

Soybean Forage

Chad Lee and Garry Lacefield, Plant and Soil Sciences

August 13, 2007

The dry weather has some farmers concerned about whether or not double-crop soybeans will complete seed fill. Many of the plants in these fields are only about 15 inches tall and have not filled the canopy. Farmers are hoping to capture some yield from drought-stressed soybeans by harvesting them for forage.

Soybeans for hay will yield about 2 tons/acre of dry matter under the most ideal conditions. Soybeans that are only 15 inches tall may yield less than 1 ton/acre of dry matter.

Ideally, soybeans should be harvested when green, plump seeds fill the pod cavity (R6 growth stage) to maximize yield and quality. When harvesting drought-stressed soybeans, seed size will be much smaller, meaning that much of the feed value will come from the leaves. Ensiling or wrapping the soybeans for balage will retain more leaves and may be a better option than baling the soybeans for hay.

Soybeans harvested for silage should be about 35% dry matter for trenches or upright silos, but 40 to 50% dry matter for balage. Crude protein could exceed 15% and TDN could exceed 50% if seed fill is completed and most of the leaves are retained. Small soybeans harvested before seed fill may have very different feed values.

Before harvesting the soybeans, try to estimate yield. Harvest an area of soybeans (i.e. 10 square feet), weigh the harvested soybeans. Take a subsample of the soybeans, weigh them and then dry them to get a dry weight. Using these numbers, you can calculate dry matter concentration of the soybean plants and ultimately, dry matter yield. In some cases, yields may be so low, that they soybeans are not worth harvesting for forage.

Harvesting soybeans for forage should be the very last option employed. If yields appear to be adequate and you can properly ensile the soybeans, then harvesting them for forage could be the last best option.