

(LP) Sheep

**THE SHEEP INDUSTRY IN MAINE:**

**A PLAN OF WORK**

**A REPORT OF THE SHEEP INDUSTRY TASK FORCE**

**OCTOBER 10, 1989**

## INTRODUCTION

The Maine sheep industry began a tradition of issuing periodic reports on the state of the industry and directions for growth in 1981. The most recent report, A Blueprint for Action, was released in 1985. In the four years since, progress has been made in meeting the objectives of that report. The industry needs an ongoing effort to continue progress and insure increasing profits for sheep producers.

In early 1989, a Sheep Industry Planning Committee (names listed in appendix) was formed to reevaluate the industry in Maine and issue an updated report on the current situation and recommendations for changes or additional work. The Committee first met on February 15, and identified topics of primary importance as:

- 1) improvement of marketing opportunities,
- 2) development of value added products,
- 3) improvement of sheep product production and profitability,
- 4) identification of areas requiring further research and development and
- 5) division of responsibilities for specific recommendations among groups within the industry.

These subtopics correspond to general issues that were also of concern in 1985. Subcommittees thoroughly investigated each area and provided the subcommittee reports that were the basis for this final document after review by the entire Task Force. This report outlines the state of affairs within each area, summarizes actions taken since the 1985 report, offers recommendations for actions, and assigns responsibilities for each action to specific groups within the industry.

The Committee has approached the task with the conviction that there is opportunity for growth in the Maine sheep industry. The objective of this Committee's effort is to outline a plan that will increase the commercial importance of sheep to the individual producer and the State. With the acceptance of this report by the Board of Directors of the Maine Sheep Breeders Association, the Board will take responsibility for the implementation of the plan.

The Committee especially thanks Kim Cassida, who is the author of most of the text of this report, and David Averill, who organized the Committee meetings, provided background information, and distributed draft material. Both Kim and David were employees of the Maine Department of Agriculture, Food, and Rural Resources while working on this project. The support of the Bureau of Production within that department was essential to the accomplishment of this plan, and the sheep producers of Maine very much appreciate their efforts.

For the Committee,  
Tom Settlemyre  
Chair, Maine Sheep Industry Planning Committee

## 1. INDUSTRY BACKGROUND AND UPDATE

The 1985 “Blue Book” report from the sheep industry Task Force has served as a valuable guide to bring together and focus the efforts of groups within the industry. Groups cooperating to meet the common goal of a viable commercial sheep industry in Maine include sheep producers, Maine Sheep Breeders Association (MSBA), Maine Department of Agriculture, Food, and Rural Resources (MDAFRR) production and marketing staff, University of Maine Cooperative Extension (UMCE) and Agricultural Experiment Station (UM AES), Soil Conservation Service (SCS) and Maine Agricultural Marketing Association (MAMA).

In the last four years, many people have worked hard to make reality of many of the Task Force’s 1985 recommendations. MSBA now publishes a bi-monthly newsletter, *The Producer*, to serve as a connecting link between industry groups, sheep producers, and regional producer subgroups. It continues to promote Maine lamb at fairs and other events. MSBA also has included graded wool in its yearly wool pool effort, giving producers of quality graded wool the marketing outlet they needed, and has attempted to organize a marketing pool for cull ewes. Cooperators from MDAFRR and UMCE have presented workshops and conferences on management and flock health topics, and SCS recently published several bulletins on use of Voisin rational grazing and forage brassicas. Research on forage management is ongoing and has been fairly well supported on the state and university level. Thanks to the efforts of producers and many people from MDAFRR, UMCE, and UM AES, the ram test and sale is now an established yearly event. The services of a federal carcass grader are available for grading lamb processed through USDA-inspected slaughter facilities. MAMA has provided an alternative for producers wishing to market lamb wholesale rather than through the freezer trade and is promoting Maine lamb to wholesale and retail buyers.

The picture is not all rosy, however. While the existing state department and university support of forage research, performance testing, cost analysis, and management training is appreciated, it is not yet substantial enough to meet producers’ needs. The establishment of a graded wool pool, cull pool, ram test, lamb marketing cooperative, and access to federal grading of lamb are all laudable accomplishments. However, they are not widely accepted or used within the industry, indicating insufficient acceptance by producers of the benefits of these programs. Rather than the increase in lamb slaughter facilities hoped for in the 1985 report, three more plants have closed, further limiting marketing options for producers.

Many of the recommendations offered in this report are similar to those made in 1985, a result due largely to the fact that action in most of the key areas must be ongoing if Maine is to develop a progressive sheep industry. In this context, this report will serve as a fine-tuning mechanism to keep concerns and recommendations current in a changing industry environment and to re-emphasize crucial areas.

Marketing remains one of those crucial areas. The burden of marketing continues to fall primarily on individual producers and is a serious limiting factor for growth. Most producers operate on very narrow margins and could benefit from access to better

markets. Marketing cooperatives and pools have not proved as successful as hoped for meat, wool or value added products.

