General Summary

These studies provide information that can be used by Virginia corn growers to make better management decisions on their farms. Refer to individual plots for discussion of the results.

This is the second year of testing the value of GMO hybrids. Seed companies are increasingly offering double- and even triple-stacked genes to producers, but these come at a cost. Across all sites, there was not much difference in yield across technologies – this year or last; however, conventional herbicide systems were used and European corn borer pressure has generally been low. Average yields across two years indicate that all the hybrids perform about the same in the absence of any major corn borer pressure. Where corn borers and/or corn earworms are a problem, selection of a Bt hybrid is advisable. Remember that a non-Bt reserve must be planted in the field. Where weed problems necessitate something more than our standard weed control programs, an RR hybrid may help. However, we still recommend alternating herbicides with different modes of action to fight weed resistance and maintain glyphosate as an effective weed control option.

This is the first year of replicated tests for optimum plant populations. We saw positive or neutral results to increasing corn populations in the field, depending on site. From this year’s data, it seems that final stands around 26,000 plants per acre are capable of excellent yields where soil type, water, and fertility allow for it. Where poor soils limit yield potential, populations around 20,000 should be sufficient to optimize yield. Because our studies did not look at populations much above 30,000, we were not able to capture any “yield plateaus” in our charts (see individual plots). Next year, we plan to repeat this set of experiments and include higher populations.

This is also the first year looking at aerial applications of fungicides to corn at the silking/tasseling growth stage. While a couple of sites showed statistically-significant yield increases with fungicides, overall the data was neutral. Bear in mind that disease pressure was far lower across Eastern Virginia than the past two years, so we plan to repeat this experiment next year in case disease pressure is higher.

Corn hybrid selection is as difficult as it has ever been. With more seed companies and more GMO options and seed treatment packages than ever before, it can be very difficult to decide which hybrids to plant. This year, Ernesto gave us a good look at standability so look at the lodging ratings contained in the individual studies. Also, drought conditions hit some plots while others received plentiful rainfall so we got a good look at how hybrids performed under optimum and stress conditions. See individual trials for more details.