PROCEEDINGS
Of The
SIXTH ANNUAL
FLORIDA DAIRY PRODUCTION CONFERENCE
UNIVERSITY OF FLORIDA
GAINESVILLE
MAY 13 and 14, 1969

"Improved Production Practices
and Milk Promotion"

SPONSORED BY
DEPARTMENT OF DAIRY SCIENCE
AGRICULTURAL EXTENSION SERVICE
AGRICULTURAL EXPERIMENT STATIONS
OF THE
INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES
WITH COOPERATION OF STATE DAIRY ORGANIZATIONS
TO: Florida Dairymen and Those in Related Enterprises

PROCEEDINGS

SIXTH ANNUAL FLORIDA DAIRY PRODUCTION CONFERENCE
May 13 and 14, 1969

The topics and speakers of the Sixth Annual Florida Dairy Production Conference were selected by representatives of the various state dairy organizations and of the Institute of Food and Agricultural Sciences of the University of Florida. Four milk producer associations provided financial assistance towards the expenses of the Conference.

The resumes of most of the talks are included herein. They are in the areas of labor, producing and selling quality milk, herd improvement and improved production practices. See titles under Contents.

The conference moved from the campus to the Dairy Research Farm the second day where it observed the University's new milking facility under construction and heard reports of current and planned research. The new facility will permit research on different methods of handling animal waste.

An added feature at the Conference was the inspection of the first animal in the nation in the new National Brown Swiss "Identity Enrollment" Program as Step 1 in the three steps leading to registration of qualified grade Brown Swiss cows. A cow of Wil-Win Farms, Green Cove Springs, Florida became the first cow enrolled. Also, two grade Brown Swiss heifers belonging to a 4-H boy and girl were enrolled.

A 4-H and FFA Guernsey Sale and a PDCA sponsored distribution of Guernsey, Holstein and Jersey calves to 4-H and FFA members completed the event.

Sincerely,

[Signature]

C. W. Reeves
Extension Dairyman

CWR:bp
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NAMES and ADDRESSES of those ATTENDING CONFERENCE
Ladies and Gentlemen, it is a distinct pleasure to have this opportunity to speak before you on this vital subject.

I have a deep and involved concern for what I consider the number one pressing problem of the dairy industry, Labor!

Before I get involved in the subject to which I have been assigned, I would like to tell you a little about our cooperative and how we got involved in the labor program.

Our leadership some time ago decided that a cooperative such as ours should do more than just involve itself in the field of marketing, never forgetting, however, that marketing is the most important of all services that a dairy cooperative can perform.

We have involved ourselves in the hauling of our entire membership's milk from farm to market. We have assisted our members in the purchase of items such as automobiles, trucks, tractors, tires, appliances, lawn mowers, clothes and any such items where there exists a possible saving through collective purchasing. We have assisted members with their tax and legal questions. We have assisted qualified young men on dairy farms in securing draft deferment. We have provided a complete and sound market for our members. We check butterfat, bacteria and leucocyte and verify weights of all member milk. We provide a qualified, quality control man to assist our members in producing high quality milk. We provide production projections for anticipated market needs to assist the members in planning future production. We balance market needs with market production for optimum utilization. We provide a regular newsletter to keep our members current on market conditions. We represent our membership in all areas of Federal Order hearings and work with legislative and congressional matters.

It should be noted that these services are no more than those offered by other dairy farm cooperatives. However, we do attempt to assist our members in an area normally avoided by cooperatives such as ours and that is in the placement of labor on dairy farms. I, like many others, felt that we would be involving ourselves, too much so, in the actual operation of the dairy farm, and could easily find ourselves as cooperative managers, in a rather precarious position.

Approximately three years ago, the leaders of our cooperative expressed a growing concern related to the securing of adequate and qualified personnel for work on the dairy farms. At this time, I was instructed to investigate any and all areas open to us for possible assistance.

The local County Agent, Mr. Jean Beam and his assistant, Mr. Paul Glasscock informed us that the Manpower Development Training Act offered a program, On-the-Job Training, and that such might be available to us. Much time was spent investigating possible establishment of an actual school for dairy farm labor, but after close investigation, it was determined that the costs of such a school would be prohibitive.

We, with all the assistance that could be found, applied to the Manpower Development Training Act people for a grant to train 100 laborers, on-the-job,
at farms throughout the immediate area. After applying and re-applying several times, we were finally granted a contract, a coordinator was hired, and the first attempt at operating such a program was under way.

The dairy farmers were reimbursed $15.00 per week for 16 weeks to train the man on-the-job in all areas of dairy farm work.

The intention of the program was that new people would be trained for dairy farm work and existing persons on the farm would be given additional training in order that they might be promoted to higher positions.

