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Forage Focus: Dry Season Pasture Management

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Showers crossed the state last weekend (6-17-12), but in many cases it was only enough to settle the dust for a few hours. The dry conditions in our area continue to challenge farm managers and their ability to keep forages growing and productive.

While we can't control rainfall, we can control our livestock and provide forage plants the opportunity to remain productive during and, maybe more importantly, after drought conditions. Overgrazing forage plants anytime reduces maximum growth potential, but in dry conditions overgrazing forage plants really takes a toll. Allowing livestock to take more than half of the plant's leaf material quickly starts reducing root growth. Also, as excessive amounts of leaf material are removed during hot, dry conditions, soil temperatures generally increase which slows or stops growth of our cool season forage plants for extended periods of time. Overgrazing also contributes to evaporation of soil moisture due to lack of ground shading.

Ed Rayburn, WVU Extension Specialist, said "root growth determines the ability of a plant to take up nutrients and water. Root growth is determined by the plant's leaf area actively photosynthesizing, since the roots depend on energy captured by the leaves. When energy is in short supply, it is used by plant tissue nearest to the site of photosynthesis. Therefore, roots receive energy only when more energy is produced by photosynthesis than is being used by top growth. However, under drought conditions the lack of water may reduce top growth while photosynthesis remains active. This results in the accumulation of carbohydrates at relatively low canopy heights. Forage stands that have growth retarded by drought can then have a vigorous regrowth once good rain is received."

The key to this process however, is to leave enough plant leaf residual. As Ed stressed, photosynthesis can continue to provide energy for roots, but only when sufficient leaf surface is present to gather sunlight. When forage plants are overgrazed, top growth must come from root reserve energy which leads to weaker plants.

Another consideration, to maintain forage plant health, is the amount of rest/regrowth the plants have had before being grazed again. Turning livestock into paddocks that have not had sufficient rest will be very stressful to forage plants. Unimproved fescue and white clover paddocks should be a minimum of 5-8 inches while orchardgrass and red clover predominant paddocks or improved varieties of fescue and clover paddocks should probably be a minimum 8-10 inches tall before allowing livestock to start grazing again. Using hayfields that have sufficiently regrown, after first cutting hay was made, or feeding hay or grain would be options to allow pasture plants enough time for adequate rest and regrowth before grazing resumes.

Most farm managers find it hard to feed hay or concentrate feeds in the summer while there is still a little green forage left in some of their pastures, but protecting the forage plants and allowing adequate leaf material to remain after a grazing pass will help you grow more forage per acre in the long run.

Changes should be made in a proactive manner, rather than reactive to minimize negative effects on forage and livestock production during prolonged periods of reduced precipitation. Step-in posts and electrified polywire or polytape can be used to decrease waste by reducing paddock size and also keep livestock from overgrazing. Closely monitoring livestock's grazing and moving them in a timely manner to maintain adequate residual can pay big dividends during dry periods.