Development of new value added meat, wool, pelt, or manure products and marketing opportunities that would increase the profitability of sheep production continues to lag behind need. The potential of wool production to provide income to producers in the state is especially under-realized. An aggressive plan is needed to help producers convince buyers and consumers of the value of products with the "Maine Produces" theme.

The problem of narrow margins also can be addressed from the angle of decreasing production costs and increasing productivity of inputs. Adequate recordkeeping on animal performance and finances are vital to this goal. Poor nutrition, preventative health care, and physical management are all prime contributors to the low lambing rates experienced on many farms.

Lastly, there is a need for ongoing research in many areas of sheep production. Existing techniques must be adjusted to fit Maine's unique environmental and financial situation. Maine has access to good forage and by-product feeds that could be used to support a thriving sheep industry, but the technical knowledge and facilities required are still lacking.

The Committee hopes the following recommendations will aid the Maine sheep industry in charting its direction in the next few years.

## 2. IMPROVING MARKETING OPPORTUNITIES

### **STRATEGY 1. Producers should work together through MSBA and MAMA to develop viable cooperative marketing structures for lamb and mutton.**

In 1985 the Task Force determined that most Maine lamb was sold directly to consumers for their freezers by the whole or half carcass. In 1989, convenience, a major buying factor for consumers in Maine and nationwide, has influenced demand away from large quantities of meat for the freezer. Now, small portions are preferred, and consumers are less likely to stockpile meat in the freezer. Thus the complexion of the freezer market has changed.

The small scale of most Maine sheep operations limits entry into the wholesale market for most producers. A few producers have business arrangements with local retail markets, but small operations cannot supply sufficient volume year-round to access wholesale meat distributors. The importance of maximizing cooperative marketing is underscored. MAMA was vested the authority and responsibility for lamb marketing by the MSBA Task Force in 1985. MSBA made this decision to emphasize the importance of pooling supply in order to expand into new markets through cooperative marketing.

MAMA is an arm of the Farm Bureau and represents the work of volunteer county-elected Farm Bureau members. MAMA has not been able to achieve the marketing goals established in 1985, in part because of low producer participation. MAMA's leaders decided to focus on marketing of quality finished lambs; feeder lambs, cull ewes, and hothouse lambs are not being coordinated by MAMA. The Task Force urges MAMA to coordinate all classes of live sheep and lambs.

#### **Recommendation 1. MAMA, working with MSBA, should take responsibility to create access to markets for finished Maine lamb.**

Initially, MAMA focused on marketing whole lambs in Maine. A later attempt to market carcass cuts directly to restaurants and institutions encountered difficulty in competing with large-scale food distributors, and MAMA has now returned to its original strategy. Currently, MAMA is marketing all the lambs it can get in Emergy and Sons slaughter facility in Newport for a good price, but it continues to have a supply problem. The value of the cooperative is lost if producers do not market enough animals through it to supply it with some economic bargaining power. Communication and cooperation between producers, MSBA, and MAMA will be essential to reach the goal of creating a ready market for finished Maine lamb. MSBA will form a liaison office or joint committee to oversee development of this program.

**Responsibility: MAMA, MSBA**

#### **Recommendation 2. Investigate potential of coordinating shipments of lightweight lamb out-of-state for holiday markets.**

At least three private entrepreneurs in Maine are successfully gathering loads of lamb for shipment to out-of-state Easter/holiday markets. The Committee recommends that MAMA and MSBA investigate the possibility of coordinating similar shipments to

determine whether this excellent marketing opportunity can become available to more producers.

**Responsibility: MAMA**

**Recommendation 3. Investigate potential feeder lamb markets.**

Many of Maine's small scale lamb producers are ideally set up to produce lambs for the feeder market instead of finished lambs. The advantage of this for small producers is that lambs can then be sold off pasture without additional purchased feed inputs for fattening. Feeder buyers then sort lambs by weight and frame size and finish them for market. A lesson we have learned from MAMA is that some producers move their lambs in the fall as pastures run out, but when the lambs are not properly finished. These lambs are rejected or grade less than USDA Choice at the slaughterhouse.

Selling feeder lambs to feedlots out-of-state will require coordinated loads for movement to a feeder buyer. An evaluation of interest in this market is needed.

Another consideration is having a feedlot in Maine rather than using out-of-state feedlots. With an in-state feedlot, Maine lamb could be made available for the Maine market year round, as the lambs would be finished and moved to slaughter on a consistent basis each week or month. Because the lambs would be finished consistently, the reputation that Maine lamb is a quality product would be enhanced. This single factor would substantially impact on demand.

Whether MAMA could develop a role in a Maine feedlot is another issue for consideration by MAMA's directors.

**Responsibility: MDAFRR Bureau of Marketing**

**Recommendation 4. Revive efforts to institute a cull pool.**

Several attempts by MSBA to organize a cull pool as was recommended in the 1985 report have been poorly received by producers. The Task Force believes this effort should continue. The primary reason for supporting the cull pool is to provide an easy marketing route for spent and non-productive animals and restrict their movement into different flocks as breeding stock. This is vital to improvement of the genetic base and should have the added benefit of providing extra profit to producers. This could occur because availability of a volume of culls will decrease shipping costs and encourage new local use of mutton in value-added products like sausage. Producers need to be better informed about these advantages and encouraged to cull animals through the pool.

