KOSOVO

CLUSTER AND BUSINESS SUPPORT PROJECT

Report on
Assistance to Kosovo
Association of Milk Producers

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Summary Report
Kosovo Association of Milk Producers
Kosovo Cluster & Business Support Project
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Overview:

My assignment with the Kosovo Cluster & Business Support Project (KCBS) was largely work with the newly formed Kosovo Association of Milk Producers (KAMP) to develop work plan for the year of 2005. Specifically the deliverables for the assignment are:

- Report on the constraints facing the Kosovo Dairy Industry.
- Develop an Action Plan for KAMP.
- Outline as to how to develop a Dairy Genetics Herd Book.
- Recommendations for cooperation between the producers and the processors associations.
- Recommendations and overview of the activities being conducted by the KCBS.

In the next few pages, I will report on my findings and on the activities that were accomplished.

Constraints Facing the Kosovo Dairy Industry:

The dairy industry is facing many challenges in Kosovo. In order to survive, the dairy industry will need to increase the quantity of high quality products while keeping the cost of the products very reasonable. The processors definitely need a larger supply of high quality milk to insure the plants are running at capacity. I will focus on what must happen at the farm level to insure there is a larger supply of high quality raw milk. The main constraints are:

- Cows are currently being kept in very poor to marginal conditions, thus reducing their ability to perform.
- Cows need high quality forages as a basis for the feeding program. The forages being fed are of very poor quality largely due to the fact farmers do not understand forage quality.
- The feeding programs are not providing the energy needed for the cows to perform. Most producers understand protein, but do not understand the concept of energy.
- Reproductive performance is no doubt a very low level.
- Calf rearing programs need to be developed to insure young stock grows well and is a very productive animal when it reaches maturity.
- Milk quality is very questionable and no doubt many of the cows have either clinical or subclinical mastitis.

- The genetics of the current animals are unknown, but the characteristics of the cows indicate they are not capable of performing well.
- The farmers lack any records, so they are not aware of the level of performance they are actually getting from the cows.
- One of the problems is the price of milk is very good, and even with bad management, the farms are profitable.

In the next few paragraphs, I will attempt to outline the steps that will need to address these issues. Each of the issues is manageable and the resources are available in Kosovo to make improvements in the supply of milk to processors.

Housing and General Conditions of Dairy Cattle Housing: One each of the farms I visited, the cows were housed in facilities that did not provide a good environment for the cows. One farmer was building a new barn, and even it did not meet what would be considered to be "modern acceptable housing" for dairy cattle. The facilities were dark, moist and warmer. This encourages the growth of microorganisms that contribute to Mastitis and other health problems in the cows. These conditions also contribute to stress in the cows, and stress reduces the performance of the cows. In all of the farm visits, I did not see any "clean" cows. Most had manure matted in the hair on the flanks near the udder. Dirty cows contribute to off flavors in the milk, higher bacteria counts, and contribute to mastitis. These conditions will contribute to lower quality milk being sent to the processors.

Unfortunately, farmers are not going to quickly build new facilities that will meet contribute to an ideal environment for the cows. ***KCBS & KAMP need to be cognizant of the criteria for good housing and point out the need for improving conditions each time they work with farmers or conduct seminar.*** Simple steps like opening windows, improving the lighting, replacing the bedding daily, and making sure the manure is removed from the barn more than one time per day will go a long way in improving the environment in the barn. I also left some building designs with KCBS for properly designed housing. They may wish to make this available to producers who are thinking of building new facilities or remodeling old facilities.

Forage Quality, A Zero Cost Improvement to Improve Production: Dairy cows are ruminants and require a fiber for proper rumen function. Failure to provide good fiber has a negative effect on the cow. Diets high in fiber are slow to digest, and this reduces feed intake because it makes the cow feel full. Increasing the amount of grains and protein meal to compensate for the lower feed intake, without improving the quality of the fiber will result in the health problems of acidosis and laminitis, as well as reduced milk production. The first step in improving milk production in Kosovo is to improve the quality of forage the farmers are providing to their cows. This is something the farmer has complete control of and can make the management decisions to improve his forages, generally without any cost to him. ***KCBS and KAMP*** **help** ***the farmers learn how to improve their forage.*** A program that would be effective in addressing this issue would be as follows:

- Select a farmer in several different regions that would be willing to improve his forage and use that farm as a demonstration farm.
- Bring in a Forage Specialist such as Dr. Daniel Undersander to conduct a seminar and training program on good forages. The training program would

focus on cultural (growing practices) and harvesting practices that would enhance the production of forage.

- Introduce improved varieties of alfalfa and grasses to the farmers via demonstration plots. Variety material could be obtained from some of the US seed companies or from USDA/ARS (Agricultural Research Service, Beltsville). This could be coupled with USDA/FAS via a Cochran Fellowship for some of the selected specialists or extension persons in Kosovo.
- Conduct Harvesting Demonstrations to show how to harvest correctly, then do a chemical analysis to show the advantage of early harvest.
- Conduct feeding trials and collect the data to show the benefits of just harvesting on time and correctly.
- **KAMP** should publish the results and continue to provide education to other members.
- High quality forage is not just limited to hay and silage made from grass and alfalfa, but should also include corn silage.

A good forage demonstration project would greatly enhance the production of milk on the member farms in the country. On every farm I visited, the lack of high quality forages is a limiting factor in the production of milk. This issue must be a priority and must be addressed before the spring harvest. Based on my understanding of climatic conditions, the first harvest of grass and alfalfa should be completed in the time frame of May 15 – May 30, therefore the program should be a priority and should be started soon. This program was included in the **KAMP** work plan.

Balanced Rations and Improved Feeding Programs are Essential: The Body Condition Score tells me a lot about the feeding program of a cow. The cows on the farms I visited were all in very poor body condition, and this tells me the cows are not being fed properly. On most of the farms, there was no feed in front of the cows, indicating a lack of understanding of how much feed a dairy cow needs. Farmers need to learn about good nutrition, not only how much feed to give the cow, but the proper management of the nutrition program. No doubt the number one problem in dairy cattle, not only in Kosovo but everyplace in the world is nutrition. A well designed nutrition program is needed for the farmers. This is a program that needs to be conducted by **KCBS and KAMP.** The program needs to focus on:

- Balancing rations to provide adequate fiber, protein and energy.
- The use of vitamin and mineral premix in the feeding programs.
- Cost –benefit ratios and how to determine when to quit adding feed.
- Body Condition Scoring to evaluate the effectiveness of the feeding program.
- Feed delivery systems to achieve the maximum benefit from the feeding program.
- Role of by-products in the feeding program.
- Water consumption and how it affects the effectiveness of the feeding program.

The nutrition program not only needs to embrace the use of concentrated feeds, but must include forage in the program as well. Feeding trials need to be set up to show the benefits of a good nutrition for the cows.

It is important the same consultant be used for successive sessions with the farmers. Changing consultants or bringing in multiple consultants will only confuse the farmers as each consultant will go about developing the feeding program in a different way.

A component for conducting Nutrition Training for KAMP members has been written into program for the year. This program should be a priority and should be conducted jointly with the forage program so the farmers can see the maximum benefit of good nutrition and good forages.

Reproduction is the key to a productive dairy industry. "Without reproduction there is no production" is a phrase that is often used by specialists in the dairy industry. The natural cycle of milk production begins when the cow gives birth, peaks about 25 to 30 days after calving then declines as time marches on. If cows are not bred back quickly, not only is there a lack of replacement animals for the herd, the milk production will be lower for the cows. The goal of a good reproduction program is to have a calf on the ground from every cow every 13 – 14 months and a non lactating period of 60 to 70 days. In talking with the farmers, I was given the correct answers for the number of doses of semen being used and the length of the calving interval, but when I looked at the number of young stock on the farm, it was obvious the numbers I was given were incorrect. If a farm has 30 cows, if they have a reproductive program that is correct, there should be an equal number of young stock on the farm. Poor nutrition, stressed cows, and failure to detect estrus correctly lead to poor reproductive performance.

Reproductive efficiency will lead to more heifers being raised on farms, resulting in less need to import replacement animals. Farm records need to be maintained so the farmer can track his performance; however **KAMP** must educate the farmers about the importance of reproductive efficiency. This must be an ongoing program and should be discussed at each and every seminar or meeting held with farmers.

Although this issue should be priority, good records will be needed to determine just how bad the situation truly is and what steps must be taken to improve the performance.

Young Stock Rearing Programs are an essential part of the reproduction program. Once the cow gives birth to a calf it is important that calf is fed well, managed well, and achieves good growth standards. The goal of the farmers should have heifers in the herd producing milk at 24 – 25 months of age. Anything less is not economical for the farmer and the cost of raising heifers becomes a burden. Young stock issues will need to be addressed, but not as an immediate priority.

Genetic Improvement is needed on the farms. Many of the farms now do not know the genetic background of the cows, and most of the animals are of the Simmental breeding lines. Simmental animals are good for producing beef, but do not efficiently convert feed to milk. The commercial farmers I talked with recognize the need to be using dairy breeds (Holstein and Brown Swiss) to improve the future generations of cattle on the farm. Genetic improvement is slow and the results of a cow being bred today will not be seen for three years. The transformation to dairy breeds will be a slow process, but is a process that must begin now.

Largely, the commercial farmers are using natural service (bulls) as opposed to artificial insemination. Using a bull does limit the potential for genetic improvement, therefore for this reason I would recommend proven bulls of dairy breeds be made available to the

farmers and they be encouraged to use AI. Those farmers who are now using AI do not know the genetic background of the bulls they are using and they have little choice of bulls.

The impact of using proven bulls will be greatly seen in the F1 generation of the cross. The F1 female will have hybrid vigor, produce more milk, and show substantial trait improvements. For this reason, I have recommended **KAMP** acquire some bovine semen from proven bulls and start offering the semen to farmers. The farmers who agree to use the material need to agree to specified terms to insure the resulting calves become producing cows in the country. My recommendation for starting genetic improvement is as follows:

- The genetics improvement program should be limited to KAMP members who are marketing high quality milk.
- The farm must have the cattle identified in accordance with the MOA program of registry and identification.
- Cows bred and determined to be pregnant must be kept in the herd until the calf sired by the proven bull is born.
- Calves must be properly identified and tagged. They must also be raised using a good calf rearing program, including feeding and management.
- Milk production records must be maintained so the benefits of using proven sires can be determined.
- If a program is instituted, no more than two straws of semen be allocated per cow. In other words if a farmer has 20 cows he would be entitled to 40 straws.
- Any semen used for the program should be imported by a reliable importer and shall meet the health requirements of Kosovo.

Genetic improvement is essential for improving the dairy production and competitiveness of the dairy farmers in Kosovo. Delaying the start of insemination of the cows, will only prolong the use of low producing cows, therefore this program should be started as soon as possible.

The peak breeding season in Kosovo will be in the (April – June) when cows leave the barns and go to the pastures. For that reason if **KAMP and KCBS** are going to implement a program of genetic improvement, the implementation needs to begin as soon as possible.

Milk Quality is definitely an issue that must be addressed. There are two problems that relate to milk quality. The first is the number of colonies of bacteria in the milk and the second is the number of Somatic Cells in the Milk. Bacteria is caused by 1) poor milking hygiene; 2)dirty milking equipment; or 3) poor cooling of the milk. Any of these issues can be corrected easily. Somatic Cells are present in the milk due to the presence of Microorganisms in the udder causing an infection. The microorganisms can either be environmental or contagious; therefore it will take longer to get the cell counts lower in the milk. This will require the development of a mastitis control program on the farms and will take some time to implement. This program will largely require the education of farmers and the continued monitoring of the quality of the milk leaving the farm. Processors will have a definite role in this process as the quality of the product they produce is dependent upon raw milk quality.

Farm Records are absent at the present time. It is very difficult to evaluate the true condition of a farming operation, either from a production view or financial success without good records. The establishment of farm records that are easy to use, contain the essential information, and can be summarized easily are absolutely necessary if the dairy industry is to be competitive.

The establishment of a "records service" is one of the services **KAMP** could provide to its members on a fee basis. This data would aid in the improvement of the cattle on the farms, the efficiency of the farm operations, and would identify the "elite" cows in Kosovo. The elite cows could then be used for the genetic advancement of the national dairy herd in Kosovo.

During my stay I did develop some simple record sheets that could be used by **KAMP** members to maintain records on their cows and start to assemble information about the performance of the cows.

There are many more constraints limiting the competitiveness of the dairy industry in Kosovo, but the items listed above, are the constraints that can be addressed quickly and effectively. Addressing the issues of policy, credit, land ownership, and other issues that are out of the control of the farmer, can not quickly be changed. The farmers must begin to work on issues that he can control, and the issues listed above are within the control of the farmer. **KAMP and KBS** must continue to address policy issues, but the focus must be on the farmer controlled issues first.

Action Plan for KAMP

I had the opportunity to meet with many of the directors and officers of KAMP. Based on farm visits and based on discussions with the board members, I did develop an Action Plan for the year of 2005. That plan is attached as Exhibit 1 to this report.

KAMP is a new organization. It will be important for them to establish a viable organization as quickly as possible. The organization must complete some basic tasks quickly to establish their credibility with both the producers and other sectors of the dairy industry. The basic tasks include:

- Developing a revenue source, either from dues or from services paid for by members.
- Employ an Executive Director or CEO to manage the day to day activities and to insure programs for members are implemented.
- Establish an office, publishing information about their location, contact information, activities, and members.
- Develop a working relationship with the Ministry of Agriculture and other public policy agencies.
- Seek support for the activities listed in the work plan.

Guidance from KCBS will be essential during the infancy of the organization, however the board members must remember the role of KCBS is to provide guidance and some technical support, but not to handle the day to day operations of the organization.

Development of a Genetics Herd Book

The development of a National Genetics Herd Book, Milk Recording Program, Identification Program, and Breeding Evaluation Standards will largely be a function of the Ministry of Agriculture and will need to comply with the rules of International Committee for Animal Registration (ICAR). The rules for registration and testing will need to be established through the guidance of ICAR. I did talk with the Ministry of Agriculture and they are currently in the process of developing the programs, however, once the programs are developed the Ministry does not intend to keep the programs under their control. These functions will be transferred to local organizations or associations that can carry out the functions. For this reason, KAMP needs to maintain a close working relationship with the Ministry and cooperate where possible. No doubt in reality there will be two or three (Simmental, Holstein, and Brown Swiss) Registry Books developed, based on the breeds of cattle. Local breed associations consisting of breeders will make up these organizations and will no doubt be put in charge of the books. KAMP would be the ideal candidate to assume the responsibilities for the Milk Recording Service. It is therefore essential, through their members; establish a basic record keeping system on member farms to demonstrate their abilities.

