

Soybean Planting: Warm Temperatures and Itchy Trigger Fingers

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Spring has sprung ... for now. Air temperatures were 4 to 8° F warmer than normal over the past 30 days and 8 to 12°F warmer than normal over the past 7 days across Indiana (www.iclimat.org). We welcome this spring weather as many are trying to catch up from the prolonged harvest this past fall which limited tillage and applications of fertilizers, lime, and herbicides. Our trigger finger for planting soybeans is itchy, and we need to discuss the optimal planting window for soybeans in Indiana.

Several producers and crop consultants from southern to northern Indiana told me this past winter that they shoot to have soybeans in the ground by tax day (some even earlier). I even heard of soybeans planted on April Fool's Day this year. Let's proceed with caution.

During the Purdue Crop Management Workshops in January, I asked "What is the optimal time to plant soybeans for high yields?" (Figure 1). Twenty six percent chose Late April followed by 46% for early May and 23% for mid-May when averaged over the regions of the state. Interestingly, the southern locations tended to chose later planting dates than the northern and central parts of Indiana.

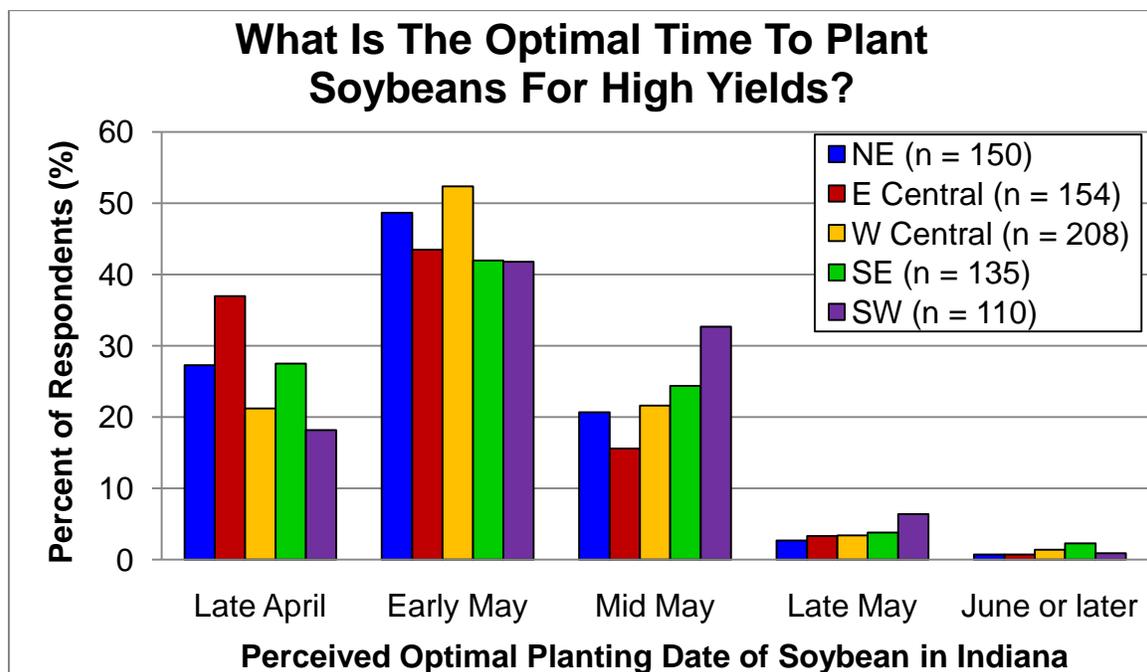


Figure 1. 2010 Purdue Crop Management Workshop participants' response to the optimal planting date for soybean. NE = northeastern IN, E Central = east central IN, W Central = west central IN, SE = southeastern IN, and SW = southwestern IN.

