

## Chapter 3

# Variety Selection and Seeding Rates

*Donald Boquet*

## Variety selection

Although variety selection for conservation practices is not greatly different from that used in other cropping systems, selection of suitable varieties for planting can help make conservation tillage planting more successful. This is true more so for soybeans than other crops.

Some traits that should be considered include seedling vigor, resistance to specific diseases that may survive on residue or may be common for the area, and maturity date. Full-season varieties of all crops should be planted to allow for a sufficient growing season to compensate for later planting dates and the potential of slower early season crop development, especially for double-cropped soybeans following wheat. For double-cropped cotton, however, early season varieties should be planted, since full-season varieties may not have enough time to complete development of late bolls.

Generally, it is a good idea to consult someone – an LSU AgCenter field agent or specialist or seed company agronomist – for help with variety selection. Results from the LSU AgCenter’s official variety tests and on-farm demonstrations will provide information on variety performance for different soils and various planting and environmental conditions. Because of the large number of available soybean maturity groups used in Louisiana and extreme differences in varietal traits, selection of soybean varieties that match varieties with soil types and planting dates is very important.

## Seeding rates

The plant population densities needed for optimal yields in conservation tillage fields are not different from those used in the past on conventional till fields (Figure 3-1). Recent advances in technology in the seed and equipment industries and advanced technology to



*Doublecrop sorghum in wheat stubble*

help in disease control have changed conservation tillage planting and seeding recommendations.

In the past, standard recommendations were to increase seeding rates by as much as 25 percent to ensure optimal stands. Today, some individuals still increase seeding rates for soybeans, cotton and small grains. An increase in seeding rates is needed, and is important, when planting well after the optimal planting dates – when double cropping, for example. Late planting (after June 1) requires increased seeding rates to com-

pensate for reduced overall plant growth of soybeans, not because the crop is being planted with conservation tillage.

Generally, planting rates are not different for conservation tillage than tilled fields when using the most recent planting equipment that is properly adjusted. To determine the best seeding rates for specific circumstances, experienced producers and research center agronomists are excellent sources from which to seek advice.



*Monocrop cotton in vetch residue*



*Doublecrop soybean in wheat stubble*



*Doublecrop cotton in wheat stubble*

*Figure 3-1. Conservation practices of reduced tillage and cover crops can be successfully used with any crop or crop sequences of monocropping, doublecropping, or cover/green manure cropping without major changes in varieties or seeding rates.*