In the early days of this program, it was a complete failure. After many flops in one way and then another, we decided that the reason for failure was ours and not that of the program. The coordinator that we hired, the farmers participating in the program, and myself had no confidence in the program. Unfortunately, a lot of us felt that just because the government was involved, that it would be nothing other than a failure. When we finally came to our senses, we changed our attitudes and our coordinator. Mr. Dick Jolly, who is now with the Dairy Division of the State Department of Agriculture, was hired and the program became a success. Immediately after the conclusion of the original program, which lasted a total of one year, we applied for another. This program was harder to secure than the original due to the poor performance of the original program.

After several months of waiting, we were finally awarded a trial program to train 50 laborers during a six month period of time. Mr. Ken Crothers, who was already with our staff, was hired as the coordinator to manage this program. The program was an even greater success than anyone predicted. We employed and placed on the program 67 different people and the fully allotted 50 trainees completed the course.

The majority of these trainees are still on local dairy farms. All were added laborers to the total work force and for the immediate moment helped eliminate the critical labor shortage. This pleasant experience of having relief from labor problems was but for a short period of time.

Upon the conclusion of this, we immediately applied to the Manpower Development Training Act people for another On-The-Job Training Program and were informed that such was no longer available.

After much discussion with local officials of the labor department, we learned that we might qualify for a contract with the JOBS program, and after much investigation, we decided to present a bid application for such a program.

The new program is referred to as JOBS (Job Opportunity Business Sector). An important thing to understand about this program is that it was designed by the National Alliance of Businessmen in cooperation with the Federal Government for the purpose of assisting the hard core unemployed persons of our society.

Many of the hard core disadvantaged persons cannot write their name other than with an "X", read a simple sign, such as in or out, ride a bus because of the inability to read where it is going. Only one in five owns a clock and knows how to use it, very few have a social security card and only a few have ever been counted in a census or registered to vote.

As has been pointed out by leading business men having involved themselves in this program, these people do want to work, and, if given
assistance, many will become worthwhile tax paying, instead of tax receiving, members of our society. This type of person needs encouragement, motivation, stimulation and incentive to overcome his fear of constant hostility and failure.

To completely understand what I am trying to say, I would like to quote from a speech of Mr. V. E. Boyd, President of Chrysler Corporation. "Give a man a fish and he will eat for a day. Teach him how to fish and he will eat for the rest of his life."

As a point of interest, following is the criteria for individuals eligible to participate as employee trainees: poor persons who do not have suitable employment and who are either (1) school drop-outs (2) under 22 years of age (3) 45 years of age or over (4) handicapped, or (5) subject to special obstacles of employment.

If you look closely at what I have just described, you will find that our industry, more than any other, lends itself well to the absorption of this type of person.

The JOBS program is for specific metropolitan areas, referred to as S.M.S.A. (Standard Metropolitan Statistical Areas). Originally, the program was available in only 50 metropolitan areas of the United States, and later it was extended to 125 and finally, through the new MA-5 contract, to 250 areas.

Many of our members were located in areas outside these specific metropolitan areas. We requested and were granted permission to place individuals on farms in suburban areas provided the recruitment of trainees was from the qualified S.M.S.A. area.

Contracts are awarded to individuals, partnerships, corporations, and consortia. We are a consortium, for the purpose of performing (1) on-the-job training for specified details related to performing the actual job and training for possible upward mobility (2) orientation and counseling for the purpose of assisting the individual to understand his job, his employer, his responsibilities and his opportunity for a better way of life. This includes counseling in the area of personal problems such as, financial and hygiene. (3) Basic education is to be offered to an extent where the individual can perform his job and have an opportunity for advancement. This is a must in all JOBS programs. (4) Supportive services must be performed for the purpose of working with the owner or manager of the business to assure a complete involvement in the program and assistance to the trainee.

This type of program is a great deal different, compared to ones previously discussed, in that it includes a total involvement on the part of the consortium bidder (the association) and the consortium participant (the dairy farmer) to see that the program is a success. In other words, retention of the trainee for a complete working year becomes a financial advantage. The participant and the bidder are reimbursed for expenses incurred in performing training services to the trainee at a rate of 1/260th of the total allocated amount for each day the trainee remains on the job.

After several submittals of application for this program, it was finally approved April 1, 1969, and we received our grant which is referred to as MA-4 contract. It should be noted that we are the first cooperative of our type to be awarded such a contract.
Our contract is for $226,000 to be used over a two year period to train 100 farm hand laborers, 2 dairy testers and 6 trailer truck drivers. This is broken down in the following manner: for each farm hand laborer trainee, the farmer will be reimbursed $544 for on-the-job training, $160 for damage to cows and $181 for waste and loss of milk. For time that the trainee spends away from his job attending orientation, counseling, and basic education classes, the farmer will be reimbursed at the minimum wage rate.

For the dairy tester, the consortium participant will be reimbursed $1435 for on-the-job training and $155 for breakage and waste as well as reimbursed for actual time spent by the trainee in classrooms away from his job.