Herd Books are important in identifying "elite cows" for genetic purposes, and this is the main reason for entering cows or bulls into the herd book. In most countries a small portion of the cattle are actually in the herd book, for example in the United States only 14% of our cattle are in registered in herd books. Milk recording provides the farmer with a wealth of management information about his herd. Many more cows will be on the milk recording system because of the value of the management information. For example in the United States 49% of our cows are on official milk recording. KAMP members may be interested in placing some of their cows in the herd book, but many more will be interested in the management information obtained from milk recording records.

After I discussed the issues with Peter Dickrell, KCBS, the nomenclature for herd book refers more to farmer record systems. I did develop some basic barn and cow records to get the program started. My recommendation would be that farmers start completing the information on their farms, then if the ICAR system is not in place by July, data be transferred to one of the Data Processing Centers in the United States to start getting management data. This is being done in many countries now and is a very effective way for organizations with a small number of cows to cost effectively gain access to good data. This will need to be addressed later this year.

An example of the Cow Data Sheet and the Barn Sheet are attached as Exhibit 2 to this report.

Cooperation between Producers Association and Processor Association

The reality is the producers need a market for their milk and the processors need raw milk to keep their processing plants operating. Each group depends on the other, and there are many issues that are common to both. Each organization should seek to cooperate with the other for the mutual benefit of members of each organization. Each association must represent the best interests of its members, but there should be dialogue between both associations to insure the industry is providing a quality product at a competitive price. Some of the areas of cooperation would be:

- Milk quality standards.
- Payment Policy to insure the farmers are paid timely for the milk they supply to the processor and that insolvent processors do not leave producers not being paid.
- Standards for handling and harvesting milk.
- Market promotion activities to encourage consumers to use more dairy products produced in Kosovo.
- Policies that will enhance the competitiveness of the industry.

Each organization should bring forth issues of concern for their members and try to reach a solution through common discussions.

Overview of KCBS Activities and Recommendations

The program at KCBS is just beginning, but the interest is growing each day. The work with KAMP will be challenging but seems to be taking the right approach addressing the issues of the dairy industry. The success of the program will depend largely on the ability of KCBS and KAMP to identify progressive dairy farmers that are willing to accept the new practices and implement those practices on the farm. The greatest challenge will be to get the farmers to recognize the need for change in the basic management of the dairy cattle on their farm. At the current milk price and with the demand by processors for raw milk, low input dairy farming can be very profitable. It will be very difficult to get farmers to see the need for change.

The process of introduction of new and innovative practices is slow and requires patience. When a new practice is initiated, a 10% acceptance rate of the practice is good. The key will be for KCBS and KAMP to identify who the innovative farmers. Once the innovative farmers accept a practice and implement it, others will follow in due time. Getting farmers to accept management changes is especially difficult, as most farmers think new technology will replace management, and there are always those sales persons who will take that approach. The purchases of new technology (equipment or products) that are to be the answer to a problem usually result in the problem becoming worse. As I visited with the farmers, Total Mixed Rations (TMR) is a technology that is of great interest. This would require capital investment on the part of the farmer, but without improving the forages, the problem will only get worse in the area of nutrition not better. Developing a good supply of basic ingredients is the key to improved forages, however getting the farmer to recognize this is often quite a challenge.

Farmers, like everyone else, seek instant results. Unfortunately, with dairy cows the benefits in changing a management style will not immediately be seen. The physiology of the cow will not change, so implementing new feeding practices to cows that are already in lactation, will not result in major changes until the next lactation. Changing the way forage is harvested will not result in major changes in production until the next lactation, although the farmer will see some results such

as better body conditions and higher conception rates. Patience will be a key in getting improvements made in the dairy sector.

Consistency is another key to a successful program. It is important the message stays the same and the message is conveyed to the farmers often. If a consultant is selected to work with forage, for example, that same consultant needs to come back on subsequent visits. Changing consultants will send a different message to the farmer, and this will lead to a lack of change.

Support during the period of transition is very important. Introducing a new practice to a farmer and getting him to accept the new practice is a step forward, however when the farmer begins to implement the change, support and encouragement is needed. I provide consulting services to farmers in many countries, and once a farmer begins implementing a practice, many questions will follow. The follow up and support is essential to give the produce confidence the practice will work and he is "not going it alone". KCBS will need to continue to provide this conduit of information and support, not only to the farmers who are serving as the demonstration farms, but also to KAMP.

I have reviewed the program with Peter Dickrell and feel the scheduled activities are on target. The key will depend largely on KAMP's ability to identify new members and to grow. They will ultimately need to serve as the outreach arm for the program.

Incentives will be needed to encourage change. The commercial farmers that I talked with want better genetics in their cattle. Providing a limited amount of proven bull semen to the farmers, if they agree to implement changes in their operations, could be an incentive that would be affordable and would yield results. The genetics would need to be brought in by an approved importer, farmers would still need to pay for the breeding service, and the importer would need to be permitted to charge a fee for his services of handling and storing the semen. This approach has been used in other countries with success.

KCBS and KAMP will need to continually monitor the success of the program and continue to add new components as dairies improve. The needs of the dairy farm and industry will be different in the future than they are now. KCBS will need to be the originator of new practices and information, however the dissemination of the information and extension work will need to be done by a local organization and KAMP very well could be that organization. The development of KAMP into a creditable, viable organization is one of the keys to success of the program.

Cooperating with other entities that can provide some training will also add to the success of the program. Training trips for selected persons to other countries in the region will contribute greatly to the success of the program. Use of the

Cochran Fellowship Program (USDA) and training programs provided by World Learning can be very useful in advancing the implementation of new practices.

Continued evaluation and change will be necessary for the program to be successful and have an impact on the competitiveness of the dairy industry in Kosovo.

Summary:

My time was largely spent working on the development of a plan of action for KAMP. I have tried to look at programs that are the most important areas for the dairy farmer. I have also listened to the farmers and feel the areas outlined in the plan are priorities for them as well. The success of the program is to now dependent upon the leaders of KAMP and the ability of KCBS to keep everyone focused and on track.

Respectfully submitted,

Lindell Whitelock
Consultant

Action Plan for KAMP

Exhibit 1

Kosovo Association of Milk Producers (KAMP)
Strategic and Business Plan

Purpose:

The purpose of KAMP is to improve the competitiveness of the Kosovo Dairy Industry through member driven activities that will enhance dairy production through out Kosovo.

Vision:

KAMP will be an organization of milk producers that will be striving to improve the quality of the raw milk and will be the driving force for improving both quality and quantity of milk being provided to processors.

Mission:

KAMP's mission is to enhance the competitiveness of the dairy industry by:

- Improving the quality of milk being shipped from the farms.
- Improving the genetics of the dairy animals.
- Developing sound business practices and record systems.
- Advocating good dairy cow management practices such as feeding, housing, and health so as to improve the production opportunities.
- Advocate public policies conducive to the private sector business development of both farms and supporting industries.

Kosovo Association of Milk Producers (KAMP) Goals

Goal 1: To assist the Ministry of Agriculture in the development of a national Genetics Herd Book.

Objective 1: To identify cows in the country with as much information as possible relating to pedigree, production, and type.

Strategy 1: To cooperate with the Ministry of Agriculture in the implementation of an identification program that will enable cows to be permanently identified.

Tactic 1: Encourage the Ministry of Agriculture and/or the Veterinarian Service to implement a national ID system as quickly as possible.

Tactic 2: Each KAMP farmer should implement the Ministry of Agriculture system of tagging his cows with easy to read tags that include vital data so the cows within the herd can be quickly identified.

Tactic 3: Each KAMP farmer should establish his own record book so he can do selective mating to insure improvement of the cows in the herd.

Strategy 2: To assist the Ministry of Agriculture in the implementation of a permanent herd book record of elite cows for the purpose of developing a breeding program for the country. This program is being developed by the EAU.

Tactic 1: Recover and record as much information as is available on the cows in the country at present.

Tactic 2: KAMP farmers should identify and record the parentage for calves that are born in the country.

Tactic 3: Use this information to develop a pedigree system to identify the backgrounds of elite cows.

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Goal 2: To develop a farm record system (book) for both production and economic records.

Strategy 1: Develop a system of record keeping that allows data to be assembled easily and quickly for economic analysis of the farm.

Tactic 1: Establish and implement a system of record keeping at the farm level to maintain good records, keeping them current and using the data for economic analysis of the farms.

Tactic 2: Annually summarize the records so farmers can determine their efficiency and their standing in comparison to other farms in the country and region.

Strategy 2: To develop a system of recording animal performance.

Tactic 1: Record milk weights and quality information on the milk produced by each cow.

Tactic 2: Record management actions, such as estrus (heat), breeding dates, calving dates, and health problems.

Tactic 3: Identify cows with Somatic Cell Count Problems.

Strategy 3: To develop system of classification of cows (scoring) to identify the elite cows to be used for foundation stock.

Tactic 1: Train KAMP members to evaluate the cows and "score" them according to their traits.

Tactic 2: Score the cows and record the scores. Scoring should be done as a minimum annually to reflect any changes in the cow.

Tactic 3: Record scores in the pedigree book for future reference

Goal 3: To advocate good dairy management practices to improve the production of milk.

Objective 1: To improve the performance of the cows through improved forage production practices, and improved rations.

Strategy 1: To improve the quality of the forages (hay and silage) prepared at the farm level by using improved forage varieties and harvesting the forages correctly.

Tactic 1: To improve the knowledge of farmers through educational/consulting programs provided to KAMP via a forage production specialist.

Tactic 2: Implement a forage testing program to insure farmers know the quality of their forages.

Tactic 3: Develop a joint program with KCBS to bring in a consultant to present a program on the production of high quality forages and develop a plan with at least 4 farmers in different regions of the country.

Strategy 2: To improve nutritional programs though improved rations.

Tactic 1: Develop recommended feeding programs for member herds using cost effective sources of protein and energy for the cows.

Tactic 2: Develop a joint program with KCBS to bring in a consultant to develop feeding rations and feeding management programs, implementing selected demonstrations on farms.

Stategy 3: To improve the reproductive efficiency and improve the genetic traits and production abilities through the use of improved genetics.

Tactic 1: Use Artificial Insemination and Proven Bulls to inseminate cows resulting in improved genetics in future animals

Tactic 2: Develop an implement calf rearing programs that result in a heifer that will enter the milking herd at 23 – 24 months of age.

Tactic 3: Through management records and cow records monitor the key reproductive measures.

Goal 4: To improve the quality of the milk being shipped from the farm.

Objective 1: Implement milking practices and milk handling practices that reduce the bacteria in the milk.

Strategy 1: Implement hygienic milking practices.

Strategy 2: Implement and follow the recommended practices for cleaning equipment.

Strategy 3: Implement mastitis control programs, especially dry cow treatment programs to reduce the SCC level in the milk shipped from the farm.

Strategy 4: Insure adequate cooling systems for the milk at either the farm level or collection stations are available so the milk is cooled quickly to aid in improving the quality of the milk.

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Goal 5: Advocate Public Policies that conducive to the development of the dairy industry both at the farm level.

Objective 1: To identify issues that are critical to the development of private dairy farms.

Strategy 1: Establish creditability with the dairy farmers as an association that represents the dairy producer and is acting in their collective best interest.

Strategy 2: Develop a working relationship with governmental agencies to insuring access to the key government leaders in establishing rules that have an impact on the diary industry.

Strategy 3: To publicize activities of KAMP to both dairy producers and to consumers.

Strategy 4: Insure government programs and policies promote the competitiveness of the Kosovo dairy industry.

Example Record Sheets

Exhibit 2

Barn Sheet
Prepared for KAMP

Lindell Whitelock

The Barn Sheet is designed to be kept at the barn or near the cow so the farmer can see at a glance the status of the cow and can be alerted to try to observe important phases of the lactation cycle. The Barn Sheet can also be used as a feeding guide where cows are hand fed.

The instructions for use are as follows:

1. **Cow Name/Number** should be entered so the farmer can relate the record to the cow.
2. **Calving Date** is the date the cow delivered the last calf.
3. **Status** would be either "open" not pregnant or "bred" indicating she is pregnant.
4. **Sire** of the cow should be recorded to 1) reduce the risk of inbreeding, and 2) to allow the farmers to see the performance of the sires they have used in the past.
5. **Expected Estrus Date** should be entered to provide the farmer with a date to be observing the cow to see if she does cycle.
6. **Breeding Date** indicates the cow is inseminated. The sire used in the insemination process should be used as well.
7. **Pregnancy Check** would be used to indicate the date the cow should be checked to confirm pregnancy by palpation.
8. **Milk Production** indicate the date the milk was weighed and the amount of milked harvested in the AM/PM milkings.
9. **Expected Calving Date** should be determined after the cow is confirmed pregnant.
10. **Dry Off Date** should be 60 days before the cow is expected to deliver.
11. **A space for notes, treatments, and comments** is provide to allow the farmer to make entries he desires to assist him in the spot management of this cows.

Cow Data Record Sheet

Prepared for KAMP

Lindell Whitelock

The following instructions are being provided for using the "Cow Data Record Sheet" developed as a part of the consulting program carried out in Kosovo. The sheet may be printed and completed manually, or can be done electronically.

1. Attach a photo or sketch of the cow showing unique markings that could be used to identify the cow incase of lost ear tags or other identification.
2. **Barn Name** is the name the cow would commonly be called by workers in the barn.
3. **ID Number** may be the number assigned by the farmer as his own records or the number assigned by the MOA program.
4. **Registration Number** would indicate the number issued on the animal's pedigree, should the animal be registered in the herd book.
5. **Dam, Sire, Grand Dam, Grand Sire** provides information on the parentage of the animal, if known.
6. **Calving Record** is used to record the date of the birth of the calves, the sex of the calf, the sire of the calf, and the assigned ID number.
7. **Health Records** provide space for recording health problems and treatments the cow has had.
8. **Breeding Record** provides a place for information relating to services, pregnancy checks, determining the delivery date and the dry dates as management tools.
9. **Lactation Record** provides for a record of how much milk the cow produced and in how many days. It also allows for quality factors.
10. **Reason for Cow leaving the herd** allows the farmer to record the reason the cow was culled.
11. **Management Summary** allows the farmer to track the performance of the herd, including the non productive times for the cow.

This record is designed to be a permanent record kept in the office or other location where the owner or herd manager can evaluate the performance of the cows in their herd.

Animal Health Program
Dairy Sector, KCBS –KAMP
Kosovo

Overview:

An evaluation of the diary farms in Kosovo has shown there is a lack of young stock in the country. This indicates an underlying problem in the reproduction function of the cow. The challenge is that cows are not well managed, thus a lack of feed and the stress can cause the reproduction system to fail to perform. Farmers often mention such problems as sterility, however the evidence does not point to any disease problems in the cows.

For this reason, KCBS should support KAMP by having a reproduction specialist to review the problem and to develop protocols to work with the problem.

