The BUZZ about Pasture Management

Have you considered the numerous far-reaching advantages of well managed pastures? Advances in agriculture have made us aware our pastures contribute much more than a space for meat production. Well managed pastures benefit air and water quality, conserve and improve soils, and maintain wildlife populations. Removing air contaminants, decreasing atmospheric CO2, producing oxygen, controlling erosion, water filtration and conservation, improving soil microbes that digest tons of matter turning it into useable products and providing crucial habitat for wildlife are just a few benefits attributed to well managed pastures.

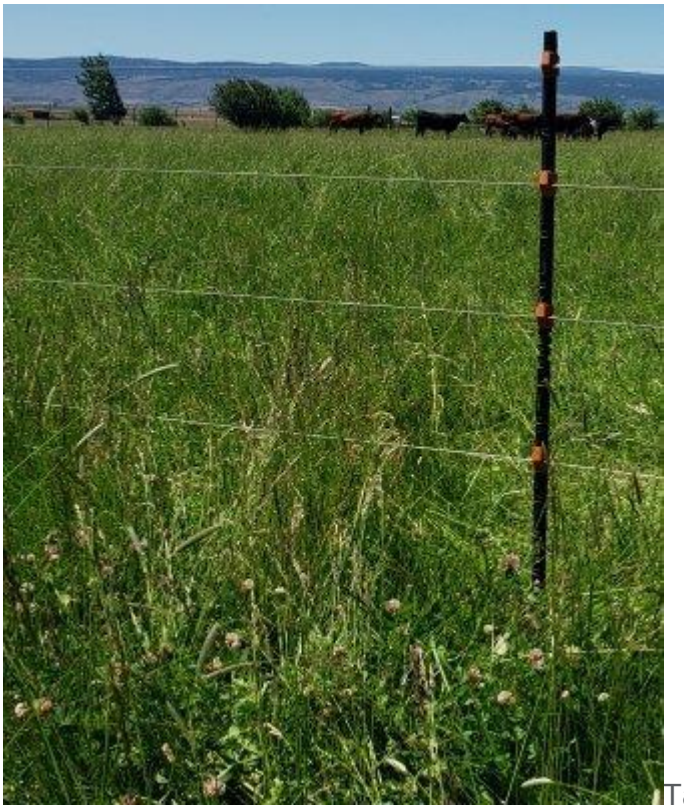
“Overall, good grazing management for livestock is compatible with good grazing for pollinators”

Just imagine how many insects are present in our pastures that wouldn’t be there without the vegetation. We don’t pay much attention to them, but insects have a huge impact on our lives.

Although many major crops are wind pollinated (corn, rice, wheat), pollinators are essential

for the majority of our fruit, nut, and vegetable production. Here are some eye-opening facts about animal pollinators.

- Globally 87% of the leading 115 food crops require animal pollination.
- Animal pollinators are responsible for 35% of the global food production.
- Pollinators contribute more than 24 billion dollars to our economy.

 Take bees for instance - our food supply is dependent on bees. Scientists say that the over 4,000 species of bees in the US are responsible for our every third bite of food. The contributions of honey bees are even more staggering.

- Honey bees contribute 15 billion dollars to our economy in agricultural products.
- Honey bees enable the production of at least 90 commercially grown crops in North America.
- The honey bee is credited with approximately 85% of the pollinating activity necessary to supply about one-quarter to one-third of the nation’s food supply.
- Over 50 major crops in the United States either depend on honey bees for pollination or produce more abundantly when honey bees are plentiful.
- Some crops, like almonds, are almost exclusively pollinated by honey bees, and many crops rely on them for more than 90% of their pollination.