The consortium participant will be reimbursed for the trailer truck driver in the same manner as the others, except at a rate of $700 for on-the-job training and $430 for excessive damage to truck, trailer and equipment. Likewise, the participant will be reimbursed for time spent by the trainee away from his job attending classes.

The consortium bidder (the association) is reimbursed for all expenses incidental to the program such as, salaries for the (1) administrator (2) coordinator (3) secretary (4) bookkeeper (5) counsellors (6) medical and dental expenses, and (7) transportation.

Involvement on our part in programs of this type, has helped us become acquainted with employment agencies that we did not formerly know existed. Each of the following agencies assist us in securing labor, (1) Youth Opportunity Center (2) Neighborhood Youth Corps (3) Farm Labor office (they advertise for labor on the radio at no cost to us) (4) Florida State Employment office, Tampa, St. Petersburg, Bradenton and Sarasota (5) Neighborhood Service Center (6) Travelers Aid (7) Salvation Army and (8) Employment Program Concentrated. With all this assistance we have been able to do a pretty good job of balancing labor requirements with labor needs.

A MA-4 contract such as ours is no longer available and has been replaced with a MA-5 contract. The MA-5 contracts are said to be much simpler, but will not be available for a couple of months.

Should you be interested in more information regarding these contracts, please contact your local U. S. Department of Labor office. They will give you any assistance needed.

Our association harbors no false illusion that this or any other program is going to solve all of our labor problems. Involvement on our part in such a program is to first, help ourselves solve our present labor problems and second, to place the unemployable in positions where they become worthwhile working citizens of our society.

To involve ourselves in such programs, it becomes our responsibility to do everything in our power to make them work. We have called on and expressed to our entire membership that they cannot afford to condemn, criticize and in general, ridicule this or any other program if they want to solve their number one problem. Some have expressed they do not wish to be bothered with such as this. If we all assume this type of an attitude, how can we expect to succeed?

We have established as our goal, to HIRE, TRAIN and RETAIN dairy farm labor.
Having involved ourselves with programs of this type, there are several things we think we have learned. One is that there exists at most farms poor communications between the employee and the employer. The dairymen or managers need to become more acquainted with the employee, speak and talk to him regularly, inquire on occasion as to his problems, encourage and stimulate him, explain why and how he can do a better job, in other words, become interested in the employee and he will become interested in his work.

Far too many dairymen have an attitude that the employee is just another tool and not a human being. Where an attitude such as this exists, you will find a constant existence of labor problems. Employees working under conditions of this type immediately develop an "irresponsible, I don't care" attitude and you know what an attitude of this type can cost the dairymen. Unfortunately, laborers working under conditions of this type know that they can find another job just a short distance away.

Recently, I questioned a person that returned to our office seeking re-employment at another farm. I was personally interested in this man because I had originally placed him on his first job. He expressed to me things hard to believe about the working conditions at the farm where I had placed him. He said he had worked for seven weeks without a day off, from a minimum of 10 hours to a maximum of 14 hours per day. This created a problem in that one of his children required medical treatment on a regular basis and he was unable to take the child to the doctor. In all the time he worked at the farm, the owner spoke to him only twice and both times it was to chew him out for doing something wrong.

I admit that this man could possibly be exaggerating to me about these events, but for him to tell me this, I would think, surely he would tell others, which in turn would drive people away from seeking employment within the dairy industry.

It is a fact that among industries, where jobs are available, ours is less desired.

Living and working conditions on some farms are excellent, but far too many have conditions that are not even equal to those of peasants. We must find a way of changing our image if we are to solve any part of our labor problems. More money is not the answer for I have seen where some dairy farmers pay as much as $140 per week plus a home and many fringe benefits.

We propose to start seminars among our dairymen for the purpose of exchanging ideas on how to do a better job of managing our labor.

In this training program, we have also learned that something should be done to screen potential employees with the thought of eliminating the undesirable from employment within our industry. We have established a focal point (our office through the coordinator) for the hiring of dairy employees and maintain a record of how he has performed on the job.

We have learned that a sincere, hard working coordinator is of greatest importance, otherwise success is unattainable.

It is my opinion, that the industry has done an outstanding job in the field of dairy production. The Universities, the County Agents, the Department of Agriculture, the feed and drug companies have done an excellent job in teaching us how to dairy, but none that I personally am aware of has bothered to teach us good labor management practices.
I personally feel much could be done in this area and that a great service would be performed for the dairy industry if we could do a thorough job of training our farmers to be better personnel managers.

I would like to challenge this great university, the dairy farm cooperatives, and the dairymen of Florida themselves, to seek methods and ways of improving our ability in the field of labor management and the image that is our stigma as to working conditions on farms. Should we fail to do this, you can expect an even greater labor crisis in the very near future.

