

Grazing Systems Contribute to Atmospheric Quality

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Significant progress has been made by a variety of U.S. industries to reduce or compensate for effluent carbon dioxide, CO₂, degeneration of the local atmosphere.

Among these beneficial efforts is the practice of contracting with and financially reimbursing local farmers who grow appropriate forage crops, such as legumes and grasses, which will respond to various practices that prolong the green-forage growing period.

The principle involved in this arrangement is to increase and prolong the local production of atmospheric oxygen through the process of photosynthesis of green, growing plants. The object is to help compensate for carbon dioxide emitted from the local industry.

For decades, professionals in range and pasture management have promoted livestock grazing systems designed to enhance and maintain the ecological status, forage quality and production of rangeland and pasture forage crops.

Irrigated pastures and subirrigated native meadows are commonly maintained in high productivity by rotating the grazing herd among several pastures during the green-forage season. This practice promotes green-forage production and helps maximize the process of photosynthesis, which in turn, utilizes carbon dioxide, CO₂, from the atmosphere, storing the carbon in the plant and releasing the oxygen into the atmosphere. This is an extremely significant contribution to atmosphere quality.

In response to rangelands and grazed forests, regionally adapted grazing systems have effectively improved ecological status of the plant communities: (1) (2). This, in turn, benefited the stability and hydrologic quality of the watershed, forage quality and quantity for livestock, habitat for wild animals and birds, and aesthetic values for recreationists.

The ecological, biological and economic benefits of conservative utilization and rotational grazing systems are well documented. The contribution this kind of resource management makes to atmospheric

quality through increased amount and prolongation of green-herbage photosynthesis is not well known or if known, has not been publicized.

Obviously, quantification is impossible and actually not needed. However, the magnitude and significance of conservation resource management, in terms of its contribution to atmospheric quality, needs to be widely publicized.

It is quite likely that research data is available that cites the amount of oxygen and carbon produced during photosynthesis of a variety of agronomic crops currently used by industries which contract with local farmers for this purpose. It seems reasonable that such data could also be made available for native meadow vegetation and each of the various rangeland types – i.e., shortgrass prairie, bunchgrass prairie, desert shrub, - to form a basis for generalizing the contribution to atmospheric quality being made by ranchers and farmers who manage their grazing animals so as to maximize and prolong green growth on their grazing lands.

The general public, especially in urban areas, need to be informed of this huge contribution to what is commonly known as conservation grazing management.

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References

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