Plan of Action:

It is recommended KCBS engage an animal health specialist to work with the farmers and some local veterinarians to examine reproduction related complaints and develop a management plan for improving the performance of the cows. The specialist would need to spend several days on farms observing the management of the cattle, observe the breeding practices, ride with an inseminator to insure the inseminator is well trained and is following the correct procedure to breed cows. The specialist should prepare a report on his findings; conduct a training session or seminar for Inseminators and for Veterinarians.

The Animal Health Specialist, during his stay would work with farmers to implement a recording system that will allow farmers to track their performance and to make management decisions. He would also develop practical protocols that could be used to insure better conception rates.

In view of the fact the KCBS is willing to invest money in bovine semen, participating farmers should be required to work with the program.

Recommended time of Visit:

The animal health specialist should arrive about the same time as the WWS semen does. He could then work with the importer, and everyone else to make sure the material was handled correctly upon arrival.

The specialist should also at that time provide some trainng for AI technicians, and discuss reproduction efficiency.

Recommended Specialists:

There are two persons who I would recommend for this task. Either has many years of practical experience in the AI industry and could address the problems that are facing people of Kosovo:

Jim Martin, Reproduction Specialist, Accelerated Genetics
Todd Chartnetzki, Consultant & Research Specialist, The Ripple Group.

Forages and Dairy Cattle

Lindell Whitelock
Ag Consulting Service
Janesville, WI

Fiber is an essential component of the diet of a dairy cow. Unlike monogastirc animals, the fiber is required to provide good rumen function in the dairy cow. A lack of fiber in the diet and feed intake and production are both reduced due to a common problem termed “acidosis”. Long term acidosis will lead to laminitis in the cattle as well. On the other hand , too much fiber reduces intake and production due to the fact it is slow to digest, resulting in the cow feeling “full of feed” all the time. The key to a good feeding program and high producing dairy cows is to feed them forages that are of high quality. High quality forages are determined by the amount of ADF (Acid Detergeent Fiber) or cellulose and lignin; and the amount of NDF(Neutral Detergent Fiber) in the feed. Forages that are harvested at the correct time will be higher in protein, and lower in fiber, thus relating to improved feed quality and higher milk production.

The key to producing high quality forage is the time of harvest. As forages (grasses or legumes) mature, the amount of fiber increases and the amount of protein decreases, resulting in poor performance from the cows.

High quality forages are a must if the farmer is going to have a high producing herd of cows. A substantial increase in the amount of milk produced per cow can be achieved, just by going to the field and harvesting the forage earlier.

Mastitis Control Programs
The Key to Higher Quality Raw Milk
A KCBS – KAMP Program to Improve Milk Quality

Lindell Whitelock
Consultant

Overview:

Mastitis in dairy cows is the worlds most expensive disease in terms of lost production and its adverse impact on dairy products that are produced using milk from infected cows. In a recent meeting of the Board of Directors of KAMP, there was a great amount of interest in Mastitis Control Programs. No doubt mastitis is a big problem in Kosovo and producers have had little or no information on the development of control programs. The key to reducing the Somatic Cell Counts in the milk in Kosovo is not the treatment of the disease, but is the establishment of prevention programs.

Action Plan:

KAMP producers could benefit largely from the development of a mastitis control program. Several steps must be completed to make the process work.

- Educate the producers about the causes of mastitis.
- Develop a control plan that can be implemented on each of the farms.
- Conduct some "in depth on farm" seminars and training to address the issue.
- Include farmers, milk procurement personnel from milk plants, local extension leaders, veterinarians, and public health professionals to participate in the program.
- The key to implementation of a mastitis control program is to have every one on the same page and giving the same advice.

KCBS should consider adding a work item to their plan for the year to include a segment on Mastitis Control. The program should:

- Engage the services of a Dairy Professional that can prepare advance materials for the project. A period of 7 to 10 working days should be approved for the person to prepare materials in advance of their arrival. This material should then be sent to KCBS for translation and publication prior to the arrival of the professional.
- Identify a laboratory in Kosovo that can culture the milk and provide reliable microbiological information on milk samples. The professional would work with this lab to develop the technical procedures for preparing the cultures, growing the cultures, and interpreting the results.
- A one day comprehensive workshop should be conducted in country for Dairy Professionals and key dairy farmers. This program should take 8 – 10 hours and may be a two day workshop.
- Hold regional meetings for farmers near a farm site where a trip can be made for on hands work.
- Identify a local specialist that would be willing to work with KAMP as the "coach" after the Dairy Professional leaves the country.
- Develop a system of monitoring Somatic Cell Counts to determine the effectiveness of the program.

Materials Needed for the Project:

The following materials would be needed for the project.

- A copy of the NMC Procedures for culturing milk samples. The cost of this document is approximately $300, but it includes full instructions for the Microbiologists to follow.
- A Mastitis & Milk Quality publication that can be translated and published locally. The Contracted person would be responsible for the preparation of the book.
- Several California Mastitis Test Kits. The cost of the kits would $16 to $18 each.
- A variety of teat dip concentrates. These could be obtained locally through Deleval or Westfalia.
- A variety of "dip cups" for demonstration purposes,
- A vacuum gauge to be used for testing milking vacuum at the teat end.
- Assortment of mastitis treatments for demonstration purposes.

Conducting the Program:

The program should be conducted at a time of the year when framers are not extremely busy with planting or harvesting so they can attend the program. I would suggest late October as the time to conduct the program. This will be the time when the cows will be going back in the barns and the pressures from environmental microorganisms will be the greatest. The dairy professional should be contracted soon so the material can be prepared well in advance and can be published prior to the arrival of the specialist.

Persons to Consider:

W. Nelson Philpot, Philpot & Associates, Homer, LA.
Lindell Whitelock, Ag Consulting Service, Janesville, WI
Norm Schuring, Surge Westfalia, Naperville, Illinois.

Genetic Improvement of Dairy Cattle in Kosovo
KCBS/KAMP Sponsored Program

Lindell Whitelock
Consultant

Overview:

Dairy farmers in Kosovo have a sincere interest in the improvement of their cattle genetically. Every farmer indicted to me that he felt the need to transition from the Semimetal to Holstein cattle. This can be done via a cost effective means of breeding the local cattle with proven US bulls. The F1 generation will have an improved type and will have improved production capabilities.

There are many issues relating to dairy production in Kosovo. These issues relate to record keeping, good nutrition practices, improved milk quality, and improved young stock rearing practices. The farmers that adopt new practices will see an economic benefit in the future, but to get the process jump started KAMP and KCBS need to have some incentive. That incentive could be providing semen to farmers to breed their cows to proven bulls.

The use of the proven bull semen will have both a short impact on getting new practices started on the farms, while the long term impact will be better cows three years from now.

Mechanics of the Program:

The dairy genetics program would be carried out through KAMP with KCBS providing some funding to acquire the genetic material. The program would work as follows:

1. Based on farm visits and a look at the cattle, Lindell Whitelock, Dairy Specialist reviewed the characteristics of the local cows and what traits should be selected for.
2. Based on the needs, 12 proven bulls from US breeding companies that would qualify for shipment to Kosovo were selected based on trait values, milk production improvement, butterfat content improvement, protein improvement, calving ease. The bulls come from multiple breeding stations in the US and the shipment of the semen could be accommodated by World Wide Sires, Ltd.
3. KCBS and KAMP would identify an importer that could accept delivery of the semen and would be able to maintain the tank until the material is all used. The importer would be allowed to charge a fair and reasonable fee for the handling, storage, and N used to keep the material frozen.
4. The semen would then be allocated to farmer members of KAMP. The farmer would be required to pay the insemination fee for breeding the cow.
5. In exchange for the genetic material the participating farmer would agree to the following terms:
    a. The farmer would agree to ID his cows in accordance with MOA rules.
    b. The farmer would keep records on the cow and the off spring.
    c. The farmer would agree to subscribe to improved feeding practices and forage harvesting practices on his farm.

d. Subscribe to an improved calf raising program.
e. Calves would be identified and records be kept on the animal.
f. Agree that if for some reason the farm ceases to operate, KAMP would be notified and any heifer calves that were the result of the breeding program would be sold to other KAMP members.
g. Subscribe to recording milk weights so comparisons in production can be developed.

6. Farmers who participated in the program would be prohibited from selling milk on the "green market", but must be sold to processors through normal channels.
7. Farmers must improve the quality of the milk being shipped to the processor.
8. To be a qualified participant in the program, KAMP would be required to certify the farm has an action plan in place and it is being implemented.

Material needed:

The material needed for the program would be 1) semen from proven US bulls; 2) storage tank, and 3) plastic sheaths used in the insemination process. All of the material can come from one source, the recommended source being World Wide Sires, LTD. World Wide Sires, LTD is the marketing arm for the farmer owned cooperatives in the United States, and therefore they would be the logical supplier of genetics.

Based on the desired improvements that need to be achieved in the local cattle, 12 bulls from the US bull studs have been chosen. The bulls are as follows:

Improved Genetics Project, Kosovo	
Stud Code	***Name***
7HO06168	Bay-Bob Amateur (**Amateur)**
14HO03574	Glen Toctin Breaker (**Breaker)**
7HO06055	D-P-M Rudolph Bright (**Bright)**
7HO05710	Pagen-Ernwood Dane (**Dane)**
14HO03023	Andersonville D Delman **(Delman)**
14HO02958	Sildahl BW Dutch Boy **(Dutch Boy)**
14HO02736	Barbee-M Juror Ito **(ITO)**
7HO 05760	Le-Bert Aerostar Link **(Link)**
7HO06759	Regancrest-Be Mto Morgan **(Morgan)**
7HO06546	Din-A-Ste Remington **(Remington)**
14HO02586	Paradise-R Sailor 95 **(Sailor)**
7HO05605	Ladys-Manor Warrior **(Warrior)**

The cost of the semen and materials to carry out this program would cost in the range of $25,000 to $26,000.

Since there are concerns about reproductive diseases in the country, a Reproduction specialist should be contracted to work with a local veterinarian for 2 weeks to address the issue. This would insure more pregnancies were achieved from the material.

Implementation:

Many farmers are on seasonal breeding, meaning many of the cows will be bred when they go to pasture. That will occur late April to early May, with a the breeding taking place in May and June. For this reason the determination to implement the program needs to be made quickly. If the determination is to follow through, then an order should be placed with World Wide Sires as quickly as possible.

Cow Data Record Sheet

Prepared for KAMP

Lindell Whitelock

The following instructions are being provided for using the "Cow Data Record Sheet" developed as a part of the consulting program carried out in Kosovo. The sheet may be printed and completed manually, or can be done electronically.

1. Attach a photo or sketch of the cow showing unique markings that could be used to identify the cow incase of lost ear tags or other identification.
2. **Barn Name** is the name the cow would commonly be called by workers in the barn.
3. **ID Number** may be the number assigned by the farmer as his own records or the number assigned by the MOA program.
4. **Registration Number** would indicate the number issued on the animal's pedigree, should the animal be registered in the herd book.
5. **Dam, Sire, Grand Dam, Grand Sire** provides information on the parentage of the animal, if known.
6. **Calving Record** is used to record the date of the birth of the calves, the sex of the calf, the sire of the calf, and the assigned ID number.
7. **Health Records** provide space for recording health problems and treatments the cow has had.
8. **Breeding Record** provides a place for information relating to services, pregnancy checks, determining the delivery date and the dry dates as management tools.
9. **Lactation Record** provides for a record of how much milk the cow produced and in how many days. It also allows for quality factors.
10. **Reason for Cow leaving the herd** allows the farmer to record the reason the cow was culled.
11. **Management Summary** allows the farmer to track the performance of the herd, including the non productive times for the cow.

This record is designed to be a permanent record kept in the office or other location where the owner or herd manager can evaluate the performance of the cows in their herd.

Cow Data Record

Barn Name	ID Number	Reg. Number	
Date of Birth		Grand Dam	
Dam		Grand Sire	
Sire		Grand Dam	

Photo Or Sketch of Cow

Health Records

Date	Problem & Treatment

Calving Record

Date	Sex	Sire	ID No

Breeding Record

Date	Sire	Preg Check	Due Date	Dry Date

Lactation Record

Number	Milk Production	BF	Protein	SCC	Days
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Reason for Cow Leaving Herd

Management Summary

Number	Days Milked	Dry Days	Calving Interval

Notes

Barn Sheet
Prepared for KAMP

Lindell Whitelock

The Barn Sheet is designed to be kept at the barn or near the cow so the farmer can see at a glance the status of the cow and can be alerted to try to observe important phases of the lactation cycle. The Barn Sheet can also be used as a feeding guide where cows are hand fed.

The instructions for use are as follows:

1. **Cow Name/Number** should be entered so the farmer can relate the record to the cow.
2. **Calving Date** is the date the cow delivered the last calf.
3. **Status** would be either "open" not pregnant or "bred" indicating she is pregnant.
4. **Sire** of the cow should be recorded to 1) reduce the risk of inbreeding, and 2) to allow the farmers to see the performance of the sires they have used in the past.
5. **Expected Estrus Date** should be entered to provide the farmer with a date to be observing the cow to see if she does cycle.
6. **Breeding Date** indicates the cow is inseminated. The sire used in the insemination process should be used as well.
7. **Pregnancy Check** would be used to indicate the date the cow should be checked to confirm pregnancy by palpation.
8. **Milk Production** indicate the date the milk was weighed and the amount of milked harvested in the AM/PM milkings.
9. **Expected Calving Date** should be determined after the cow is confirmed pregnant.
10. **Dry Off Date** should be 60 days before the cow is expected to deliver.
11. **A space for notes, treatments, and comments** is provide to allow the farmer to make entries he desires to assist him in the spot management of this cows.

Barn Sheet

Cow Name/Number	Calving Date	Status
Sire	Expected Estrus Date	Estrus

Milk Production		Breeding Date		Pregnancy Check	
Date	Kilograms	Date	Sire	Date	Yes/No
		Expected Calving Date		Dry Off Date	
		Notes, Treatments, Comments			

Kosovo Association of Milk Producers (KAMP)
Strategic and Business Plan

Purpose:

The purpose of KAMP is to improve the competitiveness of the Kosovo Dairy Industry through member driven activities that will enhance dairy production through out Kosovo.

Vision:

KAMP will be an organization of milk producers that will be striving to improve the quality of the raw milk and will be the driving force for improving both quality and quantity of milk being provided to processors.

Mission:

KAMP's mission is to enhance the competitiveness of the dairy industry by:

- Improving the quality of milk being shipped from the farms.
- Improving the genetics of the dairy animals.
- Developing sound business practices and record systems.
- Advocating good dairy cow management practices such as feeding, housing, and health so as to improve the production opportunities.
- Advocate public policies conducive to the private sector business development of both farms and supporting industries.

Kosovo Association of Milk Producers (KAMP) Goals

Goal 1: Assist the Ministry of Agriculture in the development of a National Genetics Herd Book.