In conclusion, I would like to leave you with this thought, "the success and failure of any industry lies within its manpower and that the most magnificent, awesome and richest thing about this great country of ours, is its People."
Maintaining an Insecticide - Free Milk Supply*

Resume

Recent changes in regulations will bring an end to the old no residue or zero tolerance concept by 1970. Pesticides will then have a negligible residue tolerance or a regular residue tolerance. Negligible residue tolerances have already been established at 0.05 ppm for DDT, DDE, or TDE (on whole milk basis) for each material or any combination. Other negligible residues have also been established recently for residues of other pesticides in milk. Many current residue problems in milk stem from residues in non-commercial feeds and pesticide drift. The dairyman must be continually on guard concerning non-commercial feeds, particularly peanut or soybean hay. In producing grain and forage, dairies should choose only those pesticides cleared for use on dairy farms. Residues created by drift are more difficult to control because agricultural chemical application is not regulated other than by USDA pesticide registrations and FDA residue tolerances. Regardless of minor problems, Florida dairymen can boast of "clean" milk in relation to pesticide residues. This good record will continue through awareness of the problem, industry cooperation, and strict adherence to current pest control recommendations.

ABNORMAL MILK - RELATIONSHIP OF LEUCOCYTE COUNT

(Somatic Cell Count)

Dr. K. L. Smith
Department of Dairy Science
University of Florida

The number of leucocytes or somatic cells in milk is affected by many factors. Normal milk from healthy animals contains both leucocytes and epithelial cells from the cows udder. During routine laboratory analysis of milk samples, no attempt is made to distinguish between epithelial cells and leucocytes and because of this the counts are reported as somatic cell counts. Epithelial cells comprise only a relatively small part of the somatic cell count and large changes in this count are a reflection of changes in the number of leucocytes present.

The somatic cell count of normal milk tends to increase as the age of the cow increases. Healthy first calf heifers are expected to have an average count of 300,000 cells whereas older cows in their sixth or seventh lactation may average as many as one million cells per milliliter. There is at least one research report indicating that the increased count is not due to a physiological change in the udder but is due to an increased incidence of low-grade or non-clinical infection in older cows.

Stage of lactation is another factor affecting somatic cell count. Colostrum is considered as abnormal milk and is also very high in cell count. Within two to three days after calving, the somatic cell count of the milk will be within acceptable limits and usually by this time the composition also has returned to normal. It is therefore important that early lactation milk be excluded from the bulk tank to help control the somatic cell count of the mixed herd milk. There is also a tendency for the somatic cell count to increase near the end of lactation when the level of milk production has greatly decreased. One theory proposed to explain this occurrence is that the healthy udder tends to produce a constant number of somatic cells throughout the lactation. When milk production starts decreasing, the number of cells per milliliter of milk increases and higher counts are reported for the late lactation milk.

When cows are milked twice daily, there is a tendency for the somatic cell count of the evening milk to be slightly higher than that of the morning. The difference in the counts is very small and would have no significant effect on the count of pooled milk.

Although all of the preceding factors have some effect on the somatic cell count of milk, mastitis has a far greater effect on the count than any other factor. No single constituent of milk changes as much as does the somatic cell count when an udder becomes infected with a mastitis microorganism. When mastitis is present in a quarter the somatic cell count of the milk from the infected quarter may be in the tens of millions per milliliter. Milk from cows having mastitis must be withheld from the bulk tank in order to meet the somatic cell count standard of not more than one and one-half million cells per milliliter.
THE TOTAL PROGRAM CONCEPT OF MASTITIS CONTROL

Dr. G. W. Meyerholz  
Associate Extension Veterinarian  
University of Florida

The National Mastitis Council and the National Conference of Interstate Milk Shippers have initiated actions that have resulted in a three-phase program for the detection and elimination of abnormal milk. Screening tests are presently being conducted on herd milk samples. Mastitis or inflammation of the udder is the primary cause of high test results or high leucocyte counts. While there is no simple solution to control mastitis, it can be reduced by a long continuous program aimed at correct milking with adequate housing and facilities correlated with proper laboratory results to give the most effective treatment available. This is referred to as the total program concept of mastitis control.

Economic losses amount to an average of $30 per cow in the U. S. Costs of treatment and milk quality control add to the total. Milk production is significantly lowered. Mastitis also has an adverse and economic effect on quality of fluid milk and manufactured products.

Adequate concrete yards, pens and barns combined with cow cleanliness and washing and priming of the udder prior to milking provides for faster milking and fewer mastitis problems. Dipping teats in antiseptic solution after milking and keeping milking utensils clean helps to prevent new udder infections. Proper use and application of the milking machine is also important. The milking system should be checked periodically by a reliable milking machine serviceman to keep it functioning properly. A veterinarian can help to identify the type of infection and prescribe treatment. Badly infected cows and cows that fail to respond to treatment should be sold. Isolation of the causative organism from milk samples and antibiotic sensitivity testing may help in selecting the best treatment. Dry cow treatment is of proven value. Vaccination is of questionable value and has given variable results. Control of mastitis depends largely on the prevention of new cases by instituting better management along with milking and sanitation practices, and by using improved milking equipment. Frequently, it takes 6 months to a year to correct herd mastitis problems, especially if mastitis has been in the herd over a long period of time.

