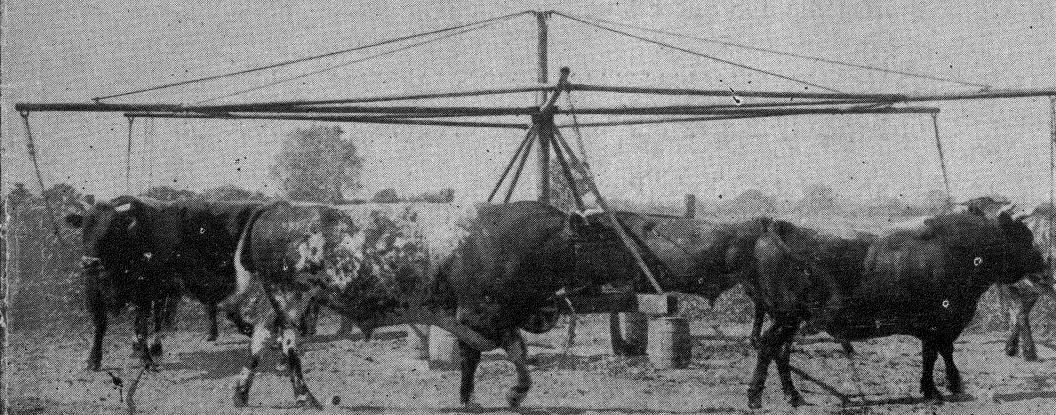


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# Artificial Breeding Of Dairy Cattle In Oklahoma

Circular 491



EXTENSION SERVICE  
OKLAHOMA A. & M. COLLEGE  
SHAWNEE BROWN, Director  
STILLWATER, OKLAHOMA

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# ARTIFICIAL BREEDING OF DAIRY CATTLE in OKLAHOMA

by

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Extension Dairyman

Artificial breeding of dairy cattle represents one of the fastest growing developments in Oklahoma agriculture. The first dairy breeders' cooperative association was organized at Muskogee, December, 1945. There has been a rapid growth since that time. Why? Because the 27 local breeding circles, (2 bull studs) are offering a program which farmers can profitably use. This program has expanded from the original 1,200 cows in the first association to 28,000 cows that will be artificially bred this year. The Bureau of Dairy Industry, U. S. Department of Agriculture, reported in March of this year that "On January 1, 1948, there were 224,493 herds, consisting of 1,743,327 cows, enrolled in artificial breeding associations. Compared with January 1, 1947, this is an increase of 83,922 or 59.7% in numbers of herds and 618,287 or 55% in numbers of cows."

This breeding service is available through two central breeding organizations—Eastern Oklahoma Dairy Breeders' Association with headquarters at Muskogee, and Northwest Oklahoma Dairy Breeders' Association with headquarters at Enid. These dairy breeding organizations, organized and incorporated under the cooperative laws of Oklahoma, assemble and process semen for local affiliates in 34 of the 77 counties in the state. These organizations are owned and operated by dairy farmers on a non-profit basis. At present, there are 44 dairy sires in use at these two breeding barns, representing Guernsey, Holstein, Jersey and Milking Short-horn breeds. This number is divided into four to nine sires of each breed represented at the respective breeding center, making it possible for the members to do selective breeding.

The rapid expansion of this movement is due to the interest and enthusiasm of dairy farmers in the state. The success of this program in other states, together with the possibilities and advantages it offers to dairy farmers in Oklahoma, has aroused them to the point where their outstanding leadership and initiative have been brought into full play. This movement, in every instance, has been initiated by the local farm people. The program has likewise had the wholehearted support, including financial assistance, from the business interests. The efforts of the Civic groups at Muskogee and Enid helped the two parent organizations, Eastern Oklahoma Dairy Breeders' Association and Northwest Oklahoma Dairy Breeders' Association, to become established. In addition, support and assistance from the Oklahoma Extension Service has been given in order that the movement could advance faster and reach more of the 765,000 cows in the state as soon as possible.

A manager and laboratory technician are located at each of the two breeding organizations. These four men, together with the Extension Dairy Specialist, have provided leadership, counsel, and guidance for the 27 organized breeding-circle groups, and for the operation of the breeding barns. The expansion in the use of artificial insemination has been so rapid that there are many unsolved problems concerning the evaluation, dilution, storage, and transportation of bull semen as well as certain physiological problems with regard to insemination of the cows. The above personnel have conducted training and instructional work at the breeding barns of the two organizations, and at district and statewide meetings of technicians and Boards of Directors.