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Soybean yield potential and probability of success is greatest during the first three weeks of May across Indiana (Figure 2). The yield potential tends to be lower prior to May and it decreases substantially as planting dates are pushed beyond May. Soybean plantings in 2009 were late May to early June in many areas of Indiana yet yields were very good. Why? The cool growing season in 2009 reduced the heat stress during flowering thereby increasing flower retention, and adequate soil moisture allowed for good pod development. The good weather in August finished filling out the pods and seeds. Soybeans were able to fully mature without any early fall frosts. The combinations of these growing conditions allowed soybean yields to be good in spite of the later plantings. Optimal planting dates are the probability of success year in and year out.

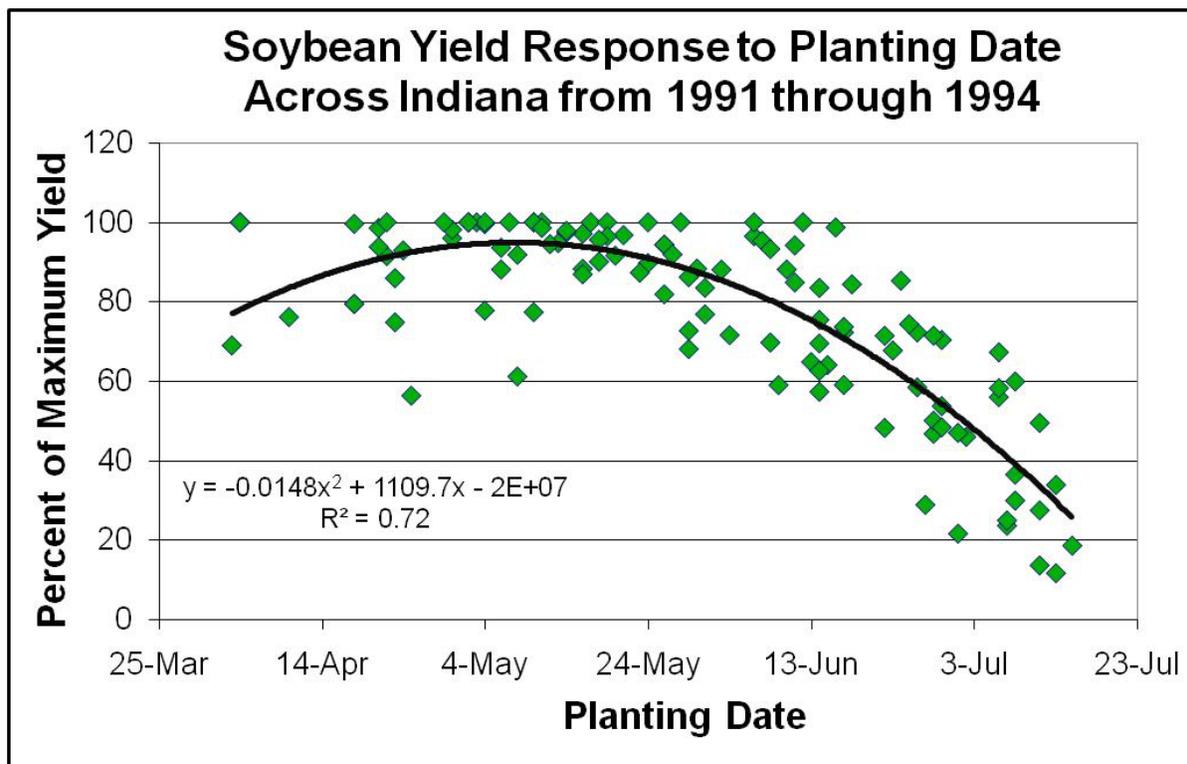


Figure 2. Soybean planting dates from southern to northern Indiana in 1991 to 1994.

It is important to realize that these planting dates are based on soybean seed that is not treated with fungicides or insecticides. Soybean seed treatments have been on the rise over the past few years, which have impacts on our soybean management decisions. Theoretically, we should be able to plant soybeans earlier (typically cool, wet soils) with protection from diseases and with in-“vigor”-ration effects of various products. However, we do not presently have data to warrant an early shift in our planting date recommendations. We will discuss soybean seed treatments – fungicides, insecticides, inoculants, and plant growth promoters – in the following article.