Objective 1: To identify cows in the country with as much information as possible relating to pedigree, production, and type.

Strategy 1: To cooperate with the Ministry of Agriculture in the implementation of an identification program that will enable cows to be permanently identified.

Tactic 1: Encourage the Ministry of Agriculture and/or the Veterinarian Service to implement a national ID system as quickly as possible.

Tactic 2: Each KAMP farmer should implement the Ministry of Agriculture system of tagging his cows with easy to read tags that include vital data so the cows can be quickly identified.

Strategy 2: To assist the Ministry of Agriculture in the implementation of a **Permanent Genetics Book** of elite cows for the purpose of developing a breeding program for the country. *(This program is being developed by the EAU.)*

Tactic 1: Record production information on the cows

Tactic 2: KAMP farmers should identify and record the parentage for calves that are born.

Tactic 3: Use this information to develop a pedigree system to identify the backgrounds of elite cows.

Goal 2: Develop a farm record system for both production and economic records.

Strategy 1: Develop a system of record keeping for economic analysis of the farm.

Tactic 1: Establish and implement a system of record keeping at the farm level to maintain good records, keeping them current and using the data for economic analysis of the farms.

Tactic 2: Annually summarize the records so farmers can determine their efficiency and their standing in comparison to other farms in the country and region.

Strategy 2: To develop a system of recording animal performance.

Tactic 1: Record milk weights and quality information on the milk produced by each cow.

Tactic 2: Record management actions, such as estrus (heat), breeding dates, calving dates, and health problems.

Tactic 3: Identify cows with Somatic Cell Count Problems.

Strategy 3: To develop system of classification of cows (scoring) to identify the elite cows to be used for foundation stock.

Tactic 1: Train KAMP members to evaluate the cows and "score" them according to their traits.

Tactic 2: Score the cows and record the scores. Scoring should be done as a minimum annually to reflect any changes in the cow.

Tactic 4: Record scores in the pedigree book for future reference

Goal 3: To advocate good dairy management practices to improve the production of milk.

Objective 1: To improve the performance of the cows through improved forage production practices, and improved rations.

Strategy 1: To improve the quality of the forages (hay and silage) prepared at the farm level by using improved forage varieties and harvesting the forages correctly.

Tactic 1: To improve the knowledge of farmers through educational/consulting programs provided to KAMP via a forage production specialist.

Tactic 2: Implement a forage testing program to insure farmers know the quality of their forages.

Tactic 3: Develop a joint program with KCBS to bring in a consultant to present a program on the production of high quality

forages and develop a plan with at least 4 farmers in different regions of the country.

Strategy 2: To improve nutritional programs though improved rations.

Tactic 1: Develop recommended feeding programs for member herds using cost effective sources of protein and energy for the cows.

Tactic 2: Develop a joint program with KCBS to bring in a consultant to develop feeding rations and feeding management programs, implementing selected demonstrations on farms.

Strategy 3: To improve the reproductive efficiency and improve the genetic traits and production abilities through the use of improved genetics.

Tactic 1: Use Artificial Insemination and Proven Bulls to inseminate cows resulting in improved genetics in future animals

Tactic 2: Develop an implement calf rearing programs that result in a heifer that will enter the milking herd at 23 – 24 months of age.

Tactic 3: Through management records and cow records monitor the key reproductive measures.

Goal 4: To improve the quality of the milk being shipped from the farm.

Objective 1: Implement milking practices and milk handling practices that reduce the bacteria in the milk.

Strategy 1: Implement hygienic milking practices.

Strategy 2: Implement and follow the recommended practices for cleaning equipment.

Strategy 3: Implement mastitis control programs, especially dry cow treatment programs to reduce the SCC level in the milk shipped from the farm.

Strategy 4: Insure adequate cooling systems for the milk at either the farm level or collection stations are available so the milk is cooled quickly to aid in improving the quality of the milk.

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Goal 5: Advocate Public Policies that conducive to the development of the dairy industry both at the farm level.

Objective 1: To identify issues that are critical to the development of private dairy farms.

Strategy 1: Establish creditability with the dairy farmers as an association that represents the dairy producer and is acting in their collective best interest.

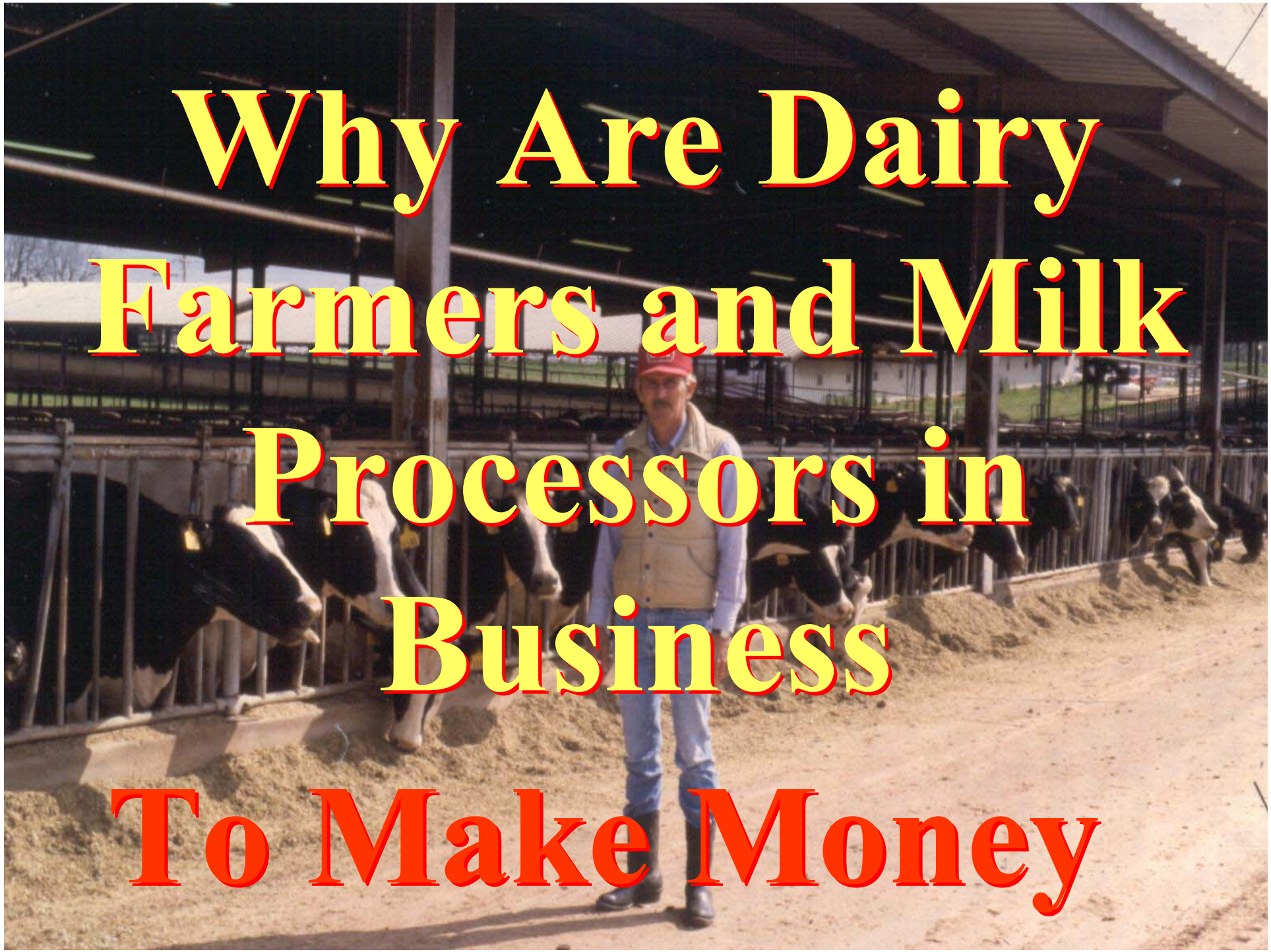
Strategy 2: Develop a working relationship with governmental agencies to insuring access to the key government leaders in establishing rules that have an impact on the diary industry.

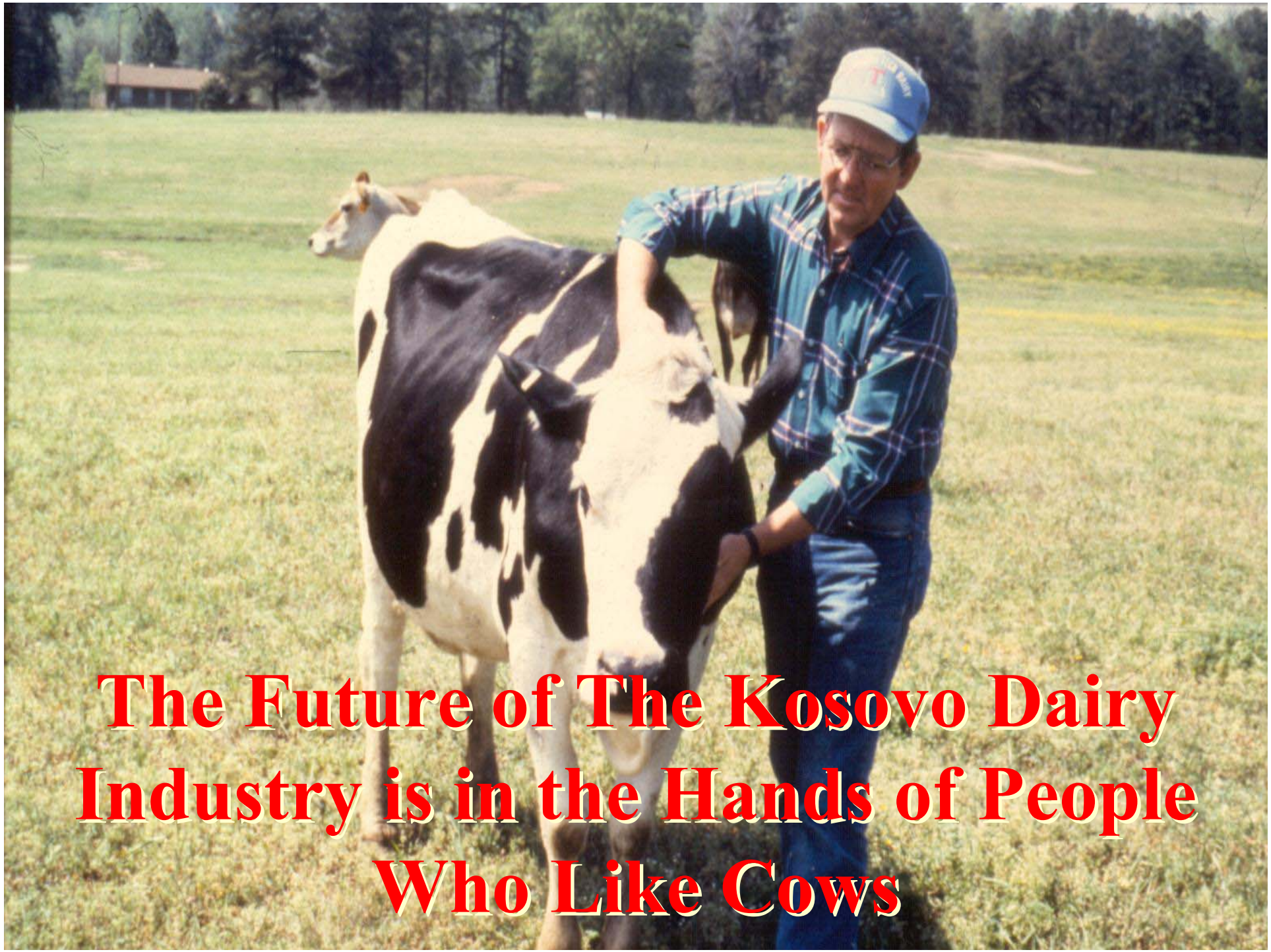
Strategy 3: To publicize activities of KAMP to both dairy producers and to consumers.

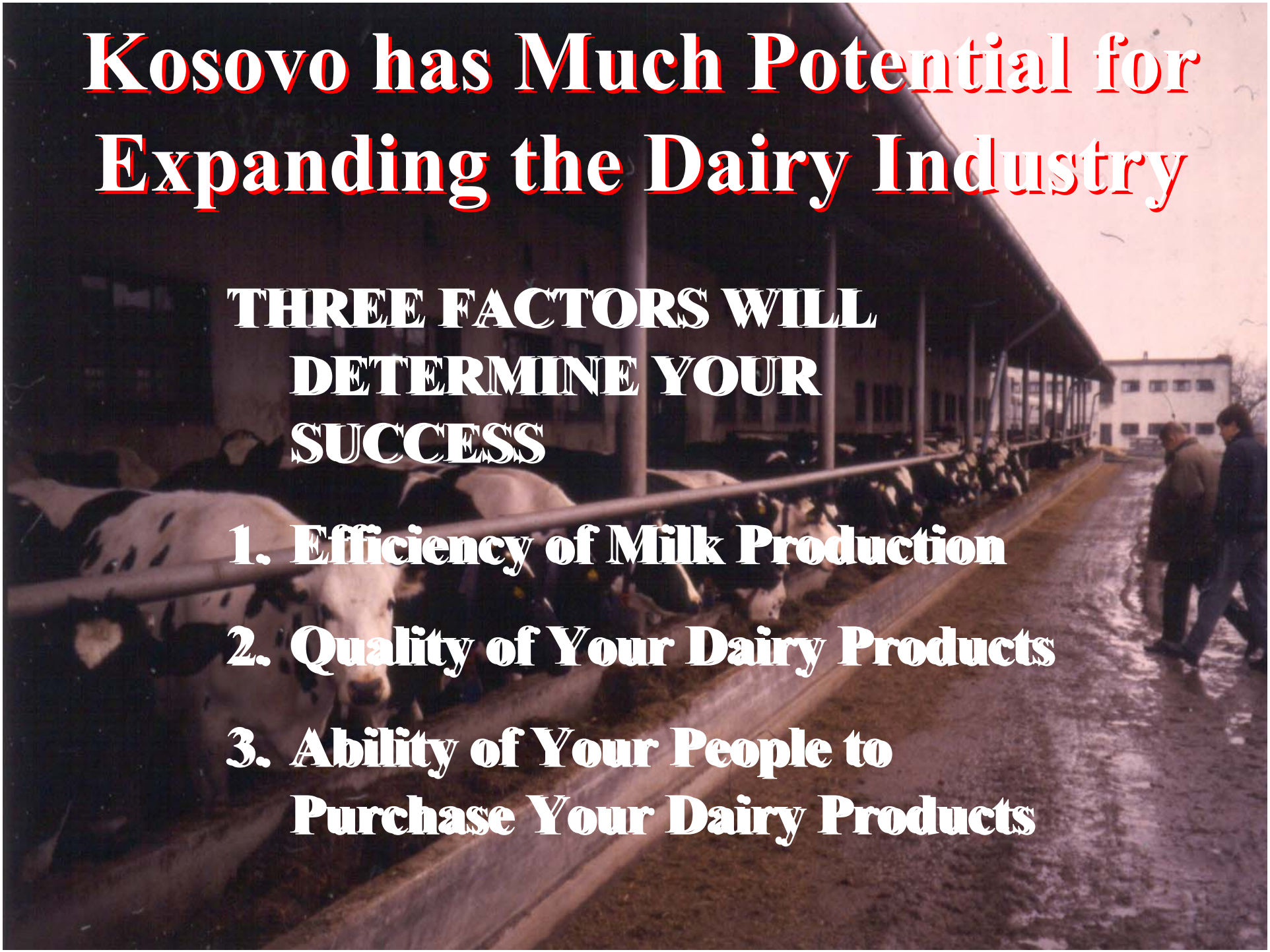
Strategy 4: Insure government programs and policies promote the competitiveness of the Kosovo dairy industry.