Dairy cows are bred by means of artificial insemination at the farm soon after the report is received at the local headquarters. This streamlined development has passed through the experimental stages. Calves dropped from registered cows may be registered the same and as easily as if by natural service. This service, therefore, conforms with regulations of the Purebred Dairy Cattle Breed Association

Breed records are kept and, in fact, the same high-type service is available to each member regardless of where he is located.

### **Advantages of the Service**

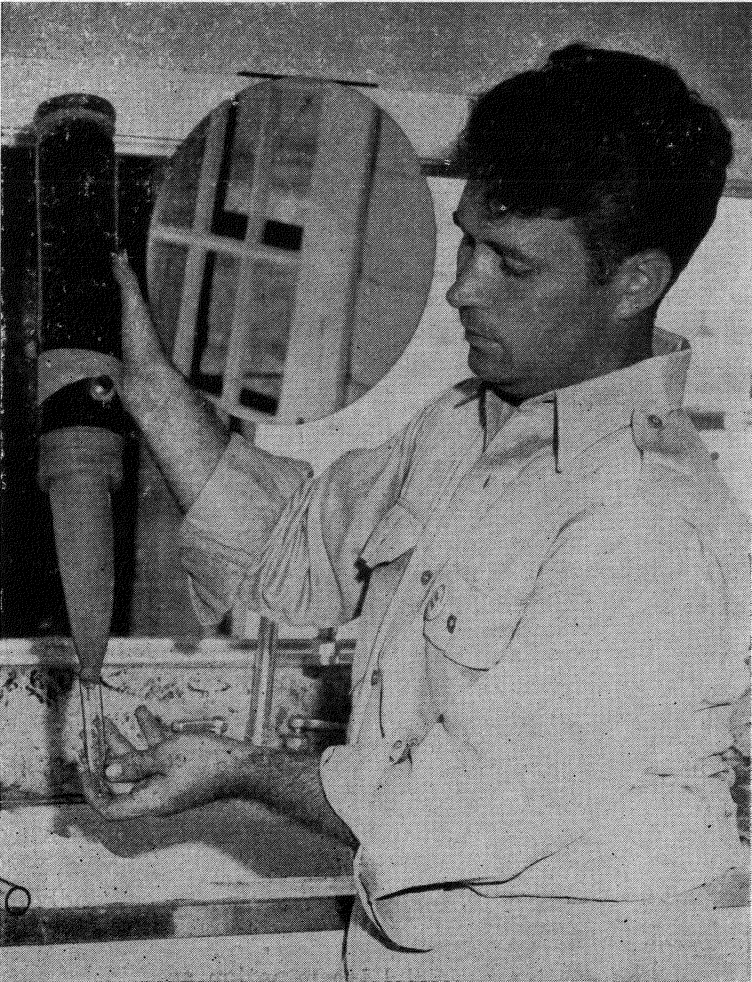
The program has stimulated interest in testing and the development of good cow families around which a good herd can be built. Fortunate, indeed, is the dairyman who has one or more outstanding cow families with which to work. These families, bred to proven sires or younger bulls selected on a genetic pedigree basis, places the breeder in a strategic position for developing a good herd. Since the program means that heifers raised may be from several sires, the breeder is not putting all his eggs in one basket and, as a result, he will never be caught with one or more crop of heifers that may prove undesirable. If the daughters from one or two bulls do prove undesirable, they can be weeded out with little detrimental effect on his breeding program.

Other aspects largely stimulated by this broad program of herd improvement through artificial breeding are:

1. Elimination of scrub sires from many herds now using artificial insemination exclusively.
2. Permits the owner of the smallest as well as the largest herds to use outstanding bulls of known merit.
3. Teaches the rank and file of dairymen a greater appreciation of pedigrees and what they mean.
4. Stimulates dairymen to take greater pride in their animals and, consequently, give them better care.
5. Cooperative effort of Oklahoma dairymen has brought together a great collection of desirably proven aged bulls, plus some younger analyzed sires. These bulls have been purchased at prices beyond the reach of most individual dairymen.
6. Cooperative artificial insemination associations have tremendous possibilities for increasing the income and standard of living of dairy farmers through the breeding of higher quality cows.