RESPONSE OF DAIRYMEN TO MISINFORMATION ON MILK*

Elwood W. Speckmann, Ph.D.
National Dairy Council

National Dairy Council and its network of affiliated Dairy Council units throughout the nation has been working on behalf of dairymen for 54 years. NDC has developed a program emphasizing the nutritional value of dairy foods in a balanced diet which serves as a positive approach to counter misinformation regarding milk. Today the Nutrition Research Program of NDC is more complete and more effective than ever before.

The purpose of the Nutrition Research Program of NDC is twofold: to support continuing scientific investigations that will result in a growing body of knowledge on the subject of nutrition and to transmit this information in various forms to health and nutrition leaders, and, subsequently, to the general public. This program can be divided into 3 rather broad categories: namely, library research, personal contacts, and the support of nutrition research investigations.

Dairy Council maintains an excellent up-to-date library pertaining to the nutritional value of dairy foods. A basic source for research ideas is the day-to-day contact of the Nutrition Research Staff with the published scientific literature retained in the library. The Dairy Council Digest is one of the many reviews which are prepared from information available in the library. The Digest, published continually since 1929, is a review of nutrition research pertaining to milk and dairy foods which is forwarded to professional leaders in educational, governmental, medical and consumer groups.

Attendance at professional meetings where unpublished research findings are reported and visits with investigators in their laboratories through an organized personal contact program provide further insights for developing and maintaining a top quality Nutrition Research Program for the dairy industry. Each year NDC sponsors a Nutrition Research Conference and cosponsors a symposium with the American Institute of Nutrition. In addition, NDC periodically cosponsors symposia with other scientific organizations such as the American Medical Association, American Public Health Association, and the American Dairy Science Association. This important segment of the NDC Nutrition Research Program serves as a vital link with the scientific community and reinforces the fact that Dairy Council is based upon a solid foundation of facts gleaned from research investigations.

Inasmuch as nutrition research is the cornerstone of the Dairy Council program, an active research program is necessary to answer critical nutrition questions involving dairy products. NDC is currently supporting a total of 17 research projects. The studies may be grouped generally into those dealing with the major nutrients in dairy foods (fat, carbohydrate, protein, vitamins and minerals) and those that relate to the functional role of dairy foods in human nutrition: (Milk and dental health; Filled and imitation milk; Nutritional status; and Medical and dental nutrition education). The need for an expanded Nutrition Research Program is evident and such a program must be implemented if the dairy industry expects to effectively meet the challenges it now faces.

A significant area wherein the dairy industry is receiving unwarranted publicity is in the whole area of the diet-heart disease controversy. The recent revision in the American Heart Association statement concerning diet and heart disease and release of their film "Eat to Your Heart's Content" for viewing by the public, has strengthened the challenge in this area facing the dairy industry. NDC has accepted this challenge and has moved forward with a positive Nutrition Research, Nutrition Education, and Public Relations Program designed not only to counter the unwarranted American Heart Association program, but in addition, to interpret the scientific data regarding milk and other dairy foods to professional leaders in an unbiased fashion.

Thus, the dairyman's response to misinformation on milk is National Dairy Council's active and vigorous program of Nutrition Research, Nutrition Education and Public Relations. The enthusiastic support of this program today by the dairy industry is of unprecedented importance if we are to continue to be effective in the industry's behalf to successfully counter such misinformation.
Florida had the distinction of having the 1968-69 American Dairy Princess, Miss Elaine Moore, daughter of a Bradenton dairyman. The 1968-69 Florida Dairy Princess is Miss Margaret Toms, daughter of a Hialeah dairyman. Both princesses attended the Florida Dairy Production Conference Banquet and spoke briefly. Below is a statement on their activities prepared by the ADA of Florida.

DAIRY PRINCESS ACTIVITIES

Miss Elaine Moore, the American Dairy Princess, represents the dairy farmers throughout the country as their "spokeslady" for milk and dairy products. She won her title last July and has made numerous appearances for the American Dairy Association this past year.

As National dairy princess, Elaine has spent much time speaking for milk and dairy products. Her activities have included attending the first annual meeting of the Milk Producers, Inc. in San Antonio, Texas; she had the opportunity of meeting President Lyndon Johnson there and also speaking at a luncheon for dairy leaders from different states.

Another activity was the 100th annual meeting of the American Jersey Cattle Club in Columbus, Ohio. She met many young people raising dairy cattle and participated in the cattle show by presenting the ribbons.

