Agronomic Interactions: The Foundation of Forage Production

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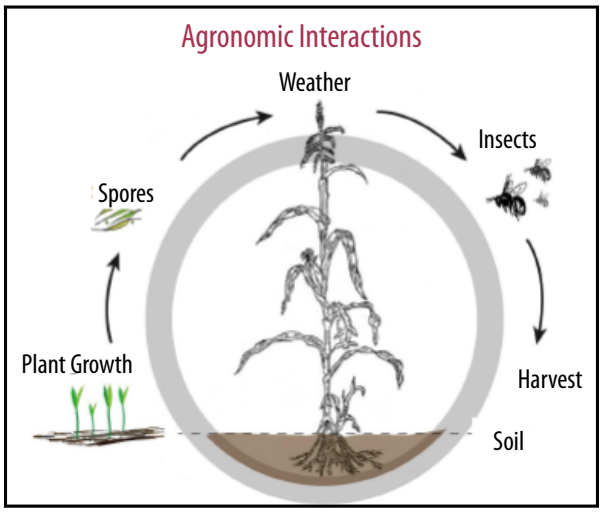
Understanding the interactions of soil health, plant genetics, plant nutrition, insect and weed pressure, and weather is necessary to establish a forage utilization program. These interactions might be simplified to "agronomic interactions," and too often agronomists, livestock nutritionists, and forage farmers do not converse on this subject enough, if at all.

Soil health is the foundation for plant growth and health. Soil health might be termed as the sum of soil texture, nutrient and water-holding capabilities, and soil organisms. New fertilization practices and cropping programs are providing better plant nutrition and increasing soil organic matter. The adage, "If you want to grow corn, you need to learn how to grow earthworms," applies to growing high-quality forages, as well.

Plant breeders have developed hybrids capable of producing high-quality forage; however, these plant genetics are sometimes susceptible to the irregularities of agronomic conditions. Understanding the agronomic strengths and weaknesses of forage hybrids is critical to determining where and when to employ the various forage genetics available today.

Insects can be as much of a plague today as during the time of Moses. Fortunately, plant genetics, crop scouting, and crop protection chemicals can aid in defending against insect damage. Similarly, agronomic programs can assist in suppressing weed pressure, which would otherwise reduce forage production and cause challenges in forage preservation.

Weather remains beyond forage farmers' control, though various agronomic practices may reduce the susceptibility of forage production to weather irregularities. Enhanced soil health, to enable greater water penetration and water-holding capacity, can partially buffer against drought. During excessive rainfall, soil health can help plants survive until the water subsides. Hail and frost damage may tip the plant health balance in favor of wild yeasts and molds.



Understanding interactions of agronomic conditions is necessary to develop optimal forage production and preservation programs. Greater dialogue between agronomists, livestock nutritionists, and forage farmers is key for optimal forage utilization.