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To: Wayne County Farmers and Agribusinesses

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Grain Sorghum Notes

Interest in planting grain sorghum in North Carolina has lead to many new questions about how to manage this new crop. Many farmers in Wayne County have already planted and or plan to plant grain sorghum behind wheat. Here are some management tips for your consideration.

**Variety Selection and Planting**

Research in North Carolina has shown grain sorghum can be planted from May 1 through July 1 with the expectation of high yields. Grain sorghum planted after July 15th could experience problems with frost and freeze before maturity. Most varieties available in North Carolina are late maturity hybrids. Early maturing varieties are not recommended for May planting. Plant an early to medium maturity hybrid in July.

Grain sorghum can be seeded in rows or drilled. Row widths from 30 to 38 inches have more consistent yields in sandy soils and also have the advantage of layby nitrogen and herbicide applications. Sorghum drilled in 7 to 15 inch row widths maximize yields in good soils with nutrient and water holding capacities. Sorghum seed should be planted at 1 – 2 inches deep depending on soil moisture and residue. Final plant populations should be in the 80,000 to 90,000 plants per acre range if planted from May 1 through June 15. After June 15 seeding rates should be increased by 20,000 seed per acre.

**Fertilization**

NCDA & CS grain sorghum recommendations for PH, phosphorus, and potassium are the same as corn, wheat, and soybeans. Soil test should be used for nutrient recommendations. If a soil test results are not available 20-30 lbs. /acre of phosphorus and 50-70 lbs. /acre of potassium can be applied.

The general recommendation for nitrogen is 80 to 120 lbs. /acre. On sandy soils 20 lbs. of sulfur is recommended. Apply 25% of the nitrogen at planting and the remainder at layby. Layby nitrogen can be applied when sorghum is 8 to 12 inches tall.

**Weed Management**

Planting grain sorghum can improve weed management due to the option to use herbicides not used in soybeans and cotton primarily for control of Palmer amaranth. Starting weed free as with other crops is also important in managing weeds in grain sorghum. That requires tillage or burndown herbicides to eliminate existing weeds. Following planting, a preemergence herbicide program should be used in conjunction with Concept treated seed. Herbicides like Bicep (Dual + atrazine) or Warrant + atrazine should be applied. When sorghum reaches 6-8 inches tall, a postemergence over the top application of atrazine + 2,4-D amine can be applied to kill emerged weeds and add some residual control. Do not apply if sorghum is greater than 12 inches. Do not apply more than 2.5 lbs. active ingredient of atrazine per season. When sorghum reaches 15 inches tall, and weeds and grasses are less than 2-4 inches, Linex can be applied post-directed no higher than 3 inches up the stalk.

Attached is Grain Sorghum Rotation Considerations by Wesley Everman for prior herbicides and herbicides used in sorghum and their rotational restriction.

**Rotational Crops**

At this time Dr. Randy Weisz and Dr. Ron Heiniger are recommending wheat not follow grain sorghum due to allelopathic affects on the wheat crop. Grain sorghum produces herbicidal like compounds that affect wheat when it follows grain sorghum. Currently more research is being conducted to define the affects.