Collegiate Dairy Judging Contest was held in 1906, and dairy youth education continues in many forms throughout the US. Junior dairy breed associations, 4-H, and FFA all offer opportunities for youth to be involved in dairy. Dairy programming has served to build the knowledge base of youth who are planning a career in the dairy industry. As the number of dairy farms decreases, the number of young people with farm backgrounds also decreases, and changing clientele is one of the challenges facing dairy youth programming. Shifts also have occurred in the information that is being taught to youth and the methods used to present that information.

DISCUSSION

Dairy project enrollment and total 4-H enrollment were analyzed using the USDA *Annual 4-H Youth Development Enrollment Report* (4) from 1985 to 1994. Enrollment of 4-H youth in the dairy project generally has tended to increase gradually, which is similar to the pattern for total 4-H enrollment in the US (Figure 1). This trend existed for eastern, southern, and western regions of the US (Figure 2), but the central region has experienced more fluctuations in enrollment.

Enrollment trends for males and females are similar (Figure 3). However, enrollment of females has increased faster, decreasing the total gap in gender enrollment. In 1985, female enrollment was 10,371 lower than male enrollment, but, by 1994, the difference decreased to 2392.

Based on 1994 state enrollment totals, trends were compared for the 10 largest states, the 10 smallest states, and the 10 states nearest the average enrollment (Figure 4). The 10 largest states have shown the greatest increase in enrollment, and the two other groups have shown more stable enrollment totals.

Dairy programming efforts still serve the traditional audiences of youth and leaders of the 4-H, FFA,

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and junior breed associations. High school instructors of agriculture continue to teach production agriculture, including dairy cattle production. Many schools now award science or biology credit for agriculture courses, recognizing the strong science component of those courses. Similarly, both elementary and high school science and biology teachers have begun to incorporate dairy-based information into curricula on genetics, reproduction, product manufacturing, and nutrition.

As the number of dairy farms in the US has decreased, the number of farm youth also has decreased. More urban youth are interested in dairy programs, either dairy products or dairy cattle production, as a way to work with animals. Many youth may not own dairy cattle but still may be interested in dairy subjects as a way to acquire knowledge about animal production and the resulting

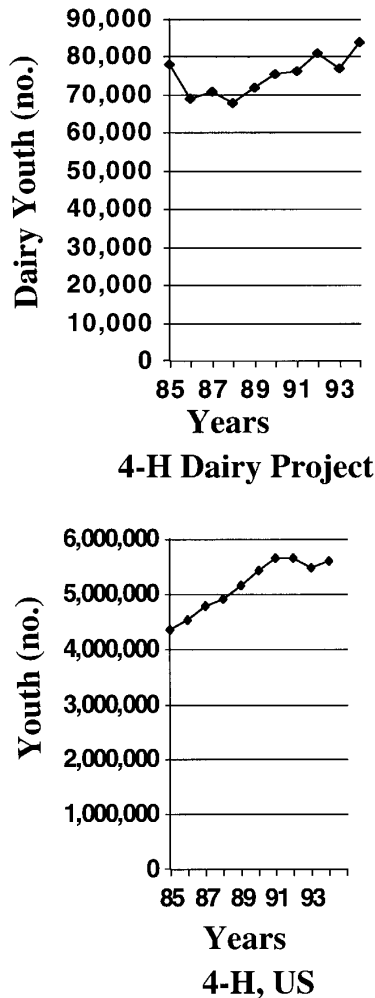


Figure 1. Comparison of total 4-H youth enrollment in the dairy project and overall 4-H in the US.

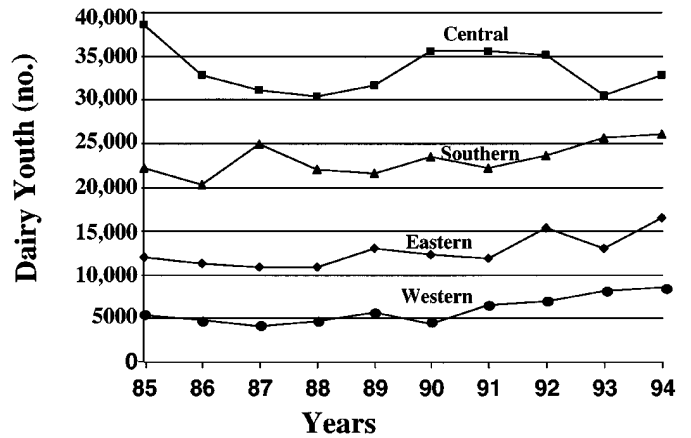


Figure 2. Comparison of enrollment trends in the dairy project in four US regions: eastern (♦), central (■), southern (▲), and western (●).

products or to pursue an interest in veterinary medicine.