**Responsibility: MSBA**

**4a. Encourage commercial use of consumer-acceptable mutton products.**

Mutton is very suitable for processing into variety meats like sausages and kielbasa which have consumer acceptance without the negative stigma of plain mutton. Recipes for tasty mutton variety meats have been developed by the American Sheep Industry, UM AES, and MAMA, but no products are being commercially produced. These recipes could be used to potential and result in an expanding market for cull ewes that currently

have little value. There is need to encourage commercial production of mutton variety meats, identify slaughterhouses and processors who will handle mutton, evaluate their pricing structures, and determine which facilities are USDA inspected.

**Responsibility: MSBA**

**4b. Identify markets for mutton products and keep producers informed about them via market reports.**

Markets for new mutton products need to be identified so production of a steady supply to meet demand will result. Regular market reports would help to keep producers informed about prices and opportunities and thus encourage supply to meet demand.

**Responsibility: MDAFRR Bureau of Marketing**

**Recommendation 5. Promote Maine lamb consumption.**

Lamb consumption in Maine is below the national average. This may be due to insufficient awareness of the taste, health aspects, nutritional value, cooking ease, and versatility of this meat. MSBA continues to promote lamb directly to the consumer by giving away free samples, recipes, and information on various products from its booth at fairs and agricultural events, and has generally found consumers to be pleasantly surprised at what is often their first encounter with lamb. Promotional efforts by MAMA are aimed more towards wholesale and retail buyers and have included development of the "Natural Maine Lamb" logo, distribution of promotional materials on various cuts of lamb, holding of chef and taste demonstrations, and development of sausage recipes that use the less desirable cuts of lamb. These promotional efforts should continue to emphasize Maine lamb's taste, simple recipes, and nutritional value. In addition, MSBA should support the American Sheep Industry in its investigation of the potential of a national lamb assessment (check-off) program to fund advertising and research.

**Responsibility: MSBA, MAMA**

**Recommendation 6. Investigate hiring of a full-time, salaried person with MDAFRR to coordinate all Maine meat sales and marketing.**

MSBA has been fortunate in having a fair number of committed members who are willing to put in many hours of work for the group. However, the burden of educating consumers and producers, organizing cooperative efforts, planning new efforts, monitoring product quality, identifying markets, and coordinating shipments is a severe drain on volunteer resources and a factor in the high turnover rate of volunteer members. Having a full-time salaried person to do this job would free MSBA members, as well as volunteers working hard within other meat commodity groups, to work in other needed areas. This staff person would serve as an industry advocate to promote consumption of all meats.

**Responsibility: MSBA**

## **STRATEGY 2. Increase the value of the Maine wool clip.**

Many Maine sheep producers have found markets for their lamb, yet realize only a small margin of profit. The profitability of sheep operations could be increased if more producers would increase efforts to market their second major product – wool. Despite the traditional importance of wool production to the sheep industry, many Maine producers do not treat wool as an opportunity for profit or realize that production of quality wool can make the difference between profit and loss for the entire sheep operation when margins are narrow. Wool income could be increased with few extra costs by more careful attention to production of clean high-quality wool that is properly sheared and stored. Further value could be added by conversion of raw wool into yarns or clothing with a much higher sale value.

### **Recommendation 7. Investigate marketing structures that provide the best price for wool.**

#### **7a. Reconsider structure of the Maine wool pool.**

MSBA holds a yearly wool pool that is now going into its forty-ninth year. In 1985, following the recommendation of the 1985 Task Force report, MSBA began including graded wool in the pool as an incentive for producers to market higher quality wool. However, conducting the graded pool does require extra work from MSBA volunteers, and there are indications it may not provide the best price to producers or be held at the best time of year. In 1989, MSBA estimated that only one-fourth of the wool produced in Maine was marketed through the wool pool. The Task Force recommends that MSBA supervise formation of a committee to investigate alternative wool marketing structures that may provide better prices and induce more producers to use the wool pool.

**Responsibility: MSBA**

#### **7b. Market Maine wool to regional woolen mills.**

Maine woolen mills process more imported than local wool, largely because most of them prefer to buy wool that is already graded and scoured rather than buying small lots of wool directly from producers. A few mills are the exception to this, and others should be encouraged to follow. Woolen mills in other Northeastern states or Canadian Maritime provinces also represent potential wool markets and need to be identified and approached. A listing of mills should be made available to producers and include mill requirements for lot size, grade, and scouring. The end objective of this recommendation is to increase the pounds of Maine wool used in regional mills.