At the fourteenth annual 4-H Dairy Conference in Chicago, Elaine spoke to over 200 4-H'ers. Afterwards, she signed their cookbooks, "Modern Approach to Everyday Cooking".

Elaine has attended several ribbon cutting programs; she cut the ribbon to open the Food and Dairy Industries Exposition in Chicago. In addition to these activities out of state, Elaine has been busy in Florida on television, club programs, newspaper interviews promoting milk and encouraging teenagers to eat correctly. Elaine will crown the new American Dairy Princess July 1, in Chicago. She attends Manatee Junior College in Bradenton.

Miss Margaret Toms, Florida Dairy Princess, attends the University of Florida and is quite active as Dairy Princess as well as maintaining a 3.7 grade average. Margaret's activities during her year have included promoting milk drinking with the Florida Gators for pictures, television and radio appearances, and speaking at conventions. Margaret recently attended the Legislative Appreciation Day and milked a cow with Governor Kirk and Commissioner of Agriculture Doyle Connor. Margaret represented the dairy industry in the "Miss Sunflavor" contest and was one of the finalists.
How To Select Sires For Greatest Herd Improvement

C. J. Wilcox

Herd improvement really means one thing only, maximizing profits over both the short and long term. Under most economic conditions and on most dairy farms, our best guess from the genetic standpoint is that we should try for maximum genetic increase in milk yield while maintaining milk of legal composition.

Let's first look at several other traits. Reproductive efficiency must be listed first in this group, yet it has a low or zero heritability and thus will not respond to selection, but it will respond to improved management. Body size is important only as it relates genetically to milk yield. Research in 1969 continues to show that we should not select for larger cows per se. Type classification scores have value to registered dairy cattle breeders but little or none to most dairymen. The hoped for relationship between desirable type (strong feet and legs, for instance) and longevity can not be demonstrated by research, although we can show that high producing first-calf heifers do live longer.

Most genetic change (over 90%) in milk yield comes from selection of sires. Female selection contributes very little. The best device for sire selection now available to us is the predicted difference, the USDA sire proof based on DHIA records.

Present recommendations of nearly every research geneticist are to select only sires with the highest possible predicted difference for milk yield, while maintaining legal composition. Where bulls of only low repeatability are available, use several.

THE NEW MACHINE DHIA RECORDS
WHAT THEY ARE (Illustrated)
by C. W. Reaves, Extension Dairyman

The electronic computer processed DHIA records of today provide the dairyman with the business information to apply the skilled management methods required of all industries. The individual cow and herd data provide information for culling, feeding, improving reproduction performance, the proving of sires, the selection of herd practices and making managerial decisions.

Let us look at some of the herd management information shown on the Herd Summary each month:

1. The percent days in milk
2. The average days open (not bred)
3. Number breedings per conception
4. The projected calving interval
5. The percent cows left herd for each reason
6. The average percent persistency of production, based on the normal decline.
7. The percent of total feed nutrients from each feed source supplied the herd.
8. The average production for month and the last 12 months
9. The Value of Product
10. The income above feed cost

These and many other items are shown for the herd as a whole.

Next, the Monthly Report for individual cows shows on one line the cow's current milk and test, her lactation to-date, income, last calving date, last breeding date, date due to calve and the data for her from which the herd figures are secured.

A new printed report is a Calf Page for each heifer calf reported with a number, giving the birth-date, sire and dam.

The Monthly Report provides a projected production figure for each cow for early culling. Her rating among the cows in the herd of her breed is shown. An Action Code column signals the cows to breed, to dry off, due to calve, start heavy grain, etc.

The DHIA record is not an end in itself, but a means to an end. The statements of successful dairymen will show how the records help.
HOW THE NEW MACHINE DHIA RECORDS HELP ME IN HERD MANAGEMENT

Mrs. Lillian Hammond
Sorrento, Florida

When Mr. Reaves asked me to be on this program I thought, "Me & My Big Mouth". Quite some time ago I said at a meeting that when we were in financial trouble a year or so ago, we felt that the $200 plus that it cost us monthly for testing was something that we didn't want to do without.

I guess the best way to tell how we use DHIA records is to take it step by step. As soon as the tester gets a "herd" weighed I take the sheets and check all cows with less than 17 lbs. Next I check this list against the breeding book. If she is 6 months bred, she goes to dry pasture. Then I check those that are left against the day book to see if she was sick, in heat, or some other reason for the poor production. If this doesn't give me the reason, I then ask the tester if he noticed anything unusual about the cow. He often notices things such as nervous, won't eat, or something else. Then I ask the man that milked her. Finally I check her lifetime record. Perhaps this is her off year, if I haven't found a good reason she goes to market, unless she is a heifer. We keep them and give them another chance. You have to give a gal a chance!