Recommendations for the Dairy Industry & KAMP

Prepared for
KAMP and KCBS
By
Lindell Whitelock


Why Are Dairy Farmers and Milk Processors in Business
To Make Money


The Future of The Kosovo Dairy Industry is in the Hands of People Who Like Cows



Kosovo has Much Potential for Expanding the Dairy Industry

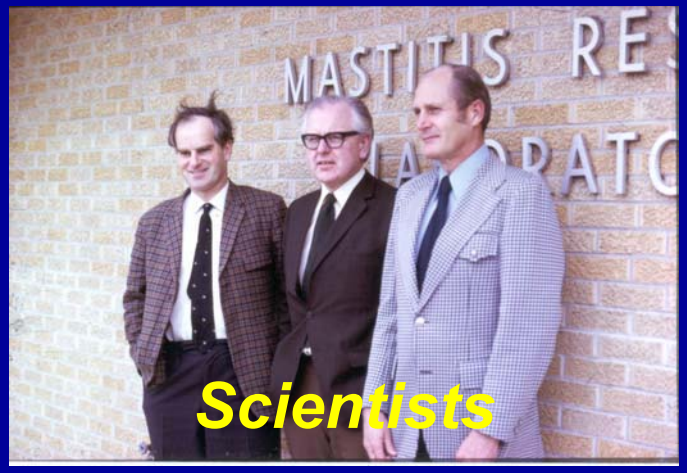
THREE FACTORS WILL DETERMINE YOUR SUCCESS

1. Efficiency of Milk Production
2. Quality of Your Dairy Products
3. Ability of Your People to Purchase Your Dairy Products


To Ensure
Success You
Must Begin NOW
to Make
Improvements in
Your Dairy
Industry

KAMP Must Cooperate with…

KAMP Must Cooperate with…



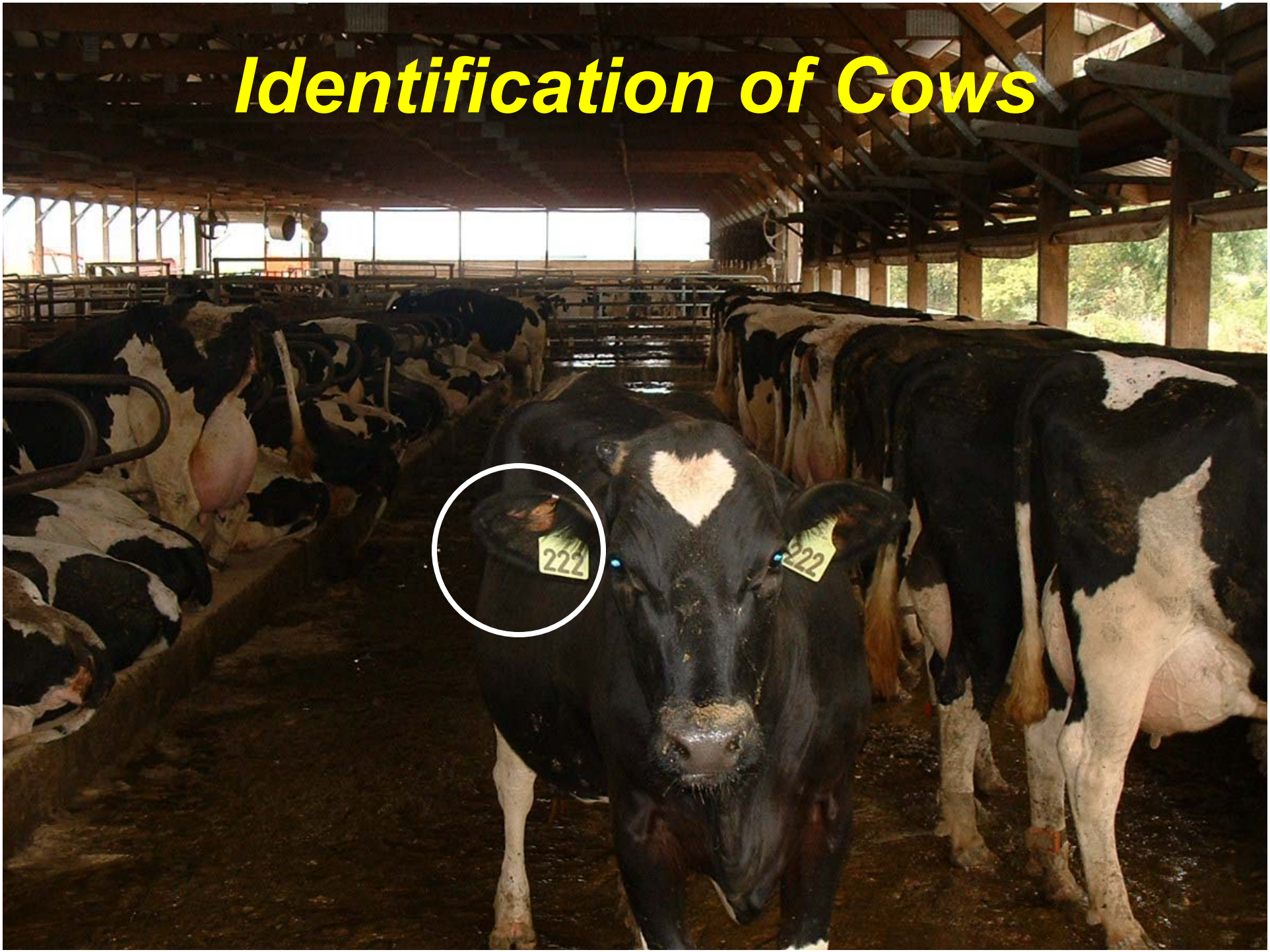
Goal 1:

To Assist the Ministry of Agriculture in the Development of a National Genetics Herd Book

Strategy 1:

Cooperate with Ministry in the Implementation of an Identification Program.

Identification of Cows

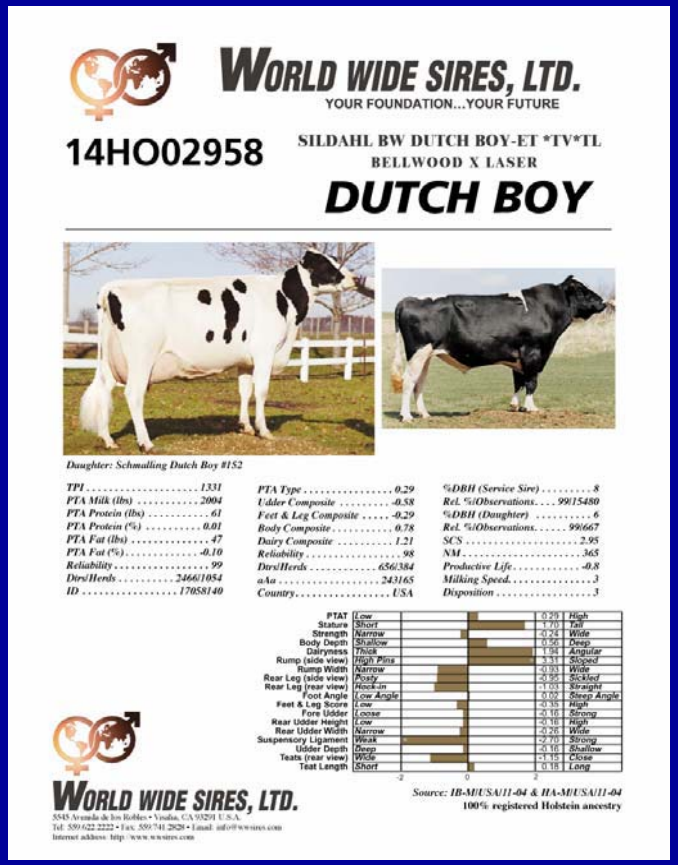


Identify Offspring and Record Information.

Strategy 2:

Assist the Ministry in the Development of a Permanent Herd Book.

Develop National Herd Book



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SILDAHL BW DUTCH BOY-ET *TV*TL
BELLWOOD X LASER

DUTCH BOY

Daughter: Schmalling Dutch Boy #152

TPI	1331	PTA Type	0.29	%DBH (Service Sire)	8
PTA Milk (lbs)	2004	Udder Composite	-0.58	Rel. %Observations.	99/15480
PTA Protein (lbs)	61	Feet & Leg Composite	-0.29	%DBH (Daughter)	6
PTA Protein (%)	0.01	Body Composite	0.78	Rel. %Observations.	99/667
PTA Fat (lbs)	47	Dairy Composite	1.21	SCS	2.95
PTA Fat (%)	-0.10	Reliability	98	NM	365
Reliability	99	Dtrs/Herds	656/384	Productive Life	-0.8
Dtrs/Herds	2466/1054	aAa	243165	Milking Speed	3
ID	17058140	Country	USA	Disposition	3

PTAT				
Stature	Short	0.29	1.70	Tall
Strength	Narrow	0.24	0.56	Wide
Body Depth	Shallow	0.56	1.94	Deep
Dairyness	Thick	1.94	5.31	Angular
Rump (side view)	High Pins	5.31	-0.93	Sloped
Rump Width	Narrow	-0.93	-0.95	Wide
Rear Leg (side view)	Posty	-0.95	-1.03	Sickled
Rear Leg (rear view)	Hock-in	-1.03	-0.02	Straight
Foot Angle	Low Angle	-0.02	-0.39	Steep Angle
Feet & Leg Score	Low	-0.39	-0.16	High
Fore Udder	Loose	-0.16	-0.16	Strong
Rear Udder Height	Low	-0.16	-0.26	High
Rear Udder Width	Narrow	-0.26	-2.70	Wide
Suspensory Ligament	Weak	-2.70	-0.16	Strong
Udder Depth	Deep	-0.16	-1.15	Shallow
Teats (rear view)	Wide	-1.15	-0.18	Close
Teat Length	Short	-0.18		Long

-2 0 2

Source: IB-MUSA11-04 & HA-MUSA11-04
100% registered Holstein ancestry

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Leads to Genetic Improvement of National Dairy Herd.

Improved Animals Through Breeding Programs

Superior Genetics

Leads to

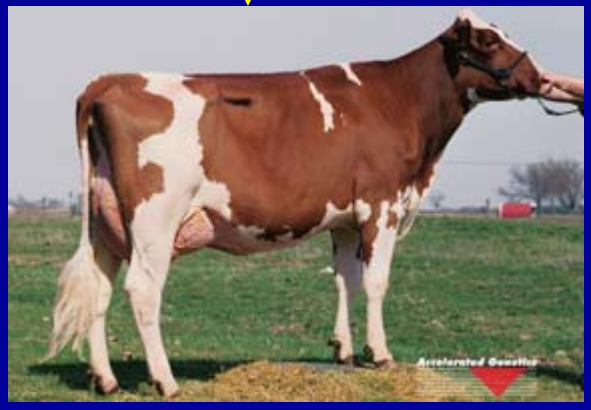
Superior Cows!

Genetic Upgrading to Improve Local Cattle

Local Cow

AI

Proven Sire



F1

Higher Milk Production

Improved Type

Hybrid Vigor

Genetic Upgrading to Improve Local Cattle

F1

AI

Proven Sire

F2

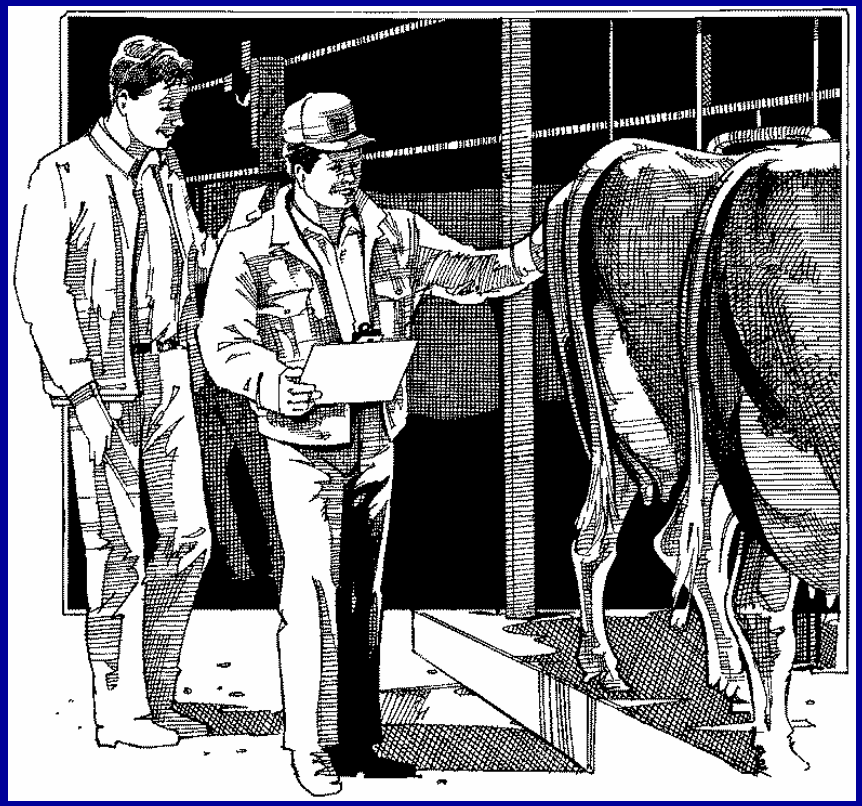
Improved Performance

Goal 2

To Develop a Farm Record System (Book) for both Production and Economic Records.

