

Wheat in Fallow

In last month's edition on Cane Planter, I outlined a form of alternative sugarcane cropping system that is becoming more widespread in the Louisiana sugarcane industry involving producing glyphosate-tolerant soybeans in the fallow (idle) period between plowing out the last ratoon and replanting sugarcane. In this and in next month's column, I'll continue bringing up ideas for more alternatives to fallow crop production and cover crops to fit in a sugarcane system.

In addition to soybeans, some Louisiana sugarcane producers have been incorporating soft red winter wheat production rather than soybeans into their cropping systems. In the past few years, wheat prices have rallied, presumably due to the rapidly increasing world population and the increase in wages of under-developed countries. When wheat prices began to rally, more sugarcane producers began planting soft red winter wheat as a fallow crop to again offset fallow weed control and maintenance costs of idle fields prior to replanting sugarcane.

It is important to realize, however, that not every sugarcane growing area has the climate to produce wheat. Additionally, the duration of the growing and harvest season and local weather conditions may require other forms of wheat to be produced such hard red, durum, whites, etc. In our case in Louisiana, we begin harvesting oldest ratoon cane in early September. Soon after harvest, the leftover stubble is plowed under and in some cases raised sugarcane beds are reestablished. Some producers prefer to leave the ground flat to produce the winter wheat. Soft red winter wheat seed is then broadcasted and disked-in or drilled using conventional planters. Minimal herbicide is required in most cases, and the wheat is fertilized with nitrogen in one or two applications when the crop emerges from winter dormancy in February. Some insect pests and diseases are controlled using various methods of integrated pest management when yield potential and commodity prices are high and the control is deemed cost effective.

Soft red winter wheat is usually mature and ready to harvest at the beginning of May, and the harvest season extends to early June. This leaves the sugarcane producer time in June, July and August to control perennial weeds such as bermudagrass (*Cynodon dactylon*) and Johnsongrass (*Sorghum halepense*). Although the wheat crop does help suppress these weeds to some extent, there are no herbicides that can be used in the wheat crop to control these weeds such as in the case with glyphosate-tolerant soybean production. However, because winter wheat is harvested early in the fallow period, there is more time after the wheat harvest to use non-selective herbicides to control the problematic perennial weeds prior to replanting the sugarcane.

Following harvest, the remaining wheat straw is traditionally burned to return much needed potassium and phosphorous nutrients remaining in the straw back to the soil for the subsequent sugarcane crop. Doing this however, does reduce the amount of organic matter added to the soil complex, but incorporating the wheat straw unburned back into the soil has proven too difficult to do with currently used cultivating equipment. Some producers have had local livestock producers bale the straw and remove it for their own use, but this was found to remove too much potassium, phosphorous, and other nutrients from the sugarcane field after thorough soil analysis. There is some interest, however, in using the remaining wheat straw for cellulosic ethanol production in future years.



Soft red winter wheat produced on raised sugarcane beds.

As in fallow soybean production, producing winter wheat in the sugarcane fallow period has distinct advantages. It reduces erosion of fertile topsoil, it adds some extent of organic matter for improved tilth in clay soils, aids in suppressing weeds, and provides an avenue for a sugarcane producer to offset costly fallow production costs for land that would otherwise incur no income. All of these factors greatly contribute to improved, sustainable yields in the subsequent sugarcane crop.

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