Historically in Louisiana, when producers double-crop behind wheat, 85 percent of those acres have been planted with soybeans. More recently, however, producers have double-cropped other crops such as cotton behind wheat. Considerable research has been done by LSU AgCenter scientists on wheat/soybean double-cropping systems since the 1970s. This fact sheet compiles research and observations from recent studies in Central Louisiana to aid producers in developing soybean production practices in a wheat/soybean double-cropping system.

Stubble Management
Wheat stubble creates a challenging seedbed in which to obtain an acceptable stand of soybeans. The key to obtaining an adequate plant population is to maintain soil moisture and then place the seed with good seed-to-soil contact. There are several options to manage the wheat residue — ranging from no-till into standing stubble to the extreme of burning the straw. Wheat stubble management research at the Dean Lee Research and Extension Center at Alexandria examined various stubble heights, as well as burning and disking operations. Two years of study showed no yield differences among stubble management regimes (Figure 1).

Maturity Group Selection
In addition to the stubble management research, additional trials have evaluated the specific maturity groups (MG) of soybeans that would perform well in a wheat/soybean double-cropping system. Two varieties within each MG 3, MG 4, MG 5 and MG 6 were planted on stale seedbeds, as well in wheat stubble.

Regardless of the stale beds or wheat stubble, seed yields were highest for MG 4 and MG 5 varieties (Figure 2). MG 6 varieties were not harvested because of excessive yield losses from late-season diseases and insects.

Plant Population
Without considerable modification some planters may not be able to properly place seed in the furrow because of dense wheat stubble and plant residue. To compensate for some stubble interference and because of the late planting date, soybean seeding rates should be increased 10 percent to 15 percent. The LSU AgCenter recommends planting 130,000 seeds per acre in a normal planting window, and it recommends increasing that rate to around 145,000 per acre in this system. If planting is delayed past June 15, rates should be increased to 180,000 seeds per acre.
Row Spacing

When planting soybeans after wheat harvest in May and June – at a relatively late planting date – rows spaced less than 30 inches consistently out-yielded rows wider than 30 inches.

Weed Control

Burn-down herbicides such as glyphosate or paraquat should be considered following wheat harvest so that double-cropped soybeans are planted under weed-free conditions. Pre-emergence herbicides also should be considered at planting. (See “Louisiana Suggested Chemical Weed Control Guide” at www.lsuagcenter.com/en/conversations/publications/Publications+Catalog/ Crops+and+Livestock/Weed+Control/Louisianas+Suggested+Chemical+Weed+Control+Guide.htm.) The burn-down and pre-emergence herbicides can be applied simultaneously. In-season weeds can be controlled using various post-emergence herbicides suggested in the Weed Control Guide.

Insect Pest Management

Producers planting soybeans following wheat should recognize the potential of economic losses from insects is much higher than what usually is experienced with soybeans planted during the early spring months. Late-planted soybeans, regardless of the production system, can be subjected to high and persistent populations of insect pests. Producers should budget for three to five insecticide treatments to manage any single pest or combination of several pests. Bean leaf beetle, three-cornered alfalfa hopper, a complex of stink bugs and defoliating caterpillars should be the most common pest problems in a wheat and soybean double-cropping system. Insecticides should be applied based upon established action thresholds, but the treatment rate and application frequency should be adjusted to reduce the impact on crop yield and seed quality.

Disease Management

Diseases can be a problem for soybeans regardless of planting date, but late-planted soybeans have more disease pressure than early planted soybeans. Budgeting for one application of a fungicide may not be sufficient for plant protection. Several diseases including soybean rust, pod and stem blight, Cercospora leaf blight, aerial blight and anthracnose likely will be yield-limiting problems. Fields should be scouted at least weekly, especially during the reproductive stages R1 (beginning flowering) through R6 (complete pod fill).

Overall Observations

The wheat and soybean double-cropping system can be successful for Louisiana producers if certain cultural practices are followed. Perhaps the most important factor in achieving maximum yield potential is stand establishment. Wheat straw is a valuable resource that should be conserved, but it can hamper stand establish-