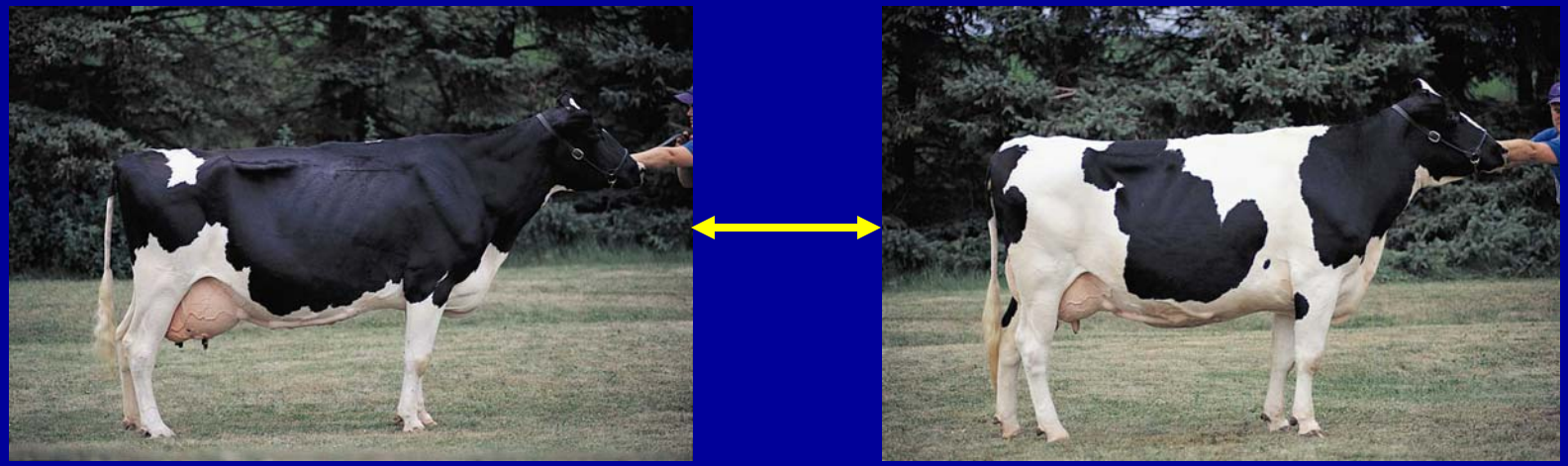
Strategy 1: Develop Farm Record System.

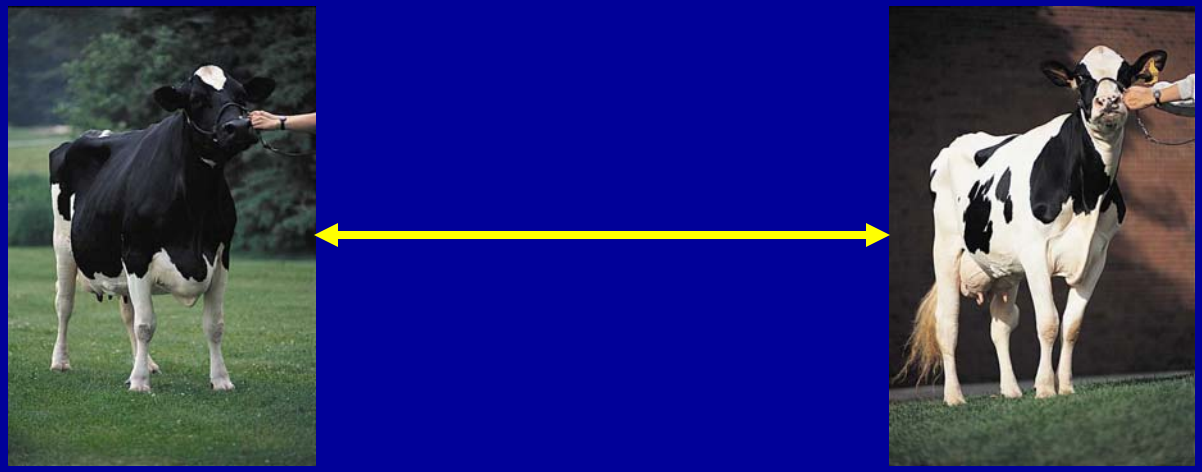
- Financial Records.
- Milk production Records.
- Performance Records.
- Make Data Easy to Use.



Strategy 2: Develop a System for Recording Animal Performance.

Strategy 3: Develop a Classification System.



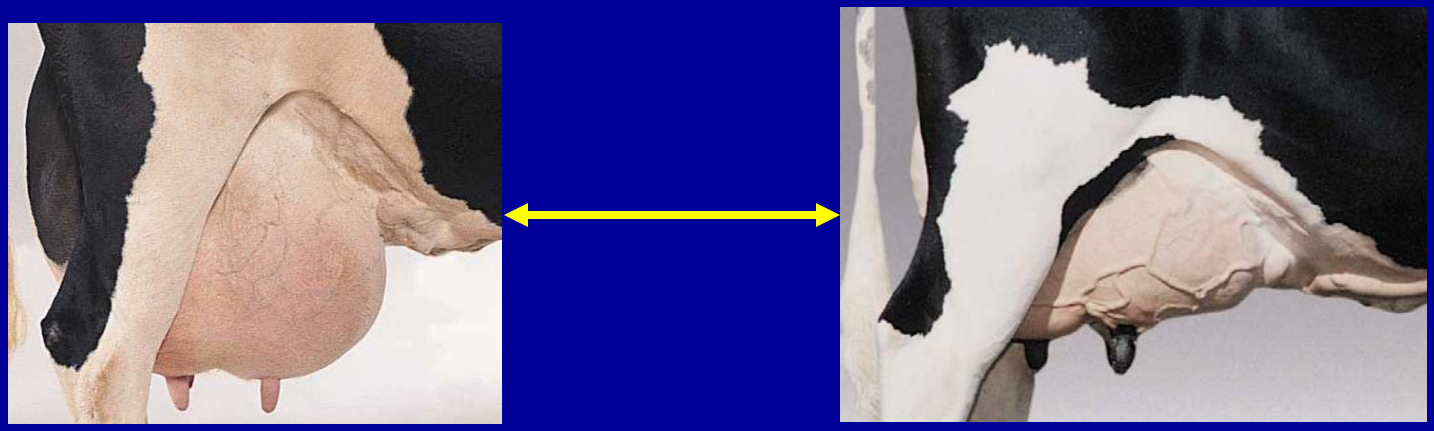


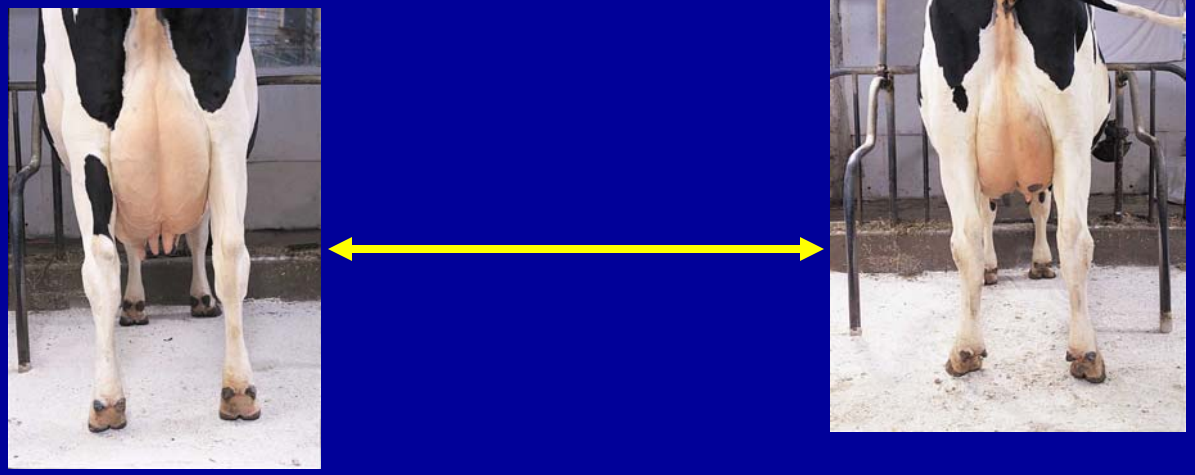
Trait Scoring Helps Evaluate Potential Problems.

Reproduction

Foot & Leg Failure

Traits Predict Health Problems.





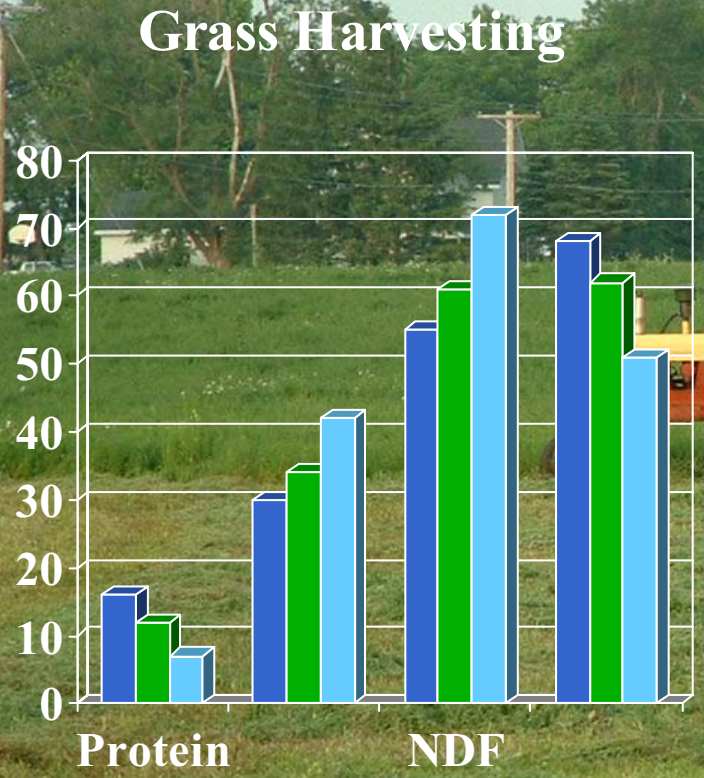
Goal 3

To advocate good dairy management practices to improve the production of milk.

High Producing Dairy Cows Must be Managed for Production

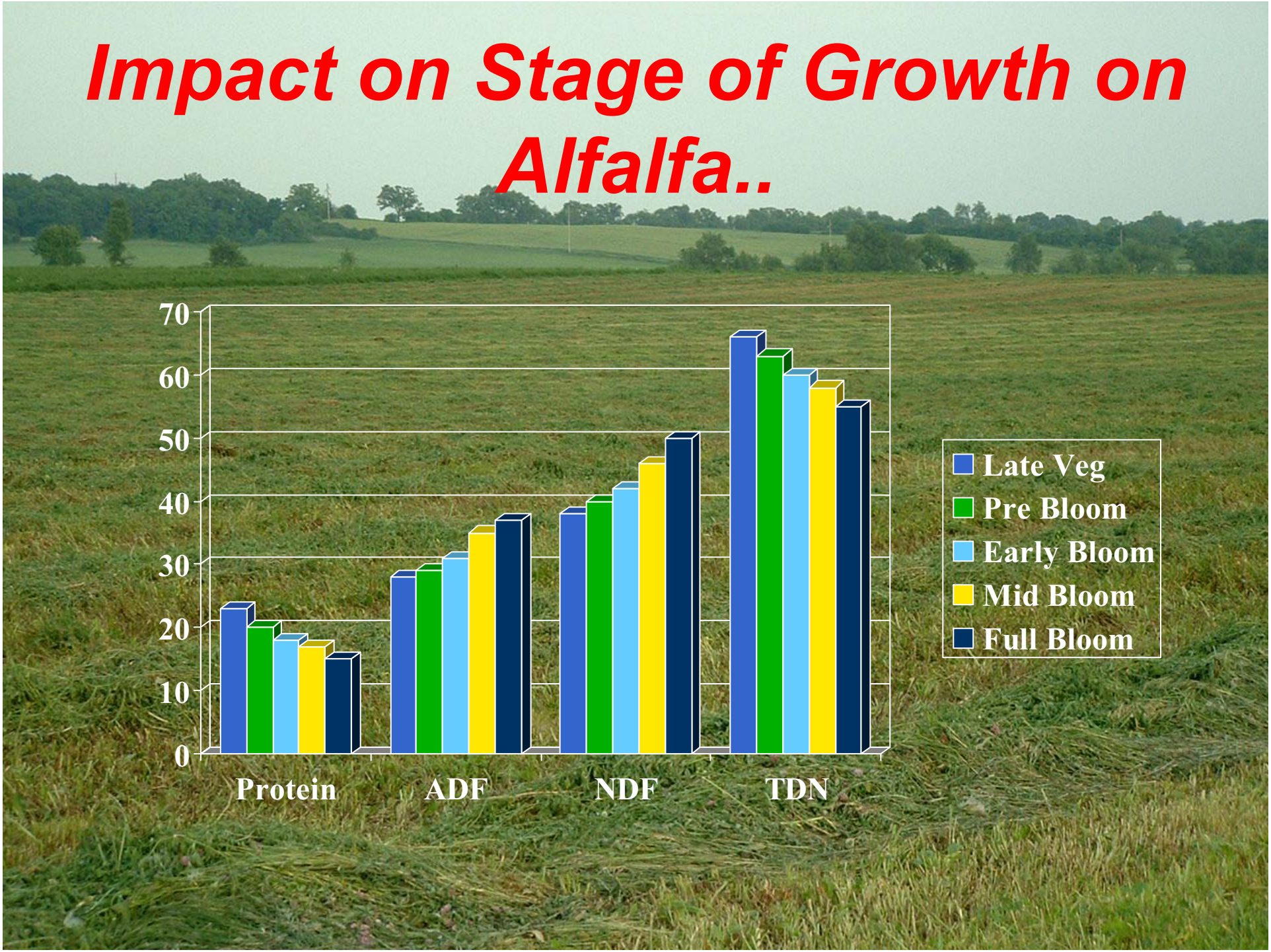
Strategy 1: Improve Forage Quality.

Impact of Time of Harvest on Feed Value..



- Late harvesting increases fiber levels
- Late harvesting decreases protein.
- Late harvesting reduces the feed value.

Impact on Stage of Growth on Alfalfa..




A Good Feed…

Store Feeds Correctly…

Impact of Forage Quality on Feeding Program.

- Feeding a 650 Kg cow.
- Daily milk production is 30 liters.
- Butterfat 3.7% and Protein 3.4%
- Cows is 150 days in milk.
- Poor Quality Forages are available.

- The Daily Ration

14.3 Kg Alfalfa Silage

9.3 Kg Corn Silage

8.8 Kg Corn Grain

3.0 Kg Sunflower Meal

0.25 Kg Energy Source

Mineral/Vitamin Pre Mix

Impact of Forage Quality on Feeding Program.

- Feeding a 650 Kg cow.
- Daily milk production is 30 liters.
- Butterfat 3.7% and Protein 3.4%
- Cows is 150 days in milk.
- High Quality Forages are available.