Traditional dairy programming continues, but with new twists. Dairy judging contests have remained popular among youth. By participation in these contests, youth learn to deal with a competitive environment and learn and improve skills that will be useful throughout their lives, regardless of whether or not they stay involved in the dairy industry. Life skills that are strongly emphasized in dairy judging include the decision-making skills needed for placing classes and the communication skills required in giving reasons.

Some dairy youth programs have expanded the traditional dairy judging contest to include additional areas of knowledge. The national FFA contest now includes additional competitive sections: questions and problems in production and management, sire evaluation, pedigree evaluation, and linear evaluation. The 1996 Post-Secondary Judging Contest at World Dairy Expo included questions on a commercial

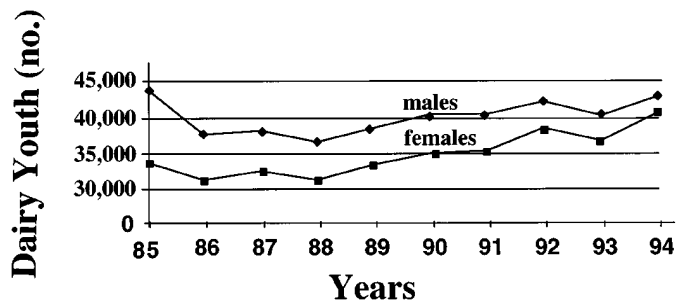


Figure 3. Enrollment trends for males (♦) and females (■) in 4-H dairy projects.

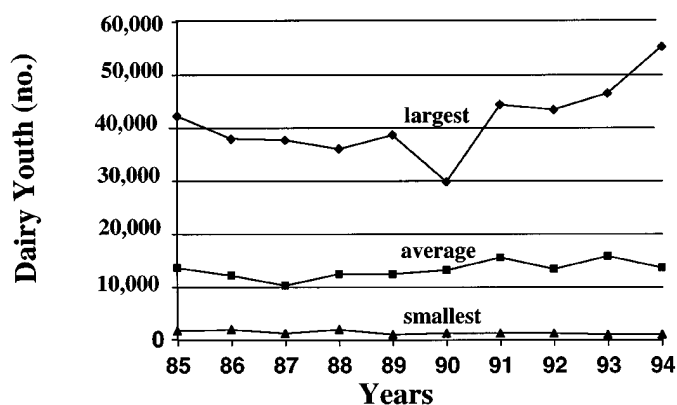


Figure 4. Comparison of enrollment trends based on enrollment totals for the 10 largest states (♦), the 10 smallest states (▲), and the 10 states (■) nearest the enrollment average. The 10 largest states show the greatest increase in enrollment, but the two other groups have more stable enrollment totals.

grade heifer class as well as a registered heifer class. Linear evaluation is also a component of the contest.

Because of the decreasing base of dairy farms, there also may be fewer leaders who have previously developed the knowledge base to coach judging teams. To address this need, Virginia Tech Dairy Club hosted a judging workshop for both youth and leaders. Workshops were presented in multiple formats, including group sessions as well as breakout sessions to address the needs of participants with differing knowledge bases. In 1996, 171 youth and 43 instructors in agricultural education and 4-H volunteers participated in the 2-d workshop.

Dairy bowl contests do not require youth to own a dairy animal; competitors only need to have an interest in learning more about the dairy industry. Dairy bowl competitions started about 20 yr ago at local and state levels. The current national 4-H contest began in 1980, and participation has increased since then to 21 teams in 1995. Breed association quiz bowls also are popular on state and national levels. In 1996, 46 teams in the junior and senior divisions participated in the Wisconsin Junior Holstein Dairy Bowl Competition.

