



# 2018 Forage Trials

In 2018, Dr. Talon Becker from the University of Illinois Extension, conducted the first year of forage trials at the Ewing Demonstration Center with funding & support from the IFGC, Agri-King, and Byron Seeds.

The forage trial aims to explore the production potential of various single species and/or mixed species forages in an intensively managed system under no-till production in southern Illinois. Specifically, the trial investigated the forage production potential and nutritional value of spring planted forages (oats, oat/pea mix, and oat/alfalfa mix) followed by summer annuals (pearl millet and sorghum/sudangrass) after a single harvest on the spring-planted forages.

General findings from the trial in 2018 are as follows:

- Alfalfa growth was limited in both spring and summer harvests, so the impact of that species on the quality and nutritional content of the forage mix with oats, sorghum-sudangrass, or pearl millet may have been limited.
- Biomass production was good for all other crops, with significant differences in production between species but no differences between treatments within a species group.
- Sorghum-sudangrass treatments yielded the greatest (4.5-5 T DM/A), followed by pearl millet treatments (2.5-3 T DM/A), and oats (0.5-1 T DM/A).

Estimating based on the 2018 results, a producer could potentially harvest 5.65 T DM/A of high quality forage in approximately five months with oats and peas seeded in mid-April, followed by sorghum-sudangrass, which was harvested in mid-September.

This project was conducted with only a single harvest from each forage species, taken at boot stage or shortly after. A producer could potentially increase production with multiple harvests or grazing passes, if their system is conducive to such practices. However, care should be taken when grazing these species, as oats tended to have high levels of nitrates (>2000 ppm), regardless of whether or not it was in a pure stand or in a legume mix. Additionally, sorghum-sudangrass could have toxic concentrations of prussic acid if grazed at an early plant growth stage or following a drought. For these reasons, these species may better lend themselves to a system that utilizes wet-wrapped forages, or haylage, which undergoes a short drying period followed by a fermentation process that can help to minimize the levels of the potentially toxic compounds in these forages.

It is important to note that the above findings are only representative of a single year's worth of data; therefore, extreme caution should be taken in extrapolating the results.

The project will continue in 2019, to further investigate the forage production potential and nutritional value of spring planted forages followed by summer annuals.

