

## NO-TILL PEANUT RESEARCH IN FLORIDA

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No-till peanuts have been produced in Florida on a limited basis for the last three years. Interest in planting peanuts no-till followed successes in other crops such as corn, grain sorghum, and soybeans. The primary concern of peanut farmers has been for disease problems, primarily "White Mold". With increased planting of small grain crops, like wheat or temporary grazing crops, there is greater interest in planting peanuts no-till following these crops. Following is a summary of research conducted in Florida on no-till peanuts planted in late May following harvest.

Information on the research data presented in tables 1 thru 5 regarding production procedures are as follows: total rainfall (June-September) was 14.97" in 1981, 23.78" in 1982 and 20.65" in 1983. Planting dates were June 5, 1981, May 18, 1982 and June 3, 1983. Seeding rate was 90 lbs. per acre of Florunner peanuts. Herbicide used was Paraquat 1½ pints + Prowl 2 pints at planting; Paraquat 1 pint as a directed spray twice + ½ pint of Butoxone over the top per acre. For soil insect control Furadan 156 was banded at 15 lbs./acre. Equipment used to plant the peanuts was: 1981 - Cole no-till planter and 1982-83 Brown Hardin no-till planter. Harvest dates were October 12, 1981, October 1, 1982 and October 12, 1983.

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Table 1. Influence of irrigating peanuts on yields using different moisture levels (Quincy 1981).

Water schedule cb	Yield (lbs./acre)		
	No-Till	Conventional	Average
20	2882	3257	3070 <sup>b</sup>
60	2868	3359	3114 <sup>b</sup>
100	3648	3832	3824 <sup>a</sup>
None	3624	3960	3792 <sup>a</sup>

Means in a column followed by different letters are significantly different at the 10% level of probability.

Table 2. Influence of row width on peanut yields under no-till and conventional till (Quincy 1981).

Row width	Yield (lbs./acre)		
	No-Till	Conventional	Average
15"	3462	3940	3701 <sup>a</sup>
30"	3049	3348	3199 <sup>b</sup>
Average	3256	3644	

Means in a column followed by different letters are significantly different at the 10% level of probability.

Table 3. Influence of irrigating peanuts on yields using different moisture levels (Quincy 1982).

Water schedule cb	Yield (lbs./acre)		
	No-Till	Conventional	Average
20	4233	4123	4178 <sup>a</sup>
60	3738	3361	3550 <sup>b</sup>
100	3633	3201	3417 <sup>b</sup>
None	3675	3284	3480 <sup>b</sup>
Average	3820 <sup>a</sup>	3492 <sup>b</sup>	

Means in a column followed by different letters are significantly different at the 10% level of probability.

Table 4. Influence of irrigating peanuts on yields using different moisture levels (Quincy 1983).

Water level	Yield (lbs./acre)		Average
	No-Ti 11	Conventional	
20	2893	2468	2681
60	2563	3105	2834
100	3356	3384	3370
None	3289	3340	3315
Average	3025	3074	

Table 5. Three year average yield of peanuts planted no-till and conventional at different irrigation levels (Quincy 1981-83).

Water schedule cb	Yield (lbs./acre)		Average
	No-Ti 11	Conventional	
20	3336	3283	3310
60	3056	3275	3166
100	3546	3473	3510
None	3530	3528	3529
Average	3367	3390	

Table 6. Results of an on-farm demonstration conducted on John King farm, Jackson County, Florida (L. C. Cobb, County Extension Director).

	Yield (lbs./acre)		Average
	No-Ti 11	Conventional	
36" single rows	4214	4649	4432
36" twin rows	5133	5310	5222
Average	4674	4980	

Twin rows = 2 rows, 10" apart on 36" centers.

## SUMMARY

There was no significant reduction in yield in planting no-till compared with conventional although most of the actual research tests were not planted where known history of "White Mold" existed. Also the trend is for no-till yields to be slightly less than conventional till. This indicates that peanuts may be planted no-till behind harvested wheat provided a good crop rotation is maintained.

There was a significant increase in yield in closer row pattern planting no-till. This was observed in row spacing studies and on the farm demonstration. No-till planting of peanuts in the future will increase as better no-till herbicides and planting techniques come into practice.