7. Artificial breeding has its greatest possibilities where a large number of cattle are located in a small area.

8. Eliminates the danger of having a bull on a farm. Many dairymen count this a very important advantage. Bulls



The latest of laboratory equipment and skilled help is used in preparation of semen for use in artificial breeding. Here a laboratory technician prepares fresh semen for use in breeding work.

are always potentially dangerous animals, and especially where there are children on the farm this is an important consideration.

9. An extra producing cow may be kept on the feed formerly eaten by the herd sire. The income from this extra cow, if a good one, will often pay the expense of breeding the whole herd artificially. Frequently, two additional cows are housed in the space formerly allotted to the bull.

10. Larger numbers of daughters for proving bulls. While we call a bull proven when he has five or ten daughters with records in one herd, we know that a large number of daughters with records made in different herds under different conditions offers much better proof of a bull's worth.

11. It provides the advantage of a large herd for the smaller herd owner in securing services of superior sires. The smaller herd owner is usually at a disadvantage in securing superior sires for the improvement of his herd. By joining an organization of this type, he is able to secure the services of good bulls.

12. Better sires at no increase in cost. Cost accounting records show it costs \$50 to \$100 a year to feed a bull at present prices. In an association of this type, a herd of 10 to 20 cows may be serviced for this cost.

13. Proving sires at a younger age. Experience shows that bulls are usually seven to nine years old before we have enough information to evaluate their breeding ability. In a program of this type, bulls can be proven when they are five to five and one-half years old, while the good ones still have many years of usefulness ahead of them.

14. Disease control. Only clean, healthy bulls are used; and inasmuch as no cows are bred direct, there is not the danger of spreading infection from one cow to another that we sometimes encounter in direct service.

15. Offers a means of spreading the risk in proving young bulls. Even though the best bred young bulls may be used, experience tells us that some of them do not come up to expectations.

16. Technical advice. In the course of the technician's visits to the farm, he sometimes sees things that the farmer would not recognize until they become serious. The old saying, "A stitch in time saves nine," applies in the early recognition of livestock ailments. Then, too, in inseminating cows, the technician may find animals that will never be breeders or that need some treatment to get them functioning properly. While he does not have time to do the professional work on the farms of his members, his advice often saves a breeder considerable grief.

17. Improved cattle in a community will attract buyers. Any organization of dairy farmers participating in a definite breeding program not only increases the milk and butterfat production, but also attracts cattle buyers from other regions.

18. Because of the regular examination of the semen, infertile bulls are likely to be detected earlier than with natural breeding. Likewise, abnormalities of the cow's genital tract which may lead to shy breeding may be discovered earlier.

19. In most cases better breeding and calving records will be kept. This is particularly true in organized breeding units where one man is responsible.

20. Line-breeding and the development of certain large families of superior dairy cattle within a community is possible.

21. Yearling heifers and small cows may be bred to large, heavy bulls without danger of injury.

22. The participation in a breeding program and the study of breeding problems by a large number of cooperating dairy farmers brings forth the best community spirit for the advancement of the dairy cattle industry.



## **How New Breeding Circles Are Formed**

1. Call county-wide mass meeting of dairy farmers and breeders.

2. Invite some qualified person to explain and discuss the requirements and discuss the necessary steps that should be followed in perfecting an organization for a successful breeding circle.

3. A steering committee is usually appointed or elected to conduct a survey to determine the interest. The number of this steering committee may vary according to the number of communities represented at this meeting. One from each community is usually considered sufficient.

4. When 800 or more dairy cows have been listed with members of the steering committee for breeding during the next 12 months, a second meeting is called. At this meeting a qualified person is usually invited to give further information about the program, in addition to answering questions and clarifying the program. At this time membership forms are executed by interested farmers and the membership fee is paid. This is later approved by the Board of Directors after the boundaries of the breeding circle have been determined. One thousand or more cows of the breeds involved in the service located within a 15-mile radius of the community center is considered sufficient for financial success. All fees are returned to those who do not come within the area designated by the local Board of Directors. In the early stages, additional members may be accepted provided the member is agreeable to paying for additional miles required beyond the 15-mile limit; provided, also, that the technician can work these extra herds in his daily schedule. The group is now ready to select a board of five directors who are elected—one for one year, two for two years, and two for three years. This Board of Directors elects from their group the President, Vice-President, and Secretary-Treasurer. The Secretary-Treasurer may or may not be a member of the Board. The Board of Directors, under the leadership of their president, drafts rules and regulations for governing activities of the

association, including membership and service fees. These rules and regulations are to be approved by the membership, with such modifications as may be desirable. The Board of Directors who have been elected, conduct the affairs of the Association and interview applicants for technician or inseminator. *The more successful breeding circles have been the ones that delayed operations until 1,000 or more cows are listed with the program.*

6. While the technician is in training, the directors may make arrangements for the necessary field equipment. The Board of Directors can inventory the situation from the standpoint of locating laboratory space for the technician and make arrangements for necessary supplies and equipment. A letter is usually mailed to the membership four or five days before the services begin, indicating the date service will be available and how the technician can be contacted, together with requirements of each member.