- The Daily Ration

12.9 Kg Alfalfa Silage

25.0 Kg Corn Silage

4.0 Kg Corn Grain

2.25 Kg Sunflower Meal

0.25 Kg Energy Source

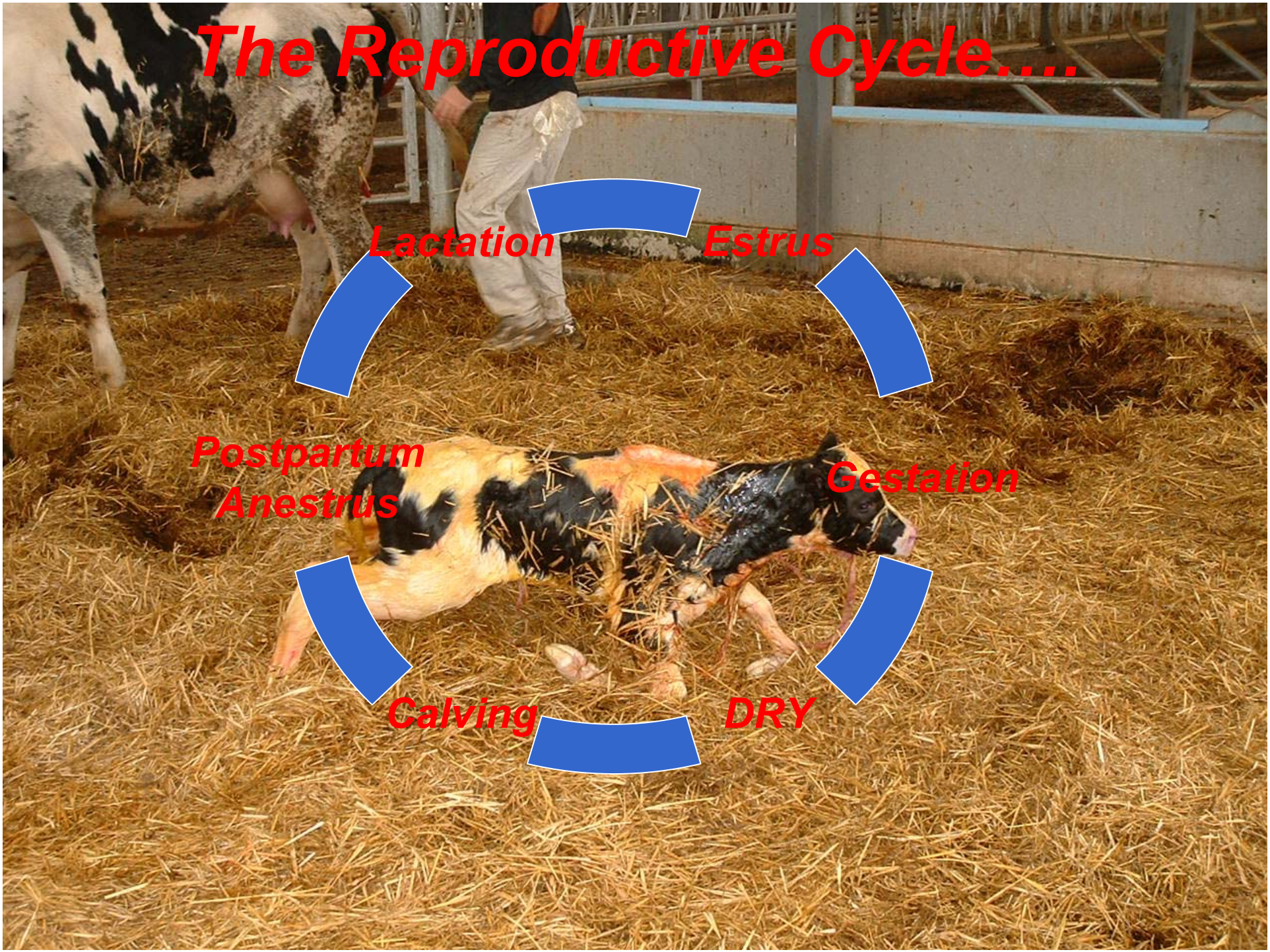
Mineral/Vitamin Pre Mix

Strategy 2: Improve Nutritional Systems.

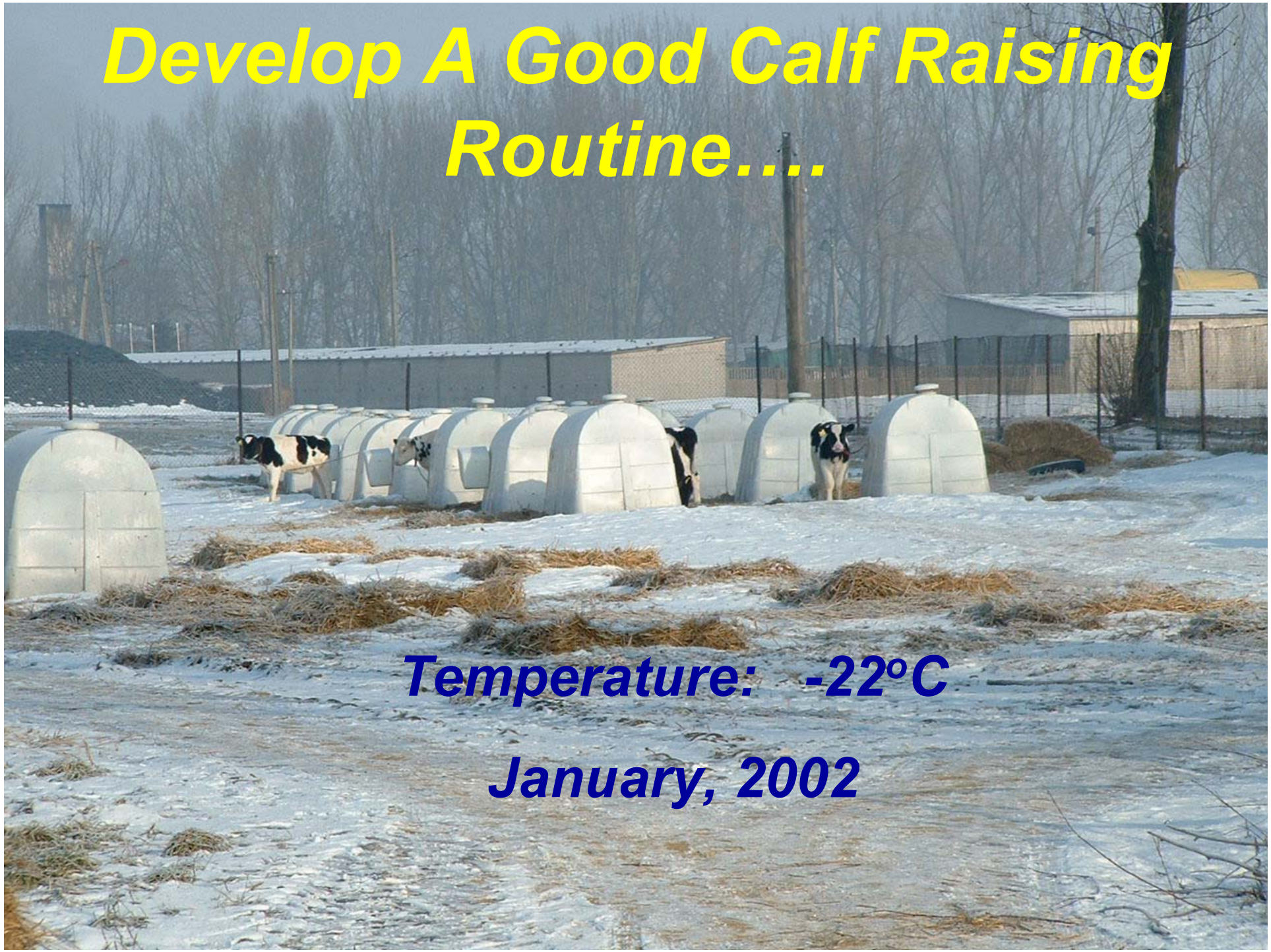
Well Fed Cows Perform Well….

Strategy 3: To Improve Reproductive Efficiency and to improve the genetics of the herd.

Without REPRODUCTION there is no PRODUCTION.


The Reproductive Cycle….
Lactation
Estrus
Postpartum Anestrus
Gestation
Calving
DRY

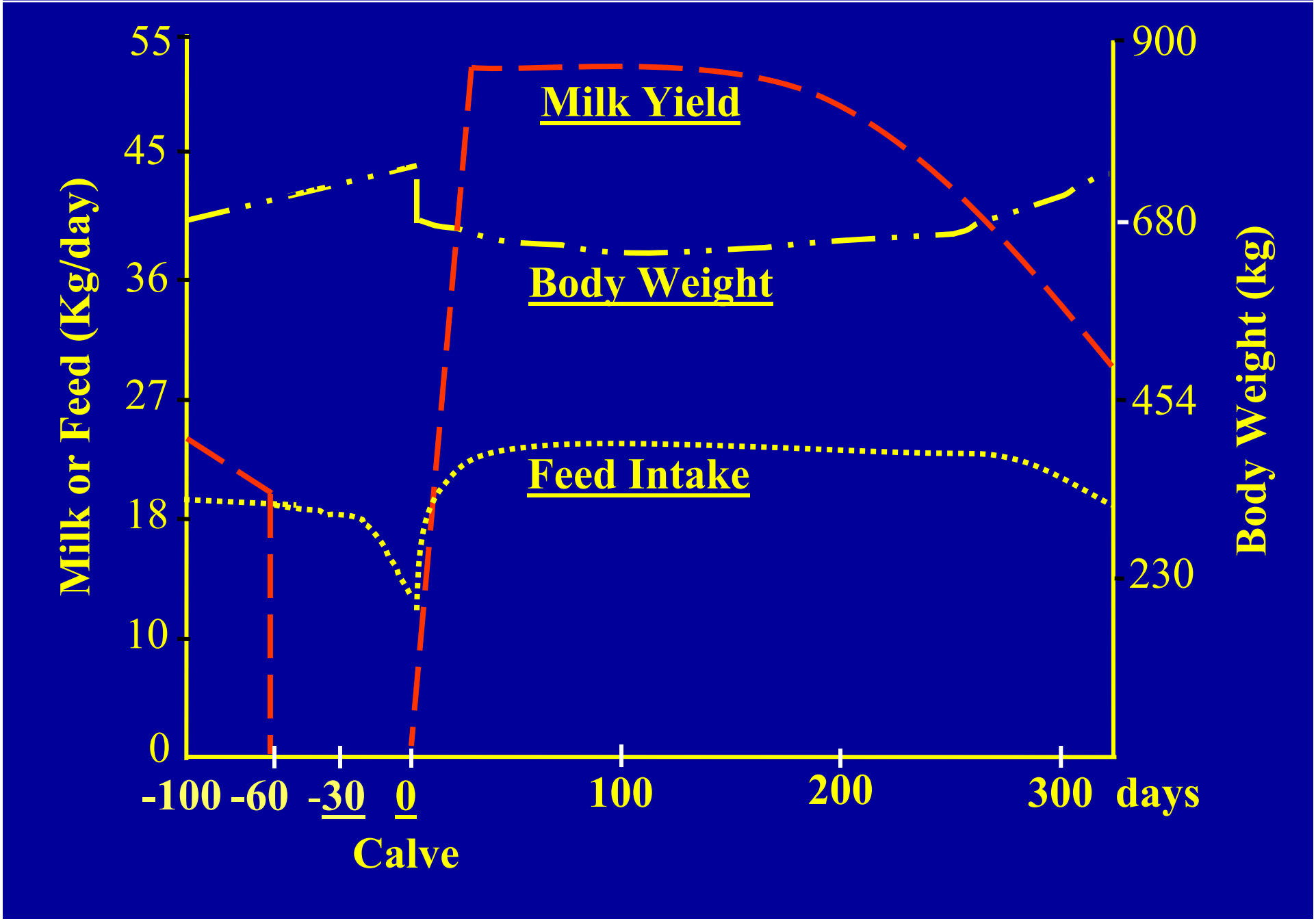

Artificial Insemination using PROVEN Bulls is the key to improved herd performance.


Develop A Good Calf Raising Routine....
Temperature: -22°C
January, 2002

How Fast Should Heifers Grow?

Age Months	Weight Kilograms	Height Centimeters
4	125	93
8	235	111
14	375	127
18	475	132
22	575	137

Lactation Cycle

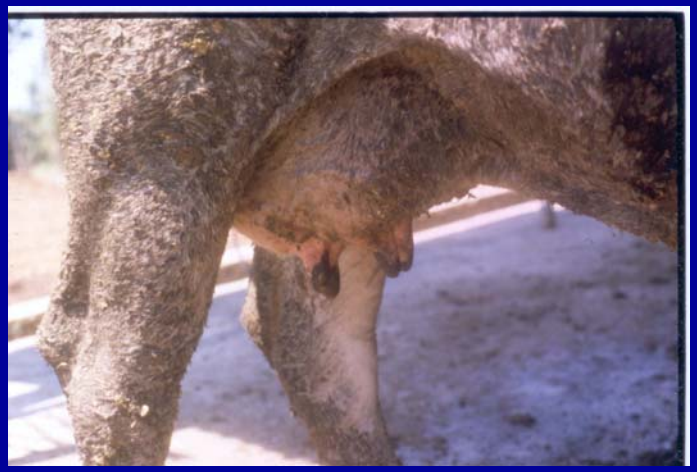


Goal 4:

To improve the quality of the milk being shipped from the farm.

