

Forages: They're Good For Life

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Forages play a vital role in the lives of everyone. Forages are leafy plants that can be divided into sub-classes of grasses and legumes. These plants are primarily used as food for grazing animals, but also contribute significantly to the lives of urban populations. Grasses comprise the largest class of forages. Legumes play an important role because of nitrogen fixation capability. Below are some of the critical roles that forage plants play in our everyday lives.



1) Forages reduce atmospheric CO₂. There is some scientific evidence that global warming may be occurring. Forages play a vital role in reducing CO₂ levels, a *greenhouse gas* thought to be responsible for increasing the earth's temperature under a global warming scenario. Forages use CO₂ and produce oxygen during photosynthesis as they produce their own energy sources. Forages, therefore, help sustain our environment.



2) Forages improve air quality. Wind blowing across bare landscapes picks up soil particles contributing to erosion and air pollution. Permanent cover provided by forage plants substantially reduces wind erosion and helps improve the quality of the air we breathe.

3) Forages provide areas of recreation. Recreational areas in which forage plants are used include sports turf, golf, hiking, hunting, bird watching, and camping. In fact, many professional sport organizations are shifting from Astroturf back to grass to reduce injury and enhance aesthetics. Water development, such as lakes and ponds, creates thousands of small wetland environments providing habitat for many game and non-game species. These environments also offer recreation in the form of fishing, boating, etc.

4) Forages provide cleaner water. Bare landscapes are also subject to erosion by water. Forages reduce raindrop impact on soils, slow overland movement of water, and allow rainfall to move *into* the soil, instead of *across* the soil, where precious topsoil is removed. Without forage plants, soil particles are transported by water out of fields and re-deposited in lakes and streams. These soil particles, or sediment, reduce the quality of water for drinking, recreational activities, and for sustainable fish

and wildlife. The quantity and dependability of our total water supply can be adversely affected by areas not covered by forage plants.

Finally, another positive aspect of having forage plants on the landscape is a decreased incidence of flooding.

5) Forages provide alternatives to coal, oil, and gas for energy production. Coal, oil, and gas (fossil fuels) are used to generate energy around the world. These non-renewable fuels are in limited supply and alternative sources of energy are needed to provide electricity for lights, heating, cooling, etc. Research indicates the use of forage plants for energy generation results in less air pollutants compared with using fossil fuels. These biofuels could provide an endless supply of energy into the foreseeable future and beyond.



6) Forages provide habitat for wildlife species. Forages provide habitat for two-thirds of our game, non-game and endangered wildlife species in the US. From the thatch layer in the lawn providing homes for insects, to bunchgrasses serving as nesting habitat for birds, to grasses and legumes furnishing

food for animals such as deer or elk, forages provide primary habitats for multitudes of wildlife species on this planet.



7) Forages improve the quality of life and provide jobs for rural Americans.

Properly managed grazing lands improve the quality of life for rural Americans. Products derived from forage-dominated landscapes are sold around the world and contribute \$250 billion to rural economies and \$4.3 billion in taxes each year. Jobs provided by forages are well distributed among young and old, men and women, and represent all racial, social, and ethnic groups. Employment opportunities include a) the boy who mows your lawn; b) the university faculty member who teaches in the classroom, does research, or educates producers in the field; c) the local farm implement dealer who sells and services equipment; d) livestock producers; e) dairy farmers; f) personnel working in the seed industry; g) individuals employed by the fertilizer industry, and countless others. Forages provide millions of jobs for Americans and others around the world. The impact on the world economy is tremendous and these jobs help to improve the quality of life for everyone involved.

8) Forages maintain and/or improve site productivity.

Topsoil is the thin layer of soil on the earth's surface produced over thousands of years. Soil forming factors including a) parent material, b) microorganisms, c) climate, d) topography, and e) time produce this topsoil layer critical for plants. Forages protect our vital topsoil resources from loss due to erosion and maintain our ability to produce food products for human consumption. Forages also improve soil productivity by increasing the level of organic matter. They also penetrate hardpans or can leave root channels beneficial to crops that follow them in a rotation.

9) Forages moderate temperatures in urban areas.

Have you ever stepped on concrete or asphalt with your bare feet on a hot summer day? If so, you know how incredibly hot these artificial surfaces can be. This causes the outdoor environment to be more uncomfortable than necessary, and also causes our air conditioners to run longer in order to maintain a comfortable indoor temperature. This results in wasted energy. Forages help to make summer-time temperatures more bearable and reduce energy consumption.



10) Forages convert the sun's energy into meat, milk, and fiber for humans.

Imagine a world without a hamburger, a glass of milk, a bowl of ice cream, or a woolen sweater. Each of these products results from forages converting solar energy into energy efficiently used by grazing livestock. Livestock provide meat and dairy products, wool, and many other products such as pharmaceuticals, medicines, and by-products used to make leather goods, plastics, and photographic film. All serve to improve the quality of life for everyone.



11) Forage plants create areas of quiet, aesthetic beauty in both urban and rural areas.

Most people say that a quiet, pastoral scene characterized by rolling fields of forages are more pleasing than a landscape dominated by concrete. The same applies to urban areas. In fact, besides beautifying urban areas, forages act as natural sound barriers and absorb sound waves. Whether in the country or the city, landscapes dominated by forages are simply more attractive than artificial cover.

For more information about forages and how they impact your world, contact your local county agriculture extension agent.