SHEEP SHEET

Sustainable Sheep Production: Part I

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Sustainable Sheep Production
Utilizing livestock in agriculture often improves the sustainability of the system from an environmental, economic, and social viewpoint. Livestock production counteracts two major environmental effects of agriculture: decreasing soil fertility and soil erosion.

The advantages of livestock production occur primarily through the application of animal manures to cropland and the subsequent nutrient cycling, increased organic matter, and maintenance of soil tilth. Livestock production often encourages a diversity of crops that favor rotation. A stable ecosystem involves cycling carbon, nitrogen, and minerals via soil, plant, and animals.

Economically, livestock production is a very important value-added U.S. industry. At the farm and ranch level, grain and forage are converted to high-value animal products. Livestock production is economically sustainable because it:

- Cushions trade, market, and feed supply disruptions;
- Diversifies farms, controls risk, and enhances farm viability;
- Increases farm labor efficiency and more fully utilize farm labor; and
- Increases the economic activity of rural communities.

Sustainable Production Defined:
Sustainable sheep production is a combination of production techniques that enhance profit and improve environmental and socio-economic conditions. To achieve this enhancement, sheep productions must be synergistically integrated into the crop and human systems.

Several opportunities to enhance the sustainability of sheep production include:

- Feeding ewes with increased use of low quality roughages.
- Nutrient cycling through improved handling of manure.
- Low-capital, moderate management semi-extensive systems that offer a better environment for the manager and reduced financial risk.
- Management systems suited to the sheep's behavior; and
- Preventative approaches to sheep health and a broader sheep genetic base.

Over the long term, a sustainable sheep production system should maintain or enhance the environment and the resource base (land, water, air, human): the quality of life for producers, lamb and wool consumers and society as a whole; the profit level of producers; and the quality of lamb (leanness, flavor, and wholesomeness) and wool (fiber diameter, staple length, clean yield) produced.

A Sustainable Model:
A model of a sustainable sheep production system for the United States would include several characteristics. While an ideal system is perhaps unattainable, it is valuable to outline the desired structures and outcomes.

Structure:
A sustainable sheep production system in the United States would have a major portion of the lambs produced with regional uniqueness. The Midwest, Eastern Atlantic and Pacific states would be under modest sized farm flock units, whereas, the Rocky Mountain, Great Basin, and Southwest would be dominated by extensive native range grazing systems. It would be critical to the successes of each of these sheep production geo-regions to consist of independent, family owned operations. The operations would be large enough to allow at least for the producer family to specialize in either one or a multitude of the sheep commodity production emphasis.

The operations would be managed by owner-operators or long-term tenants who are good

stewards of the land, air, water, soil, sheep, family, and community. The farms or ranches would be linked by networks, alliances, cooperatives to facilitate sheep production, coordination, technology transfer and adoption, value-added opportunities, and system communication.

Sheep production would be moderately management intensive and fully integrated into the crop, human, and other animal systems on the farms and ranches. The natural environment or ecosystem of soil, water, air, topography, and native plant and animal life would be carefully considered in designing, siting, and sizing the farm's sheep production.

Access and Entrance:
Sheep information, technology, markets, and genetics would be accessible to all producers. The concept of a "level playing field" would allow all sheep producers to compete based on their inherent abilities in sheep production. Young and beginning producers would be viewed as a critical resource, necessary to sustain the system. Special development programs would provide educational, experiential, environmental, managerial, and leadership training for young beginning producers. Social and recreational activities for young producers would also be a part of the programming.

Diversity:
Innovative alternative forms of sheep production that emphasize sustainable concepts would be encouraged and communicated throughout the networks. Research and demonstration priorities would be developed with producer input and sustainable objectives.

Manure:
Sheep manure would be handled as an important nutrient resource and be used for fertilizer, or methane generation depending on individual farm plans and needs. Dead ewes and lambs would be handled as a nutrient resource. Prompt rendering services or some other efficient form of recycling, e.g., composting, would be utilized.

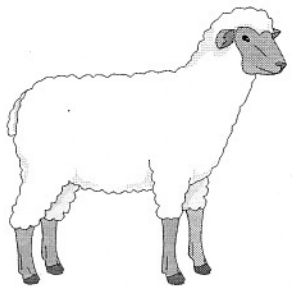
Lamb Quality:
Lean quality lamb would be a key outcome of the system. To assist in quality control, the system, the system could trace lamb to individual producer. Quality assurance programs at the farm/ranch level would be widespread and expanded. Animal care, feeding, handling, and breeding would be designed to optimize lamb quality and leanness. Communication and coordination from consumer to producer would be a clear interchange. Lean, high quality lamb would be the standard and deficiencies would be penalized.

Wool Quality:
Uniform, high yielding, staple length wool would also be an important support commodity from the sheep production system. Fiber diameter although variable, especially between breeds should be uniform for that breed. Obviously, the fine wool producers, should focus on 62's and finer wools and strict selection for minimal variation between the shoulder, side and britch of all ewes, but especially on sires selected. The medium and coarser wool breeds should also strive for fleece uniformity. All producers should utilized state of the art electric shearing, with post-harvest handling of fleeces employing either a floor skirt or a table skirt. Continued importance of reduced tolerance for fleece contaminants must be stressed and rewarded. Such contaminants as polypropylene twine, dirt, branding paint, vegetable matter etc. must be discounted.

Implications:
For long-term success, the social economic, and environmental dimensions of the U.S. sheep production need to be carefully considered at the farm/ranch, rural community, consumer, and ecosystem levels. The current rapid, and somewhat negative changes in the U.S. sheep industry structure are impacting all of these levels in fundamental ways.

Young beginning producers are vital to the future of sheep and wool production and must have access to technology, genetics, markets, and information. Integrated and interdisciplinary systems of production must be implemented to insure environmental safety and sustainability, whether on the land is owned privately or publicly. Quality lamb and wool to meet consumer demands will help insure a vibrant industry.

New sustainable alternatives are needed that select the appropriate technologies and combine them into practical integrated whole-farm or holistic systems. Virtually every issue involving sustainable sheep production provides opportunities for research, education, dialogue, and change. The implications of sustainable sheep production are a wholesome balanced environment; healthy rural families and communities; profitable, family based sheep production units that produce high quality lamb and wool.



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