Strategy 1: Implement Hygienic Milking Practices

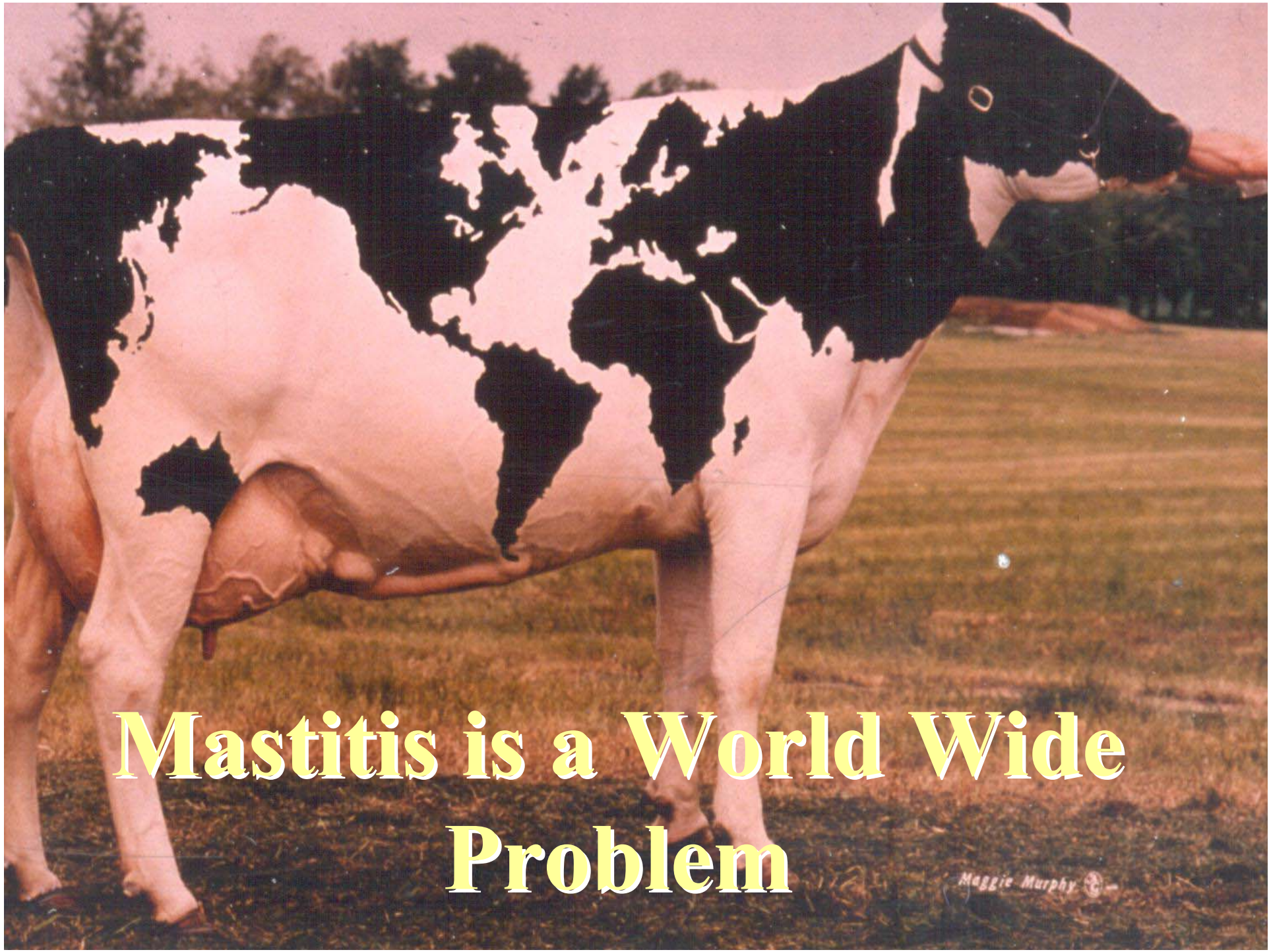
Unacceptable Practices…



Implement Hygienic Milking Practices….

Strategy 2: Implement Recommended practices for cleaning equipment.

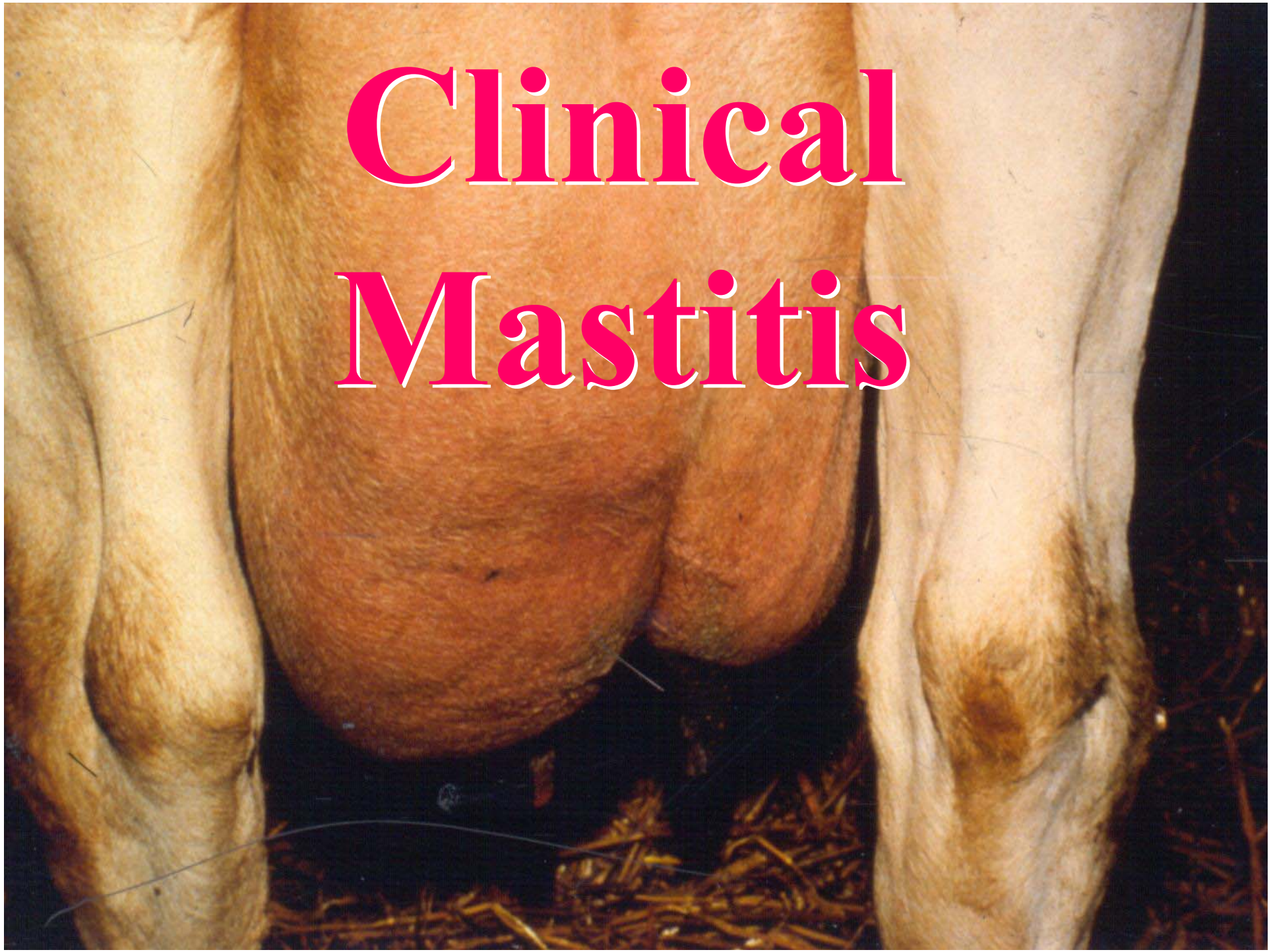
Strategy 3: Implement Mastitis Control.



Mastitis is a World Wide Problem

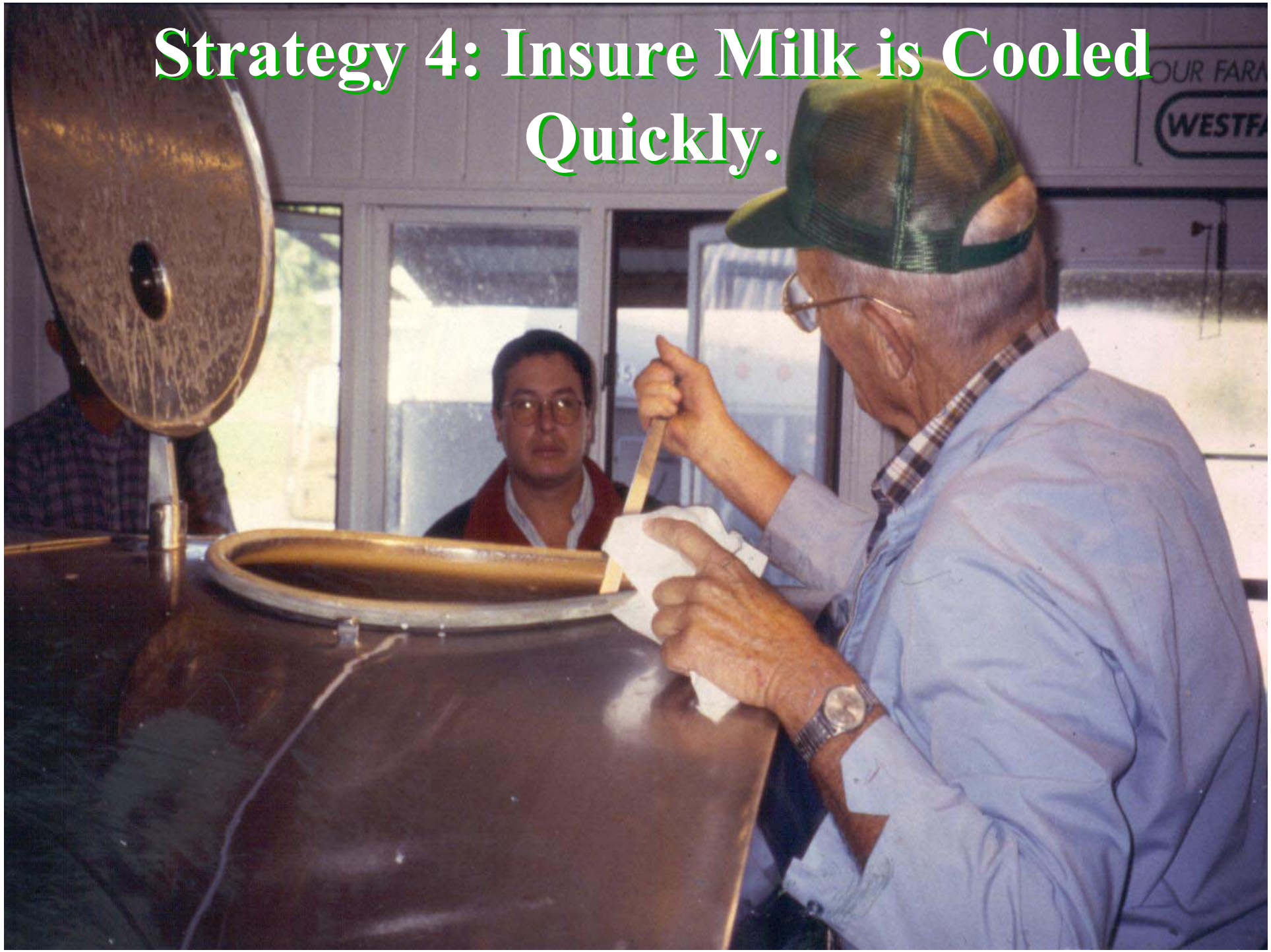
The Key to Mastitis Control Is…..

Prevention


Clinical
Mastitis


Udders That are Apparently Healthy May Have Subclinical Mastitis

Strategy 4: Insure Milk is Cooled Quickly.



Goal 5:

Advocate Public Policies that conducive to the development of the dairy industry both at the farm level.

Strategy 1: Establish Creditability.

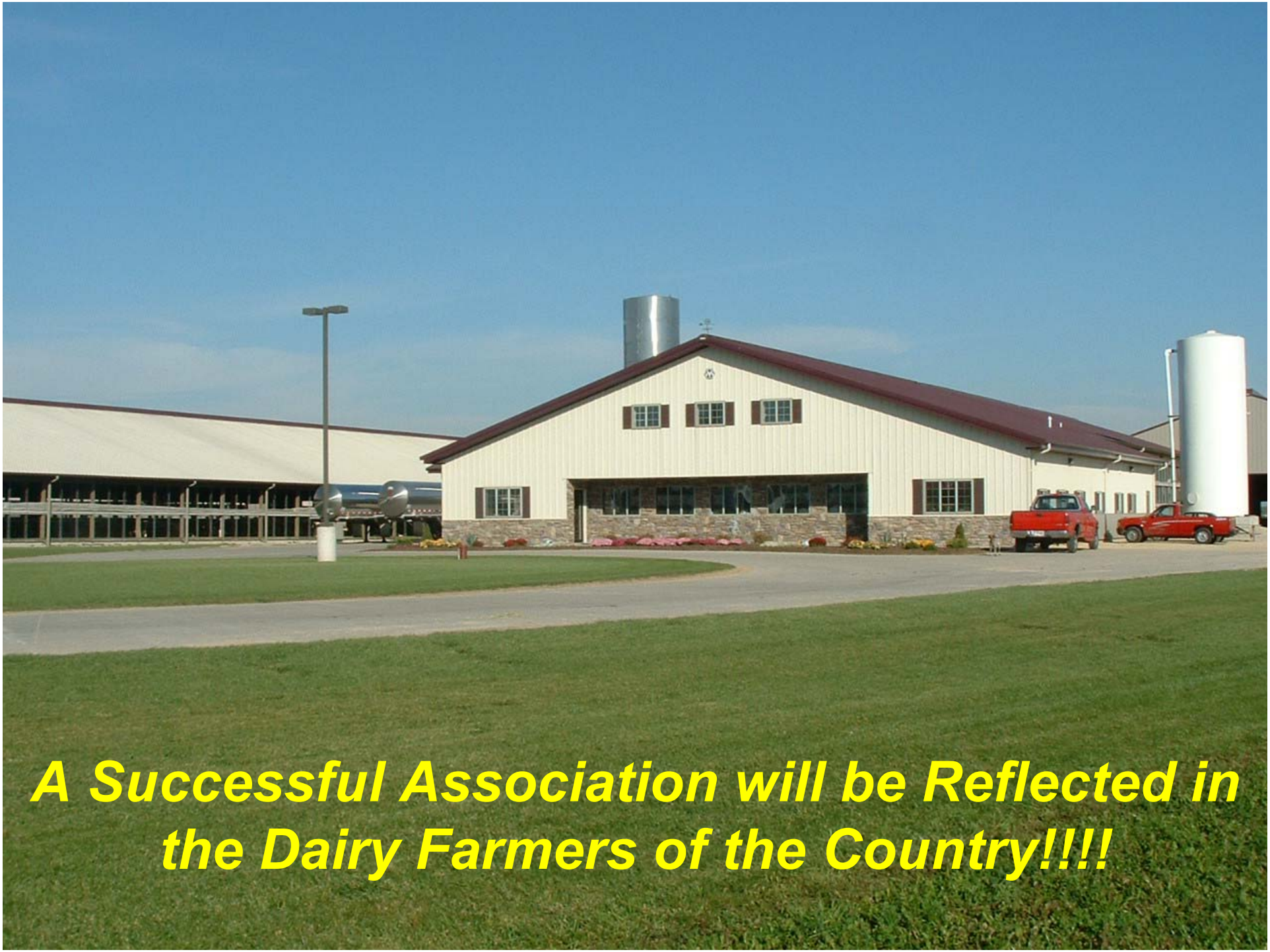
Field Days & Producer Training


Strategy 2: Develop Working Relationships with Governmental Agencies.
Policy Planning

Strategy 3:

Publicize activities of KAMP to both producers and consumers.

Strategy 4: Insure policies promote competitiveness of the Kosovo Dairy Industry.


A Successful Association will be Reflected in the Dairy Farmers of the Country!!!!


The
End