In 2014, there were 18.4 million acres of alfalfa in the U.S. Alfalfa plus other hay is the third most valuable crop in the U.S., behind corn and soybeans. However, mention “alfalfa,” and most associate it with sprouts on their salad (a minor use) or the Little Rascals. Very few know the importance it plays in their daily lives. It’s in milk, beef, cheese, ice cream, honey, leather shoes, wool sweaters, etc. Alfalfa makes tremendous contributions to world food production, but most often goes unrecognized. Fewer still recognize the role alfalfa plays in maintaining a healthy environment. And yet, this “Rodney Dangerfield” of crops has been a mainstay on the U.S. landscape for more than a century. So what’s the big deal?

**Importance as a Crop & Broad Social Goals**

**Alfalfa has Broad Economic Value.** While alfalfa is often viewed as a “low value” crop, its true economic impact is much greater than its gross receipts (which are higher than one thinks at $12.7 billion). Alfalfa is the beginning of a complex food chain and affects many industries from dairy to wool and beef production to horse racing. End-uses, such as cheese and pizza, are worth billions more than the value of the crop itself.

**Alfalfa Provides Rotation and Nitrogen Benefits.** Biological N₂ fixation of bacteria growing on alfalfa roots saves energy - no N fertilizers are needed! Additionally, alfalfa leaves behind N and improves soil structure for the following crop so farmers apply less chemical fertilizer.

**Alfalfa Provides Significant Wildlife Habitat.** Alfalfa provides valuable habitat for hundreds of species of herbivores and animals of prey. Those who love nature should recognize and value alfalfa’s support of wildlife.

**Sustaining the Soil for Future Generations**

Alfalfa is highly beneficial to soil health and cropping systems. Our soil is worth protecting - millions of tons are lost permanently each year due to wind and water erosion, poor agricultural practices, and urbanization. Alfalfa can aid in protecting the soil from loss and actually improves soil’s ability to sustain food production.

**Reduced Cultivation.** As a perennial crop, most alfalfa fields are not tilled for 2-5 years after planting. This reduces the chance of wind and water erosion, and lessens negative effects of dust on human health.

**Deep Roots.** Alfalfa’s roots go deeper than most crops which is highly beneficial to soils. Alfalfa roots are commonly 9-16 feet and may extend deeper. This holds soil in place and creates channels encouraging water infiltration, biological activity in the root zone, and improved nutrient cycling. Water use efficiency may be improved in subsequent crops.

**Vigorous Canopy.** Unlike row crops, an alfalfa canopy quickly covers the soil, protecting it from wind or water erosion. This slows water droplets before they loosen and erode soil.

**Reduced Runoff.** The amount of soil or water running off alfalfa fields is a fraction of the runoff from bare soil or many other crop fields. This helps prevent pesticide and sediment movement to natural waterways.

**Weed Suppression.** Alfalfa plays an important role in crop rotation by suppressing weeds common in annual crops. The dense, vigorous alfalfa canopy shades weeds and frequent cutting prevents weed seed production. This could reduce pesticide use in subsequent crops.

**Low Pesticide Use.** Pesticide use in alfalfa is far lower than other major crops, lowering the overall risk of crop production to the environment.

**Improved Soil Tilth.** Organic acids produced in the rhizosphere improve soil structure surrounding alfalfa roots. Soil particles aggregate, creating pore space for air and water movement. Soil becomes “crumbly” leaving many channels ideal for plant growth and water infiltration.

**Fixes Nitrogen and Provides N to Subsequent Crop.** A key value of alfalfa is its ability to ‘fix’ nitrogen gas (N₂) from the air making N available for plant growth. Additionally, alfalfa leaves behind N and improves soil structure for the following crop. While cereal crops require millions of tons of N fertilizers per year, alfalfa requires essentially no N fertilizers.

**Alfalfa is a highly valued component of sustainable agricultural systems** due to its N₂ fixation, deep roots, soil protection/enhancement, low pesticide use, and contributions to subsequent crops.
Hundreds of species prefer alfalfa to other, even natural, landscapes. What makes alfalfa a good habitat?

- **Perenniality.** Alfalfa fields represent a stable, relatively undisturbed area where plant growth continues throughout the year, unlike other sites that are either disturbed, or exhibit only seasonal growth.

- **The Beginning of a Food Chain.** The alfalfa wildlife food chain begins with alfalfa itself - a high quality, palatable crop to foragers. Although alfalfa farming is an economic enterprise, many farmers appreciate the wildlife on their farms. Farmers are conscious of the need to preserve the land to maintain the viability of the soil and field environment.

**High Feeding Value.** The high palatability of alfalfa, which makes it such a good dairy feed, also makes it desirable to many herbivores, including many species of insects, rodents, and grazing animals.

- **Below-Ground Diversity.** There is much below-ground biological activity in alfalfa fields, including earth worms, insects, and other organisms. Gophers and other rodents frequently make their homes under alfalfa fields.

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