



*Avoca, Inc.*

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## **Clary Sage Production Guide**

### **Planting Date**

Generally, Clary Sage should be planted from August 1<sup>st</sup> until September 20<sup>th</sup>. Planting should be take place when temperatures are not approaching 100 degrees and there is adequate moisture available. Plants will enter a dormant phase through the winter with growth resuming in the spring as temperatures begin to rise. Optimum plant size entering the dormant period is greater than 6 inches across.

### **Field Selection and Seedbed Preparation**

Clary Sage grows best on a medium textured, well-drained soil. It does not tolerate poorly drained or droughty soils. Preparation of a firm, high quality raised seedbed is recommended to ensure good seedling emergence and stand establishment. If a seedbed is too fine and overworked, it will loose soil moisture and develop a crust easily after a heavy rain. If a seedbed is too coarse, improper seed placement may lead to poor stands. Seed and soil moisture contact is critical for rapid emergence.

### **Planting Rate**

Planting rate for Clary Sage is 3 pounds per acre. This can be achieved using sorghum plates and a conventional row-crop planter. The seed is supplied by Avoca.

### **Seed Depth and Row Spacing**

Optimal germination and emergence occur at seeding depths of 1/4 to 3/8 inch under conditions of adequate soil moisture. Seeding at depths of greater than 1/2 inch delays or prevents emergence. Historically, Clary Sage has been planted on rows spaced 36 or 38 inches apart. This was mainly to accommodate harvesting equipment. Depending on equipment available, planting at narrower spacing may be feasible.

### **Fertilization and Soil pH**

Optimal soil pH for Clary Sage ranges from 6.0 to 6.2. Apply lime prior to planting as recommended by soil tests. Clary Sage is much more sensitive to salt and ammonia injury than traditional crops. Therefore, a pre-plant application of fertilizer is not recommended. Fertilizer is applied both in the fall and spring. Typical fall application is made about one month after seed emergence and spring application is made once temperatures begin to warm and plant comes out of dormant stage. Crop requirements for nitrogen are 175 pounds per acre with split applications between fall and spring growing seasons. Typically 60 pounds of nitrogen are applied in the fall application in early October. The spring application may be split two or three applications. If two applications then apply 30 lbs of nitrogen in late February or early March depending on weather conditions. If three applications then apply 30 lbs in February, 45 lbs in March and the final 40 lbs of N in April. Phosphorous and potassium are generally applied at the same rate as nitrogen, but can be adjusted based on soil tests. Some growers used combination of 30%N liquid and then dry blended fertilizer for phosphorus and potassium.

Some growers apply chicken litter at the rate of 3.5 tons per acre in July prior to planting in late August. Additional nitrogen applications are adjusted based on nitrogen contribution from chicken litter.

### **Weed Control**

Currently there are no pre-plant herbicides labeled for use on Clary Sage. Select Max is labeled for post-emergence grass control. Grasses should be actively growing to obtain best control. Crop oil adjuvants are recommended as well. Gramoxone Inteon, Linex, and Goal are labeled for control of broadleaf weeds. Rates for these chemicals will vary depending on size of crop and temperature. Spraying when the crop is too small or when temperatures are too high can damage or kill the crop. A plant size greater than 4 inches wide and temperatures below 75 degrees are optimal for spraying broadleaf herbicides. Some burning and discoloration of the tip leaves are normal. Please consult the North Carolina Agricultural Chemical manual for labeled herbicides and rates.

### **Cultivation**

Clary Sage responds well to cultivation. Cultivation allows much needed air to get to the roots of the plant increasing growth. Cultivation can take place from the time seedling emerges up until freezing temperatures are to occur. Once the threat of freezing temperatures is over in the spring, plowing may resume up until the flowering stage begins.

### **Harvesting**

Harvesting of Clary Sage occurs in June. There are two methods of harvesting: swathing followed by chopping with a forage harvester, and chopping directly. The method to be used will be determined by Avoca based on moisture content and whether it will be processed real-time or stored for later processing.