NO-TILL CROP PRODUCTION IN ALABAMA

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Acreage of no-tillplanted crops has increased over the past five years in Alabama. Corn is the only major crop that the no-till acreage has declined Table 1). Soybeans and sorghum has had the largest increase in no-till acreage. Cotton and peanut no-till acreage is still very small.

Table 1 No-Ti11 Acres For Alabama In 1977-1982

Crop	1977		1982	
	Total Acres	No-Till Acres	Total Acres	No-Till Acres
Soybeans	1,600,000	43,000	2,100,000	285,200
Corn	840,000	55,000	530,000	45,000
Sorghum	75,000	3,000	100,000	30,300
Cotton	395,000	800	285,000	3,400
Peanuts	215,000	0	222,000	1,100

Future increases in no-till acreage will be slowed in the next year if the government Payment In Kind program continues. Less wheat will be planted thereby limiting the successful doublecropping system of soybeans or grain sorghum after wheat harvest. However, awareness of soil conservation and seeking higher production efficiency will spur more producers to try a no-till crop production system. Failures in stand establishment and weed control are still too common. Cover crop management becomes extremely important in crops such as cotton.

In the coastal plain region of Alabama, no-till crops have been more successful using an in-row subsoiler at or prior to planting. In other areas standard no-till planters are used without the in-row subsoiler. In corn, paraquat plus atrazine are used to kill green vegetation and Lasso or Dual are added for annual grass control. Mulch for corn usually consist of rye-vetch or old crop residue. Fertilizer is normally broadcast applied prior to planting with additional nitrogen applied as a sidedressing. No-till sorghum productions practices are similar to those for corn.

No-till soybeans are either planted after wheat harvest or into crop residue from last year. Herbicides used would include paraquat plus a broadleaf herbicide (ex.-Sencor) for better control of green vegetation. Grass herbicides such as Lasso or Dual may be added for annual grass control. Fertilizers are applied to the wheat in the fall or broadcast in the crop residue.

No-till cotton production system include a legume cover crop (vetch or clover) which should be killed two weeks prior to planting with paraquat. Herbicides used for residual weed control are Cotoran plus Prowl. Fertilizers are applied broadcast with no nitrogen used. Peanuts are planted no-till into rye or crop residue. Paraquat plus Lasso will be used for vegetation control and grass control. Cracking and postemergence herbicides are used for additional weed control.

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New practices being employed by producers are strip killing clovers along the corn row for reseeding of the clover in the middles. Starter fertilizers are also being used in corn and grain sorghum. Killing of cover crops early before planting gives an advantage when planting no-till cotton.

Research at Auburn University has investigated starter fertilizer type and placement in cotton, corn and soybeans. Production systems for no-till cotton is also being determined by evaluating cover crops, cotton varieties, planting methods, nitrogen requirements and weed control. Nitrogen management for cotton grown in legume cover crop mulch is also being determined. Effects of tillage on wheat production and production systems for no-till peanuts are also being investigated.