A small deposit on the breeding fee is paid in by the members at the time they take out their membership, for each cow which they plan to breed during the next 12 months. This not only shows good faith on the part of the members, but helps to avoid an inflated signup. The local Board of Directors requests a conference with the Board of Directors at one of the central breeding organizations for the purpose of making arrangements for the breeding service. This is accomplished by a written agreement between the two Boards of Directors.

## **Requirements For The Successful Operation Of The Artificial Insemination Program**

1. Recognition of the need for improvement in the production of dairy cattle. Members of artificial insemination associations must be interested in having their cows bred to superior sires. Unless members are willing to form a strong association, with capable and responsible leadership, and make an effort to locate proven sires and outstanding young bulls, the success of the organization will be uncertain. There

is little justification for the use of artificial insemination unless it is a part of a proven sire program.

2. The purchase of sires. Board of Directors at the breeding barns are more concerned about this part of the program; however, suggestions and counsel by any member of any breed circle is always appreciated. The location and purchase of proven sires of desirable blood lines has always been one of the most serious problems of the progressive livestock breeder. The increased use of sires by artificial insemination magnifies this problem, and it is essential not only that outstanding bulls be used, but that an adequate number of cows be available for service in order that the bull may be most efficiently used as soon as he has been leased or purchased. Any constructive breeding program must be planned to cover a period of several years. The leaders of artificial insemination associations must be constantly in search of bulls of the selected blood lines to replace the original sires and to be available for substitution if disease, sterility or death eliminate the ones in use. Any cooperative breeding program, to be completely successful, should include the proving of a few promising young sires at an early age. Since the number of proven sires is already small, young bulls proven by the entire membership may ultimately be the most desirable means of developing large families of superior cattle within particular communities.

3. Leadership. The most successful artificial insemination associations are those in which the members have chosen capable and responsible officers who understand the objectives and problems involved in such an organization. Failure to appreciate the limitations of artificial insemination and the knowledge that it cannot perform the impossible are essential.

4. One of the secrets of success with a cooperative breeding association is getting cows safe with calf. Experience has shown that a few young semi-proven bulls may help in overcoming this problem.

5. The health of the herd. Cattle which are not free of

disease, particularly diseases of the genital organs, should not be included in an artificial insemination program if optimum results are to be expected.

6. The members must realize that the success of the organization depends upon their integrity and spirit of co-operation. If members enter only a portion of their herds and knowingly select those animals which have been difficult to settle by natural service, the association is unlikely to be successful.

7. Conduct the enterprise on a sound, business basis. Practice no short cuts in organization and administration; do not extend special privileges to individual members; keep accurate records of all herd and association activities, and keep all members informed of matters of interest affecting the association.

## **Results**

The results obtained to date are extremely gratifying. County Agents, Directors of breeding associations, and dairy farmers who have been using the service are well pleased with the calves that have been produced. Five to ten nice heifer calves resulting from this program are common on a large number of dairy farms and several have that many already in production, producing greater amounts of milk and butterfat than their dams. Comparisons of production records, daughter with dam, will give the true picture.

There is every evidence that dairymen take pride in the heifers from artificial breeding, and consequently, they do a very good job raising these calves and growing out the heifers.

4-H and FFA members have been encouraged because top breeding service has been available to them. Free breeding services have been offered in many instances by officials of breed circles.

The demand for females, especially calves and heifers, has been very good. Some grade breeders, having the opportunity to breed to really good bulls through artificial

breeding, are buying purebred foundation females. Many good purebred breeders are taking advantage of the opportunity to breed some of their cows to outstanding bulls owned by artificial breeding associations.

This program has made available to the small and average breeder the use of outstanding bulls at a price he can afford. (86% of Oklahoma's milk production is produced by small herds of 10 to 12 cows. Over 95% of all dairy cows in Oklahoma are grade or utility cows, not eligible for registration, and this program offers a fast and sure way of improving herd quality.)

Members who stay with the program will have a good foundation on which to build a better herd in the future.