The National 4-H Dairy Conference offers youth an opportunity to share information from many different regions and types of dairy operations. The conference brings youth together from different geographic locations, including participants from 35 US states, 5 Canadian provinces, and Puerto Rico. The conference has enhanced workshops by providing updates in topic areas including biotechnology, computers, dairy products marketing, food science, and animal welfare.

Many youth first become involved in the dairy project through participation in dairy shows because

participation in shows allows youth to compete in situations that permit evaluation of both animal type and individual showing skills. There also is the opportunity to use the time outside the show ring for other educational activities.

In conjunction with the 1996 state youth show, University of Illinois Cooperative Extension Service organized a four-part contest to test overall dairy knowledge. These "skillathons" involve a series of learning stations with specific questions for participants to answer. The dairy management test covers all areas of dairy knowledge. Dairy judging and a dairy showmanship contest are also included. The top five youth are each awarded a \$1000 scholarship to use for postsecondary education.

Dairy programming has expanded to include more topics and different aspects of the dairy industry. Ohio Cooperative Extension Service has created *Science Fun with Dairy Foods* (3) workbooks for both youth and leaders to promote science learning about dairy products. Alabama Cooperative Extension System has developed a video and accompanying workbook explaining animal food and digestive systems (1). This school curriculum is designed to meet the needs of traditional education segments such as FFA and yet remain applicable to home economics courses.

Managerial projects allow nonfarm youth or those from farms with grade cattle to participate in shows. Maryland Cooperative Extension Service developed a managerial lease agreement in 1988. Previously existing share-a-heifer programs of breed associations served as a model for the Maryland program. Formalizing the agreement has promoted increased participation by all involved attendees, including the youth, their parents, and the dairy producer providing the calf. In 1996, 78 nonfarm youth participated in the Maryland leasing program (J. L. Majeskie, 1996, personal communication).

There also has been a shift to include issue programming in dairy, including animal welfare, quality assurance, and ethics in addition to the traditional information on production management.

The methods for teaching dairy information have changed. The knowledge base may vary greatly even among youth of the same age, and so increased emphasis on targeting information to clientele differing in their knowledge base has become more important. Hands-on learning always has been integral to programming for dairy youth. With the decreasing knowledge base of youth participants as well as leaders and instructors, hands-on learning has now become essential for transfer of even basic knowledge. It can no longer be assumed that participants have ex-

perienced physical proximity to dairy cattle. Beyond showing youth how to do something, hands-on activities give nonfarm youth the opportunity to be near dairy cattle. Hands-on activities in dairy continue to expand to science activities such as ultrasound for reproduction.

Format and presentation of resource materials are also changing. Animal sciences youth and leader workbooks of the North Central Region (2) were pilot tests of a new presentation format for teaching life skills. In addition to covering traditional subject matter, the new workbook layout helps youth work through the learning cycle while emphasizing both dairy knowledge and life skills. Resources for leaders include detailed step-by-step instructions for workshops and reference information.

Technology also has had an effect on methods for presentation of material. Dairy project information still can be presented in workshops, but expanded video, CD-ROM, satellite, and computer capabilities, as well as reduced cost, have increased the options available for delivery.

Traditional funding for youth programs is being reduced in many states. An increasing number of competing youth programs now must share the reduced funding that is available. This change has led to an increased need for industry support, and fundraising has become a part of the responsibilities for youth programming. To reduce constant requests to the same companies for support, states have created foundations or endowment funds. Washington, Virginia, Iowa, and Wisconsin are several of the states that have used foundations or endowment funds to

ensure a steady source of funding for future dairy programming.

CONCLUSIONS

Based on historical data and enrollment trends, both potential threats and opportunities exist for future education programming for dairy youth. The audiences, subject matter, and methods for dairy youth education continue to change. Traditional programs, such as dairy judging and the dairy bowl, offer opportunities for both farm and nonfarm youth. New programs, such as skillathons, and new resource material, delivered through computer programs and videos, allow a more urban clientele to learn about dairy. Educational programs for dairy youth should keep the best of traditional activities as well as develop new and innovative programs for both current and new audiences. Although changes will continue to occur, the major focus will still be on teaching youth about dairy cattle and the dairy industry. Dairy is a strong learning area, and dairy cattle are a great way to teach life skills to youth while permitting them the added benefit of being able to work with a living animal.

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