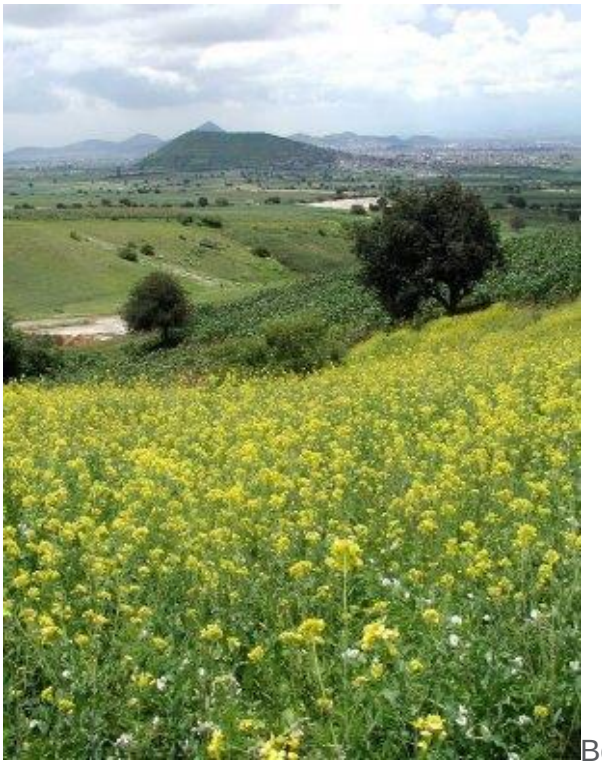
The number of managed U.S. honey bee colonies dropped from 6 million colonies in 1947, to 4 million in 1970, 3 million in 1990, and just 2.5 million today. The decline in population is

concerning. Many attribute this decline to disease, pesticide use, and habitat destruction.

We don't spend much time thinking about how dependent we are on pollinators for the food we produce and eat. Nor do we consider the effect we have on them and their habitat, unless of course our income is directly tied to their work. California's almond industry alone requires the pollination services of approximately 1.4 million beehives annually—60% of all U.S. beehives—yielding 80% of the worldwide almond production worth 4.8 billion dollars each year.

The good news is that managing our pastures well is not only beneficial for the health of our soils and our livestock, it is also beneficial for bees. A diversified pasture including grasses, legumes, and native plants increase the nutrition available to stock and nectar available to bees. Sid Bosworth, Extension Professor and Agronomy Specialist University of Vermont Extension, points out that maintaining a pasture that is beneficial for livestock will only need a few tweaks to benefit pollinators as well.

Due to the advantages of a nutritional profile with higher crude protein and mineral content for livestock and a consistent source of nectar for pollinators Bosworth advises adding flowering legumes to pastures. He promotes over seeding pastures periodically to maintain legume persistence, maintaining adequate soil fertility and pH, and rotating pastures to avoid over grazing.

 Bosworth recommends a pasture containing at least 30 % legumes seeing it as a win- win -win situation for bees, livestock and soil. “There are many forage legumes that can be used in pasture and almost all of them can be attractive to bees. However, varieties and or cultivars can vary quite a bit in their abundance and period of flower production.”

He recommends researching the varieties of white clover, red clover, alsike clover and birdsfoot trefoil that do well in your area and produce blooms throughout the season. Bosworth goes on saying, “These flowering legumes provide nectar and pollen for bees, nutritious forage for livestock and benefit soils by fixing of atmospheric nitrogen.”

Maintaining good soil fertility and ensuring residual vegetative cover with rotational grazing encourages the health of the entire ecosystem racking up even more wins. Overgrazing “weakens plants, reduces pasture productivity, and reduces flower and nectar production,” says Bosworth.

Avoiding overgrazing and leaving adequate pasture residue leads to healthier plants, soils, water and stock. Bosworth suggests a flexible rest period depending on the time of year and weather conditions to allow adequate regrowth of both the root system and the vegetation.

 Resting pastures allows flower maturity for adequate nectar, increased pasture resiliency, and decreased impact from environmental pressures due to extreme weather conditions. With a rotational grazing system, a steady nutritious food source for both livestock and bees is maintained by pastures being in different stages of regrowth. “Blooms can be used as an indicator when making rotation decisions that include pollinator health and habitat. However, forage quality declines as plants mature so that must be taken into account as well,” says Bosworth.

Livestock and bees gain the most benefit from diversified forages available at optimal nutrition accomplished in part by actively managing pastures. For bees that means maintaining flowering areas throughout the season.

Pasture rotation to prevent overgrazing with an eye toward flower maturity holds many advantages for us, our livestock and our land. Our pastures can provide a steady supply of pollen and nectar crucial for sustaining bee populations that are essential to providing our food supply.

“Overall, good grazing management for livestock is compatible with good grazing for pollinators,” says Bosworth. The next time you are walking through your pasture listen for the BUZZ, remember the impact of well managed pastures have on the bee population and the vast amount and variety of food bees contribute to your table.

For more information concerning bees and other pollinators contact your local NRCS and the Xerces Society.

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