This program provides an opportunity for the man with a small herd and small farm to use outstanding bulls. This is the best means of keeping an efficient herd and thereby make a more satisfactory living.

Another result of the Artificial Insemination Program is the development of new leaders among the membership of the artificial breeding cooperative associations. Each of the 27 local organizations have five men as directors or local leaders. Each of these men is an advocate and practitioner of modern methods of herd improvement. It is hard, indeed, to evaluate the long-time effect for good that this program will have on the dairy industry in the state.

## **How To Secure Bulletins And Information**

Each County Agent has in his office a fairly complete supply of bulletins and publications, both State and Federal. If inconvenient to call in person at his office, phone or drop him a card. He will be glad to serve you. In many instances, Directors of local breed circles can give information desired.

## **Out-Of-State Publications**

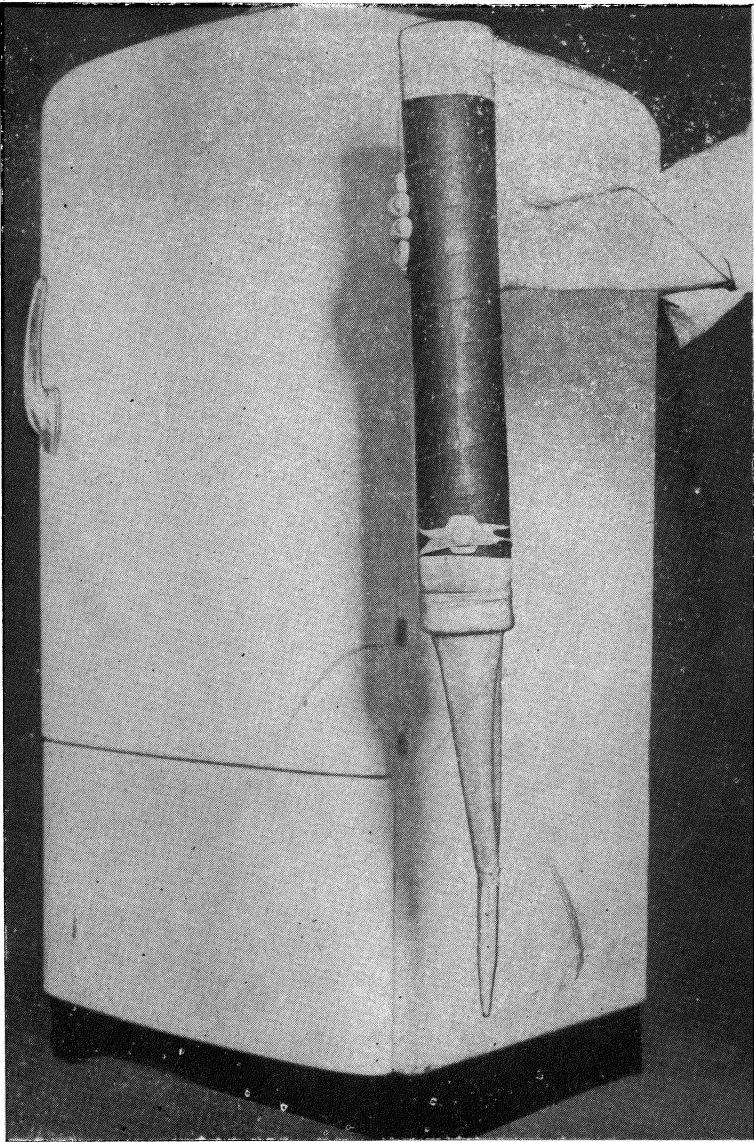
If you want a bulletin published in another state, write the institution publishing the bulletin giving the number of

the bulletin or as much detail about it as possible. There is usually a five-cent charge for publications mailed to residents of another state.

### **Answers To Individual Questions**

For answers to individual questions, not covered in this publication, try local sources of information first, such as your County Agent, the Vocational Agricultural Instructor, or Directors of a local breed circle. Your question may be directed to the Manager of either the Northwest Oklahoma Dairy Breeders' Association, Enid, or the Eastern Oklahoma Dairy Breeders' Association, Muskogee. Questions may also be directed to the Extension Service of the Oklahoma A. & M. College, Stillwater.





*Cooperative Extension Work in Agriculture and Home Economics, Extension Service, Oklahoma A. and M. College and U. S. Department of Agriculture Cooperating. Acts Of Congress of May 8, and June 30, 1914.*