**Responsibility: MDAFRR Bureau of Marketing**

### **Recommendation 8. Promote better care of wool during growth, shearing, and storage.**

Many producers could increase the value of their wool clip greatly simply by taking better care of it to insure receipt of the maximum price. Wool may be discounted at market for containing excessive dirt, black fibers, vegetable matter, binder twine, or non-scourable paint markers. Wool quality is decreased by improper nutrition of sheep during wool

growth, by making second cuts at shearing, and by bagging wet wool. Lastly, failure of producers to sort the different parts of the fleece may result in the entire fleece selling for minimum price. Education of producers on the proper way to produce and handle wool would increase the market price they receive, provide an incentive for using the graded wool pool because they could receive a premium price, and improve the overall quality image of Maine wool to buyers.

**Responsibility: UMCE**

**Recommendation 9. Educate producers about wool grades.**

The industry has worked hard to impress upon producers the benefits of improving the quality of lamb produced, with results, but little has been done to promote the economic value of producing high quality fleeces. Producers need more information about which breeds of sheep produce the finer grades of wool, how to balance wool traits and lamb production traits in their breeding stock, and how to grade wool.

**Responsibility: MSBA**

**Recommendation 10. Promote training and development of skilled shearers.**

A list of shearers is currently available through Maine-ly Agriculture. The list needs to be updated frequently, expanded to improve its accuracy, and then made available to all Maine sheep producers. Only experienced shearers should be approved for the list, and they must be screened for proper shearing techniques to optimize fleece quality. Shearing schools should be held to improve techniques for experienced shearers as well as beginners.

**Responsibility: MDAFRR Bureau of Production**

**STRATEGY 3. Develop markets for value-added products.**

Maine sheep producers have the opportunity to increase the profit margins of their businesses by improving market demand and prices received for value-added products. The value of sheep products like wool, pelts, mutton, and manure can be increased enormously by conversion into products more directly useful to the consumer, such as yarn, rugs, sausage, and fertilizer. Producers need to become better informed about how to produce these products, how to market them, and how to price them realistically. At the same time, advertising and promotion must be aimed at consumers to increase their awareness of value-added products and therefore the demand for those products.

**Recommendation 11. Adopt a logo for promotion of Maine sheep products.**

The use of logos often increases product recognition and consumer loyalty. As a result, a premium price can be asked and aggressive advertising campaigns can be implemented. The Committee recommends adoption of a logo for Maine sheep products to promote quality. Many Maine agricultural products use the "Maine Produces" logo. Another possible option is use of the "Maine Quality" logo. To do this, the Maine sheep industry would need to set standards for products to be labeled with the logo and then plan its advertising programs around logo use to educate the public about the industry and increase identification of its products. This could include articles with pictures in

newsletters such as “The Producer” and contact with the public at fairs and other public events.

**Responsibility: MSBA**

**Recommendation 12. Link Maine sheep producers with entrepreneurs selling sheep related value added products.**

Maine entrepreneurs market many value added sheep products, including fresh and frozen meat, sausage, ethnic meats, yarn, homespun wool, garments, sheepskins, tanned hides, and raw pelts. If these entrepreneurs could be persuaded to use more Maine lamb, wool, and pelts in their products, both sides could benefit. To this end, identification of existing entrepreneurs and their needs is required, as well as encouragement for sheep producers to supply the raw products needed by those entrepreneurs.

**Responsibility: MDAFRR Bureau of Marketing**

**Recommendation 13. Assess potential of the handspinner market for Maine wool.**

There are many handspinners in Maine and thus a potential market for high quality fleeces from producers who shear both small and large numbers of sheep. Handspinners will often pay a premium for colored fleeces that are discounted when sold through ordinary means. Most producers probably market their wool to handspinners either individually or through coordinated sales at fairs or other sheep related events, but there has been no quantification of these sales, nor have enough producers known about them. Sales at public events might be promoted by attaching the adopted quality logo to deserving fleeces as discussed in recommendation 11.

**Responsibility: MDAFRR Bureau of Marketing**

**Recommendation 14. Improve pelt value through proper handling.**

The 1985 report cited a pelt education program as a low priority item. In the interim, no progress has been made in this area. Most producers continue to receive little or nothing for pelts because they cannot supply large volumes of pelts, and because slaughterhouses continue to lack knowledge or motivation to properly skin, cure, and store pelts for maximum value. Producers and processors need a better understanding of pelt value and proper handling techniques so that they can exert more leverage on slaughterhouses to handle pelts properly. On the producer side, a greater understanding of the importance of external parasite control to pelt quality is needed.

**Responsibility: UMCE**

**Recommendation 15. Assess pelt markets in Maine.**

There is currently no listing of Maine pelt buyers. Sheep producers should be surveyed to help identify existing buyers and their requirements to make pelt markets accessible to more producers. In particular, identification of buyers who will accept small lots is needed. As the pelt supply grows, the possibility of a cooperative shipment of pelts should be investigated-this would provide the volume needed to market pelts to larger

tanneries and also provide leverage to help insure against excessive trimming, switching of pelts, and other quality issues in the tannery. The Maine sheep industry quality logo (recommendation 11) might be used to increase markets for direct sale or further processing of pelts into chair covers, garments, etc.