When we get ready to breed a cow that we want a heifer from, we check her record to see what we want: more milk or better butterfat test. The last couple of years we have been trying to raise the butterfat. As we use the three studs, we can pick out two or three bulls. We look at the cow to see what we want to improve. With some of our Jerseys, their udders were put on backward. So with them we try to use a bull that will improve this. (I refer to Dr. Wilcox's remark that you don't need to pay any attention to the type when picking a herd sire). If it is a cow that we aren't too crazy about a heifer from, we use a Red Dane or Brown Swiss. We have some heifers from this cross and they are big raw boned animals. If she doesn't turn out good, it isn't as hard to sell her.

We like the DHIA records very much. There are some changes that we would like to see. A little color in the action code would make it easier to pick out what you are checking. They tell me that isn't possible. I like the Heifer Sheets as this way you don't lose any information. Then too, it seems as though with them it would be easier to register calves. I like to compare the amount of feed that we allot a cow and what she should have. We would like to see the income over feed cost on a monthly basis.
HOW MACHINE DHIA RECORDS HELP ME IN HERD MANAGEMENT

Vinton Heltfield
Elfers, Florida

When Mr. Reaves asked me to participate in this program, I could not help wondering if he picked those needing the most help from DHIA.

He assured me this was not the case, picking those he knew were dedicated to the DHIA program and only wished us to express how we believed it helped us, except Mr. Butler, who recently placed his herd on test.

I like to express that there are as many reasons to test the DHIA way as the number of cows a dairyman owns. It seems to me it is good management to use a system, where regardless of milk price or production cost, a dairyman by using the records available, can make every cow he owns show a profit or eliminate her from the herd.

I believe for a commercial dairyman (one who has to pay his bills and obligations from his milk check) that the emphasis should be put on a financial basis, rather than the system of butterfat and pounds of milk produced. This has a tendency to make one watch his good cows. Those good cows will take care of you anyway. On a financial basis, you need not spend too much time with the better part of your herd. The problem is mainly at the low producing end. With the available information on each individual cow with DHIA service, any dairyman can quickly ascertain whether that cow is profitable, a break-even unit, or a loss unit.

Since every cow we own will someday become a cull, unless sold for a milk cow, the ideal situation, is to determine when a cow has reached the point of an inadequate return above expenses.

If you think you can keep your own records more economically by weighing milk yourself, my judgement is that you only have 1/3 information on a cow.

In our present marketing system one cow's milk can be worth as much as $.25 a gallon difference from another cow's. Milk weight and butterfat testing would then give you about 2/3 of the information needed. The last 1/3 is body maintenance and feed conversion efficiency on the individual cow. This all comes out in the column, "Value of Milk above Feed Cost".

The point I am making is that it is as easy to cull the wrong cow, with inadequate information, as to leave a non-profitable cow in the herd.

We have no set standard for our herd, other than a reasonable profit basis. As economic conditions change, our standards for the individual cow changes.

There is a close relationship of profit to milk production and total butterfat on an individual cow basis, but on a herd average basis this can be misleading if high production is maintained by high cost. High replacement rate and overfeeding can cancel any profit on a high average herd. DHIA records are adaptable to the commercial dairyman, to show the most efficiency and highest rate of return from your herd.

Any dairyman using the Extension Service business analysis knows how much income is needed per cow to exceed her costs, and every dairyman has a good idea from tax records what it costs to produce a gallon of milk.
Determine a reasonable rate of profit above that and it is only simple arithmetic to determine which cows stay and which must go.

Presently we check out all cows not producing 1 pound of butterfat per day, when our monthly records are returned. These cows may at certain times of the year be 1/3 or more of the herd. We then check her breeding record, predicted future production, past performance, (both present lactation and lifetime record) and her present health status.

This analysis usually shows about 2% per month that dropped below what we have determined our standard to be.

Whenever DHIA records are no longer available to me, I hope to be, or would soon be, among those distinguished gentlemen called ex-dairymen.
HOW THE NEW MACHINE DHIA RECORDS HELP ME IN HERD MANAGEMENT

Robert Butler
Okeechobee, Florida

For many years I have been coming to Gainesville to the Dairy Short Courses and Production Conferences. I have seen new goals for higher production raised and surpassed. I have actively and successfully operated a dairy farm for 29 years, but by DHIA standards I am still on the ground floor.

This past January, we joined the South Florida DHIA so I suppose I am one of the newest members on this program. I am very optimistic about the values of the program and feel sure it will help set and obtain new goals for our operation.

Even though we have weighed milk and maintained card records on our herd of cows since 1963, we have not increased our production per cow at the rate I feel we should. I am looking to the Dairy Herd Improvement Association to help in this endeavor.

I realize the records alone are not the answer but we plan through their use to achieve new levels of production per cow.

Since my experience with the new record is so limited, I will talk more about expectations and goals than I will on the actual use of the records.

