

New Uses for Fallow Fields

In this month's column, we'll do something that sounds atypical for Cane Planter – covering other crops besides sugarcane. Many industries around the world implement a fallow period in the sugarcane planting rotation. In Louisiana, typically 25% of the acreage on a given farm is plowed out in January or February when the older ratoon sugarcane has lost its vigor and yield potential. This land is then kept fallow for several months until August and September when these fields are replanted in sugarcane. The fallow period gives producers the opportunity to control problematic perennial weeds that cannot be controlled effectively in-crop, and also gives us an opportunity to correct drainage problems, precision laser-level, redraw rows, etc. This fallow period also allows the land to “rest,” likely pertaining to breaking the soil rhizosphere cycle of harmful microorganisms and soil insects.

Due to incredibly high input costs and flat sugar prices, producers are being forced to maximize income by looking at this fallow period differently. Traditional fallowed fields are not generating income, but are requiring a great deal of expense in the form of tillage and herbicides. Why not use this land to produce income to help offset these fallow expenses? In our industry, we have learned after much trial and error that the production of early maturing glyphosate-tolerant soybeans in fallow sugarcane fields is a sound agronomic practice and fits well into a sugarcane operation in Louisiana.

In the fallow soybean system, older ratoon cane is plowed under, cultivated, and raised six foot beds are reformed. In our area, early maturing soybeans (maturity group III and early IV) are planted from mid April to the first week of May. The soybeans are planted on two or three drills on top of the sugarcane beds. Because they are on raised beds, and also because much of this land has either never had soybeans grown on it (or at least for five years), soybeans in fallow cane land generally yield higher than traditional soybean farms from a lack of flood damage and soil pathogens. The soybeans are protected from insects and diseases using integrated pest management practices, and are then harvested in early August and September. Sugarcane is then planted following the soybean harvest on these raised beds. The harvesting and marketing of the soybeans generates income to pay for at least a portion of the fallow expenses. Since the soybeans are glyphosate tolerant, glyphosate can be applied to the soybeans



Photo by Blaine J. Viator

fields to control weeds that could be a problem in the subsequent cane crop.

Because soybeans are legumes, they produce their own nitrogen through a symbiotic relationship with rhizobium bacteria, so there is some nitrogen remaining in the soil for the sugarcane to utilize. The roots and biomass produced by the soybeans also add much organic matter to the soil, improving the tilth of heavy clay soils. The shading the soybeans provide aid in suppressing weed growth. Additionally, soybeans planted in sugarcane fields reduce runoff of extremely fertile top soil after heavy rains. All of these factors contribute to a benefit to the sugarcane crop, which is one reason land that is share-cropped often does not involve paying additional share rent on the soybeans produced. The landowners are getting the extra income of the soybeans in the form of increased yields in the subsequent sugarcane crop and the producer is offsetting some of the fallow expenses

In next month's issue, we'll discuss other fallow rotational crops as well as potential cover crops that may be fit well in a sugarcane production system.

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