**Responsibility: MDAFRR Bureau of Marketing**

**Recommendation 16. Determine methods to increase the value of manure.**

The production of sheep manure is rarely treated as an income-generating venture. However, it does represent a valuable resource, whether as a substitute for purchased fertilizer on fields, pastures, and croplands, or through sale to consumers as home garden fertilizer. At present, there is little information available on economical methods of collecting, storing, handling, or distributing sheep manure, nor is there adequate information on its value as fertilizer. A fact sheet is needed to address this issue.

**Responsibility: SCS**

### **Other Considerations**

**Recommendation 17. Design a publicity campaign to increase support of the MSBA Ram Test and Sale.**

Development of the ram test and sale was recommended in the 1985 report and is now going into its fifth year. Although this was done and while the test is an accomplishment to be proud of, low appreciation of it within the industry is reflected by low numbers of rams entered, poor buyer turnout, and low sale prices. A wider publicity campaign to increase awareness of the history and importance of the test should improve participation.

**Responsibility: MSBA**

**Recommendation 18. Revitalize MSBA by encouraging formation of regional subgroups.**

A very important aspect of MSBA's function is to represent sheep producers around the state, but Maine's size and diversity of farming operations make it difficult for one central organization to keep everyone involved. MSBA supports the activities of regional sheep producer groups that now exist, and encourages the formation of new ones in areas not currently served. It is these regional groups that most directly allow participation in activities by all sheep producers and permit focusing on activities of most interest to that area or group of people. Regional groups have input into central MSBA matters by election of directors to serve on the MSBA Board. Revitalization of interest on the regional level should therefore feed back to produce a stronger MSBA.

**Responsibility: MSBA**

**Recommendation 19. Cooperate with other animal industries to inform the public about the importance of animal agriculture.**

Animal rights activists have not yet made a serious move into Maine, but are putting significant pressure on animal industries in some other states. Animal activists groups are numerous, organized, and well funded; the sheep industry alone cannot compete with them. All animal industries in Maine need to work together to make sure that their side of the story is told and that the public fully realizes the scope of its dependence on animal products. It is also important that the public become better informed about the reasons for and importance of controversial husbandry practices. The best way to accomplish these goals may be to work harder to educate grade school children about agriculture through expansion of the "Ag in the Classroom" project or by arranging farm tours. To reach the adult population, the use of agriculture programs at civic organization meetings should be encouraged.

**Responsibility: MSBA**

**Recommendation 20. Work for favorable legislation in cooperation with similar commodity groups.**

The effectiveness of working towards favorable state legislation will be improved if the Maine sheep industry works together with the other red meat commodity groups. Pooling of efforts and resources should result in improved legislation that supports all groups. One of the most serious issues facing the Maine sheep industry is that of predation, which has caused some sheep producers to leave the business and causes serious losses for others. It has proved difficult to obtain legislation providing for control of coyote and bear populations, damage relief payments for producers, or financial assistance in purchasing preventative measures such as predator-proof electric fences, guard dogs, or toxic collars.

**Responsibility: MSBA**

### **3. INCREASING PRODUCTIVITY AND PROFITABILITY**

#### **STRATEGY 4. Increase productivity and decrease costs of sheep production.**

The Committee recognizes that efforts to improve productivity and profitability should be ongoing efforts in the sheep industry. Some progress has been made since the 1985 recommendations, most notably the establishment of the ram test and sale that allows a more objective selection of rams for growth traits that will improve flock genetics. However, in most areas there remains much work to be done. Inadequate recordkeeping prevents effective cost management and continues to be a problem in all aspects of the industry. Lambing rate has not reached the goal of 200% per year, and preventable health problems still cause losses. Improper nutrition is the biggest single limitation to producer profits. While research on forage production continues to be conducted, there are many questions still to be answered, and most information now available has not yet reached the producers. Many producers continue to have handling facilities that are inadequate to carry out recommended production techniques.

#### **Recommendation 21. Standardize sheep production records.**

Little has been accomplished in this area since the last report. Several years ago MSBA printed up some barn sheets, but use of these has not been widely encouraged. In order for producers to identify their costs of production and eliminate poorly performing animals and procedures, it is vital that some form of production records be kept. It is preferable that most producers use the same recordkeeping system in order to be able to make inter-flock comparisons, and to help ease Extension's job of helping producers use the system effectively. Records should be kept on individual animal lifetime production and health information as well as flock production and health. The Committee recommends adoption of the National Sheep Improvement Program guidelines for sheep performance testing records. Workshops on recordkeeping are needed to reinforce the importance of them with producers.

**Responsibility: MDAFRR Bureau of Production**

#### **Recommendation 22. Encourage use of financial records.**

The keeping of good financial records is the key that must link together all recordkeeping systems, since the bottom line behind use of records is to identify sources of profit or loss. Few Maine producers know their actual cost of production or the optimum level of production they need to make money under the management system they are using. An added plus would be adoption of a farm recordkeeping system that is compatible with IRS forms. Unfortunately, such a complete financial record system remains to be identified and promoted to producers, although the Task Force listed this same recommendation in 1985.