In discussing this I like to think in terms of DHIA:

1. Financial
   A. Dollars help increase appreciation.
   B. Discover higher income annually
   C. Develop healthy income ability

2. Herd Improvements
   A. Discuss herd improvements authentically
   B. Document heifers' identity accurately
   C. Discard heavy impractical animals
   D. Discover heifers' inherited ability
   E. Detect historically ideal animals

3. Management
   A. Depend hardly on analysis
   B. Draw hasty inclusive assistance
   C. Disclose helpful improving accomplishments
   D. Devise harmonious immediate answers
   E. I am not sure what the future holds but my DHIA philosophy is: Don't hesitate, initiate advancement.
Is Corn Silage a Potential Cash Crop for Corn Growers?

D. W. Jones
Associate Extension Agronomist
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Corn silage should contain 30-38% dry matter, 2.5-3.5% crude protein and 15-20% TDN. Converting this to a dry matter basis, it would contain approximately 8.5-15% protein and 50-60% TDN. Crude fiber content on wet silage would probably be 6-8% or on a dry matter basis, 24-30%.

Corn silage is a mixture of grain and roughage combined into one material, both needed in a dairy ration. The value of corn grain in silage is equal on dry matter basis, to grain from any other source. Silage yields of 20 tons per acre with 35 bushels of grain would contain about 100 pounds of grain per ton valued at about $2. Yields of 15 tons of silage per acre containing 109 bushels would have 400 pounds of grain per ton worth $8. In Florida, expected yields are about 12 tons per acre with about 60 bushels of corn.

The roughage portion of corn silage is about equal in quality to that of good grasses. As the grain content increases the roughage content decreases. In a ton of silage containing 30% dry matter you are getting 600 pounds of dry feed. If 200 pounds of this is grain then you are getting 400 pounds of forage.

The fiber content of corn silage is usually 24% on a dry matter basis. Little difficulty is experienced in maintaining butterfat if the silage is not too finely ground. Palatability of corn silage is good if good material is put into the silo, air is excluded and it is fed out of the silo at a rate fast enough to prevent spoilage of exposed surfaces. Urea added to corn silage at 10 pounds per ton will increase its protein value by 1.3% on a wet basis. There is a slight decrease in palatability when urea is used. The feeding value of silage can be enriched by the addition of grain, citrus pulp or molasses.

A basis for buying and selling silage should take into account its feeding value. This should include the amount of dry matter, grain and forage per ton. Dry matter can easily be determined in any laboratory. The amount of grain can be estimated in the field prior to harvest and there are a number of methods for making this determination. There is also the possibility of selling on the basis of laboratory analyses.

An agreement should be binding on both parties. It should indicate the quality of material desired and some adjustment in price if it is above or below this desired quality. A time schedule to be followed should be arranged. There are other considerations that should be included but one that should be included is trust and patience by both parties.

If any business enterprise is to be successful, both buyer and seller must receive full value and be satisfied with the transactions. If either is on the losing end, the operation is doomed to failure.

There seems to be a place for corn silage in Florida. There are dairymen that would like to feed it but don't want to grow corn. There are, I think, corn growers that are not interested in milking cows. This appears to offer an opportunity to both parties.
POST-CALVING TREATMENT TO IMPROVE CONCEPTION

Dr. Fred C. Neal
Veterinary Science Department
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One of the major economic losses to the dairyman is decreased milk production resulting from failure of cows to be ready to conceive within 60 days after calving. The cause of the impaired fertility is complex. Nutrition, management and disease control - along with genetic selection for improved breeding efficiency - are important in the solution of the delayed conception problem. In spite of numerous claims, no simple treatment, as routine hormone injections, uterine infusions or feed additives have proven effective.

This problem can best be solved by a team approach involving the nutritionist, the dairyman and a veterinarian. The nutritionist should select rations balanced to prevent excess ketogenic substances from accumulating in the post parturient cow, and levels that minimize digestive disturbances.

The dairyman must observe cattle for abnormal uterine discharge and manifestations of heat.

The veterinarian should conduct routine uterine palpations on all cows approximately 30 days after calving, and treat those cows with delayed uterine involution or uterine infections.

At the time of the uterine examination, the size and location on the ovary of follicles, corpus luteum or cysts should be recorded. Follow-up examinations should be made on all cows not exhibiting heat by the 60th day following calving, and appropriate treatment should be initiated at this time. Repeated examinations and treatments at 7 to 14 day intervals will generally enable the veterinarian to correct the condition and cause the cow to establish regular heat cycles.

Pregnancy examinations 40 to 60 days after breeding are extremely important in any breeding program. Frequently a retained corpus luteum or the failure to observe heats in a cow will lead to the assumption that the cow is settled. These cases can be detected by the routine early rectal palpation of the uterus, and corrective measures will decrease the additional time lost in delayed conception.
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