Summer Savory yield trials

2005 Season, Bixby Oklahoma

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Materials and Methods: Two summer savory varieties ('Aromata' and 'Common') were evaluated in 2005 as a new herb crop for Oklahoma. All seeds were obtained from Johnny's seed company. Two sets of plots were direct seeded with a Monosem air planter in beds of 4 rows, 12 inches apart at a total plot length of 200 feet on April 21. One set of plots were treated with 10 lb/ac ai Dacthal as herbicide on April 22 using a tractor mounted 12 foot broadcast sprayer calibrated to deliver 25 gallons of spray per acre. The other set of plots were not treated with herbicide. Soil tests indicated adequate phosphorus and potassium, but very low nitrogen. Nitrogen was applied as urea at a rate of 40 lb N/ac just after planting. Plots were irrigated with 0.5 inch of overhead irrigation following herbicide application. Plots were topdressed with nitrogen from urea at a rate of 40 lb N/ac on May 17. By May 22 substantial crop injury in terms of failure to emerge (40 to 50 percent stand reduction, compared to no herbicide plots) was noted in the herbicide treated plots and they were abandoned. Harvests for the remaining plots were initiated on July 12 and continued until September 20, for a total of 4 harvests. Plots were abandoned after the September 20 harvest due to severe die-back, especially noted in the 'Aromata' plots (60 to 70 % plant death after September 20 for 'Aromata', compared to approximately 50 % plant death for 'Common'). After each harvest, plots were topdressed with nitrogen from urea at a rate of 30 lbs N/ac. A Kincaid plot harvester, equipped with a 4.5 ft sickle-style cutting bar, a bat system for moving harvested material onto a 2.2 ft conveyer system which emptied into pre-weighed harvest lugs, was utilized to harvest all plots. Cutting height was set at 6 inches. During harvest 10 to 15 pounds of sample from each plot was transported to a cooler at 45 F and held prior to transport to Stillwater lab facilities on ice for drying. Just prior to drying, summer savory was washed to remove soil and other debris, spin-dried in a greens washer, weighed and placed onto cheesecloth. The cheesecloth was then tied to contain the samples and dried for five days at 74 to 80 F in a Proctor-Shwartz forced air drier. Moisture content was determined for all samples.

Conclusions: The crop damage observed for the Dacthal herbicide-treated plots was not as severe as was noted for basil plots, but we judged reduction in stand to be severe enough for us to abondon these plots for yield determination. Dactal, at the 10 lbs ai/ac rate, can not be recommended for use on summer savory. It should be noted that the rate tried (10 lbs ai/ac) was at the high end of recommended rates for onions and other vegetable crops. Summer savory stand establishment was variable and yield information on a fresh basis (Table 1) and on a dry basis (Table 2) has been corrected to eliminate plant skips in the plots. Harvests were timed relative to plant growth (at least 2 inches growth above the cutting floor) and yields were calculated based on the correction referred to above, with 12 inch between row spacing. 'Common' out yielded 'Aromata' by at least double on a fresh (Table 1) or an air dry basis (Table 2). It was noted that 'Common' produced longer woody stems with less dense leaves than 'Aromata', perhaps leading to a less intense odor from 'Common' versus 'Aromata'. We noted that washing should be accomplished just prior to drying or other use for summer savory, and that leaf discoloration caused by washing and after prolonged storage was worse for 'Aromata' compared to 'Common'. When storage was required, temperature should be 32 to 38 F and herbs should be stored dry under high humidity – under this condition, only minor deterioration was noted after up to 2 weeks in storage. Summer savory may have good yield potential for Oklahoma production. We are in the process of chemical evaluation to assess its value as a new extraction crop. In May 2005 we also established plots of winter savory (genus and species is Satureja montana, as opposed to Satureja hortensis for summer savory) in a perennial herb block at Bixby. The winter savory is reported to be more pungent, and may have potential as a perennial herb crop. We will assess winter survival of this crop and commence harvest and evaluations during the 2006 season.

Table 1. 2005 Cumulative Summer Savory Fresh Yields in Bixby, OK

Harvest #	Harvest Date	Aromata	Common
1	12-July	2002	2958
2	2-Aug	2783	5398
3	30-Aug	6335	15996
4	20-Sep	9822	24651

Table 2. 2005 Cumulative Summer Savory Air Dry Yields in Bixby, OK

Harvest #	Harvest Date	Aromata	Common
1	12-July	312	430
2	2-Aug	480	845
3	30-Aug	1043	2439
4	20-Sep	1848	4057