**Responsibility: UMCE**

#### **Recommendation 23. Increase lambing rates to 200%.**

Lambing rate is defined as the number of lambs produced divided by the number of ewes exposed to the ram, and should ideally approach 200% per year. Currently,

Maine's lambing rate is approximately 140%. In general, the genetic potential for a high lambing rate probably already exists in Maine flocks. Improper management practices are the major cause of the low current percentage and affect profitability not only through lambing percentage, but also through percentage of lambs born (dead or alive), percentage of lambs weaned, percentage kept as replacements, and percentage marketed. The biggest contributor to these losses is inadequate nutrition, including prebreeding nutrition of rams and ewes, nutrition of ewes during gestation and lactation, and nutrition of lambs from birth to market or breeding. Physical management of animals can also have a large effect on lambing rate and lamb survival. Lastly, health problems (disease and parasites) during gestation or growth are a big contributor to losses. There is already a considerable amount of information available on management to increase lambing rate, but it has not reached all the producers who need it.

**Responsibility: UMCE**

**Recommendation 24. Update producers on revised nutritional requirements for sheep.**

Nutrition has the largest effect on bottom line profit in sheep production of any management factor. Producers must be kept up-to-date on revisions in sheep nutritional requirements and recommended feeding practices. This should be accomplished via fact sheets or local workshops. The Committee also recommends organization of a symposium on feeding sheep for maximum dollar return per dollar input.

**Responsibility: UMCE**

**Recommendation 25. Inform producers about facility design and handling techniques.**

Expensive, over-designed facilities can increase production costs unnecessarily, but most Maine sheep producers do require better facilities and handling techniques than they currently have to be able to improve their management skills. These producers need information on minimal, least-cost handling facilities including shelters, lambing pens and creeps, holding pens, chutes, scales, and working dogs. Fencing is a major cost for producers using pasture systems, especially conventional woven wire that is expensive and has a high maintenance cost. Producers need more information on how to set up lower cost electric fences. The selection of facilities and techniques that can reduce predator losses is not to be overlooked, and can include some types of electric fence or the use of guard dogs. Information on most of these facilities and techniques is available, and there is a distinct need for factsheets, workshops, and demonstrations to bring the information directly to producers.

**Responsibility: UMCE**

**Recommendation 26. Improve flock health management practices.**

Internal parasites have a serious effect on sheep health and productivity. Producers need to know about the life cycles of parasites, the signs of infestation, and methods of eradication. Infectious diseases like foot rot and respiratory complex also cause losses in Maine despite available knowledge of prevention or vaccines. Sheep producers may

easily avoid losses from nutritional diseases such as pregnancy toxemia, white muscle disease, enterotoxemia, and copper toxicity with use of proper ration balancing techniques. Continuing education of Maine veterinarians on sheep health topics is needed. Implementation of proper building ventilation systems will also decrease health problems. Producers and veterinarians must be encouraged to work together to hold health losses to less than 10% per year, and should continue to be provided with factsheets and workshops on current advances in health care.

**Responsibility: MDAFRR Veterinary Services**

**Recommendation 27. Improve forage management on the farm.**

Forage production represents a major opportunity for sheep producers to influence their costs of production and animal health. It needs to be treated as the important facet of management it is. Support for forage research at the university level has been good and needs to continue, with results brought to producers in factsheets, workshops, and demonstration plots on different types and varieties of forage plants. The feeding value of different forages should be made known, and research on the effects of harvesting technique and method of storage on nutritive quality for sheep needs to be translated into practical terms for producers. At the same time producers must be impressed with the importance of keeping accurate records of forage production inputs, such as fertilizers, planting dates, and forage crop yields, so that they may determine which practices really are profitable in their operation. Producers must be convinced of the necessity of being forage farmers first and sheep farmers second.

**Responsibility: UMCE**

**Recommendation 28. Identify sheep production systems most suitable to supplying a consistent year-round lamb supply in Maine.**

The needs for producing more lambs per year and a consistent year-round lamb supply are major concerns for the sheep industry today. Lack of sufficient volume of lamb on a regular schedule makes it difficult to market Maine lamb to large-scale buyers. Identification of accelerated lambing systems that will work in Maine is essential if this problem is to be overcome. Several accelerated lambing systems are available, including STAR lambing, three lamb crops in two years, out-of-season breeding, and breeding ewes at six months of age. Producers need information about the requirements of these systems, which breeds work best in them, cost effectiveness, and how to meet increased nutritional needs of the animals.

**Responsibility: UMCE**

#### **4. DIRECTION FOR RESEARCH AND DEVELOPMENT EFFORTS**

##### **STRATEGY 5. Encourage research to meet the most important needs of the Maine sheep industry**

Most existing information on sheep production systems is geared toward the large-scale Western operations that comprise the bulk of the U.S. sheep industry and set national wholesale lamb prices. Maine is not suited geographically or climatically to adopt these systems, yet existing small-scale sheep production systems have not been sufficiently refined to meet unique Maine requirements and provide adequate profit for producers. It is vital that research into ways to decrease production costs for Maine sheep producers continue.

##### **Recommendation 29. Increase use of forages in sheep production.**

##### **29A. Develop methods to decrease the cost of forage production by improving grazing management.**

Feed is the single largest cost involved in sheep production, and proper nutrition is the most limiting factor to increased flock productivity. Therefore, decreasing the cost and increasing the nutritional quality of forages will have a twofold effect on profitability. The most cost effective way to feed sheep is to allow them to harvest forages themselves on improved, intensively managed pastures. Maine's growing season is too short and traditional non-intensively managed pasture yields are too low to allow pasture-raising of lambs. However, there are management methods for extending the grazing season and improving pasture yields. It is theoretically possible to improve pasture yield and quality while extending the grazing season 2-4 months by starting animals on small grain pastures in spring, followed by Voisin rationally managed grass/legume pastures, and finishing on Brassica pastures well into the fall. However, these management options have not yet been fully investigated or defined under Maine conditions.

**Responsibility: UM AES**

##### **29b. Identify most economical methods of preserving forages for winter use.**

Feeding of preserved feed for at least part of winter is an inevitable fact of the Maine sheep industry. The key to profitable winter feeding lies in identification of methods to produce high quality preserved forage at the least cost. Silage production for sheep is an area requiring particular work to develop methods of silage preservation, such as round bale silage, that are adaptable to the small size of most Maine sheep operations.

**Responsibility: UM AES**

##### **Recommendation 30. Decrease grain costs.**

The high cost of imported grain is a major drain on profitability of lamb production, particularly in production of lambs for the Easter market when pasture is not available. Transportation costs of imported grain might be decreased if lamb growers arrange milling agreements with existing local feed companies, contract with small grain growers in Maine or corn growers in the Central states, or enter cooperative agreements to pool

grain purchases. Encouragement of quality testing for grains would eliminate guesswork in formulating rations and prevent costly over or underfeeding of vital nutrients. The importance of least cost ration formulation programs cannot be overemphasized.

**Responsibility: UMCE**

**Recommendation 31. Increase use of alternative and by-product feeds.**

Maine produces a wide variety of non-traditional feedstuffs as by-products of other agricultural industries. Potential feeds include: cull potatoes, peas, and beans; wastes from fish, potato, pea, bean, broccoli, and apple processing; and potato rotation crops such as clover, small grains, and lupines. However, research feeding trials and economic analyses to determine how these feeds may be safely and profitably included in sheep rations is needed. Also, sheep producers need a list of by-product feed sources within the state.

**Responsibility: UM AES**

**Recommendation 32. Decrease costs of forage production by increasing use of alternative fertilizers.**

Fertilizer costs limit the profitable productivity of much forage land. These costs could be minimized by increased use of wood ash, sewage sludge, fish processing wastes, and kiln dust as low cost soil amendments. There is also a need for education on efficient use of manure as fertilizer, including nutrient analysis and spreader calibration. Another issue is identification of legume crops that are most efficient at fixing soil nitrogen under Maine conditions.

**Responsibility: SCS**

**Recommendation 33. Encourage the development of a feedlot industry.**

Certain areas of Maine raise abundant supplies of grain and produce large quantities of by-products which can be value-added if used as livestock feed. These feed resources, if used as the basis for a feedlot industry, would allow producers who wish to produce feeder lambs only to optimize their use of forage resources without the added expense of grain finishing. A feedlot industry also holds a marketing advantage in that a large number of finished lambs are available at one location. Therefore, the feasibility of a lamb feedlot industry needs to be explored.

**Responsibility: UMCE**

**Recommendation 34. Develop least cost ration computer programs for sheep.**

Since feed costs are the largest single component of sheep production costs, any savings here will have a large effect on profit. Maine needs to identify some good least cost ration programs for sheep raised under both high forage and high concentrate feeding systems. These programs should allow for inclusion of alternative Maine produced byproduct feeds. Producers need help in learning to use these properly, whether by county Cooperative Extension educators teaching one on one or by using a "master sheep farmer" core group.

**Responsibility: UMCE**

**Recommendation 35. Develop recommendations identifying optimum sustainable production systems for Maine.**

There are three basic sheep production systems used in Maine. A grassland system involves spring lambing with use of intensive grazing and hay supplementation when needed. Winter lambing involves feeding flocks a concentrate diet to support lamb production in time to meet the Christmas or Easter markets. Lambs bring high prices, but grain must be purchased, and labor and capital costs are high. Accelerated lambing (more than one lamb crop per year) also requires use of purchased grain and high investment costs, but results in more cash flow. An analysis must be performed to identify the various economic advantages and disadvantages of these and other production systems that may be used by Maine sheep producers. This information is necessary for producers to be able to make sound long term management decisions.

**Responsibility: UM AES**

## 5. ASSIGNMENT OF RESPONSIBILITIES

Assignments for each group are listed in priority order, beginning with the most important task.

### **Maine Sheep Breeders Association**

Promote Maine lamb consumption (joint with MAMA). Recommendation #5  
Revitalize MSBA by encouraging formation of regional subgroups. #18  
Design a publicity campaign to increase support of the MSBA Ram Test and Sale. #17  
Reconsider structure of the Maine wool pool. #7a  
Investigate hiring of a full-time, salaried person with MDAFRR to coordinate all Maine meat sales and marketing. #6  
Cooperate with other animal industries to inform the public about the importance of animal agriculture. #19  
Work for favorable legislation in cooperation with similar commodity groups. #20  
Encourage commercial use of consumer-acceptable mutton products. #4a  
Revive efforts to institute a cull pool. #4  
Educate producers about wool grades. #9  
Adopt a logo for promotion of Maine sheep products. #11

### **Maine Agricultural Marketing Association**

MAMA, working with MSBA, should take responsibility to create access to markets for finished Maine lamb. #1  
Promote Maine lamb consumption (joint with MSBA). #5  
Investigate potential of coordinating shipments of lightweight lamb out-of-state for holiday markets. #2

### **University of Maine Cooperative Extension**

Update producers on revised nutritional requirements for sheep. #24  
Improve forage management on the farm. #27  
Identify sheep production systems most suitable to supplying a consistent year-round lamb supply in Maine. #28  
Develop least cost ration computer programs for sheep. #34  
Encourage use of financial records. #22  
Inform producers about facility design and handling techniques. #25  
Decrease grain costs. #30  
Encourage development of a feedlot industry. #33  
Increase lambing rates to 200%. #23  
Promote better care of wool during growth, shearing, and storage. #8  
Improve pelt value through proper handling. #14

### **Maine Department of Agriculture, Food, and Rural Resources: Bureau of Marketing**

Investigate potential feeder lamb markets. #3  
Link Maine sheep producers with entrepreneurs selling sheep-related value-added products. #12

Identify markets for mutton products and keep producers informed about them via market reports. #4b

Market Maine wool to regional woolen mills. #7b

Assess potential of the handspinner market for Maine wool. #13

Assess pelt markets in Maine. #15

### **Maine Department of Agriculture, Food, and Rural Resources: Bureau of Production**

Standardize sheep production records. #21

Promote training and development of skilled shearers. #10

### **University of Maine Agricultural Experiment Station**

Increase use of forages in sheep production. #29

Develop methods to decrease the cost of forage production by improving grazing management. #29a

Identify most economical methods of preserving forages for winter use. #29b

Increase use of alternative and by-product feeds. #31

Develop recommendations identifying optimum sustainable production systems for Maine. #35

### **Soil Conservation Service**

Decrease costs of forage production by increasing use of alternative fertilizers. #32

Determine methods to increase the value of manure. #16

### **Maine Department of Agriculture, Food, and Rural Resources: Veterinary Services**

Improve flock health management practices. #26

## **APPENDIX. LIST OF TASK FORCE MEMBERS**

Bill Atherholt, Atherholt Farm, RR4, Box 9024, Pittston 04345 (582-3119)

David Averill, Agricultural Development Agent, State House Station 28, Augusta 04333, (289-7618)

Dick Brzozowski, Cooperative Extension Educator, 96 Falmouth Street, Portland 04103 (780-4205)

Dick Ferrin, The Sheepskin Shop, RR 1, Box 420, Thomaston 04861 (273-3061)

Anne Gass, Moose Crossing Farm, RFD 1, Box 370, South Paris 04281 (743-7656)

George Gould, Ration Maker Premixes, RFD 1, Box 479, Augusta 04330, (622-2793)

Peter Hagerty, RFD 1, Kezar Falls 04047 (625-4906)

Dean Hayward, Sr., 50 North Rd., No. Yarmouth, Cumberland Center 04021 (829-4609)

Dr. Robert L. Hough, Livestock Extension Specialist, 332 Hitchner Hall, Orono 04469, (581-2789)

Henry Jackson, RFD 1, Box 2048, South Paris 04281, (289-3221)

Chris Jones, Conservation Agronomist, USDA-Soil Conservation Service, USDA Bldg., University of Maine, Orono 04469, (581-3438)

Vicki MacDonald, Moosehead Farms, PO Box 1187, Greenville 04441 (695-2639)

Joe Miller, Deer Meadow Farm, HCR 68, Box 199M, Cushing 04563, (354-2246)

Fred Moylen, Camelot Farm, RFD 3, Box 932, Belfast 04915 (338-2895)

Jon Olson, PO Box 430, Farm Bureau, Augusta 04333 (622-4111)

Judith Powell, Marketing Specialist, State House Station 28, Augusta 04333, (289-3491)

Tom Settle mire, Settle mire Farm, Box 1572 River Road, Brunswick 04011, (729-9748)

Diane Trussel, Country Crossing Farm, RFD 1, Box 3370, Solon 04979 (643-2540)

Ken Yost, Valley View Farm, PO Box 45, Bristol 04539 (529-5233)

Mary Young, Bald Mountain Farm, RFD 2, Box 82, East Holden 04429 (843-7249)