Dow AgroSciences
Mycogen® SEEDS

AGRONOMY BULLETIN 10 — PLANTING POPULATION FOR GRAIN CORN

WHAT POPULATIONS ACHIEVE OPTIMUM YIELD POTENTIAL?

SITUATION

Planting corn at the appropriate population can help maximize the crop's yield potential. Specific populations can vary by geography so it is important to consider local conditions as well as ear type, row width and other environmental factors.

Populations should not exceed the capacity of the yield environment.

FACTORS TO CONSIDER

- Ear type of hybrid
- Row width
- Yield environment of planted field
- Plants per acre
- Planting date

ACTION PLAN

1. **Refer to ear type for population recommendations.** Proper planting population partially depends on the ear type of a hybrid. A hybrid with a determinate ear requires higher populations to achieve top yield, whereas a hybrid with a flex ear may produce lower yields when planted at a high population. Planting populations for hybrids with semi-flex ears can vary, as well. Consult technical production information or a trusted agronomic adviser to determine what population is best for each of your selected hybrids.

2. **Determine the row width.** Regardless of row width, leave 4½ inches between plants for proper root development. This spacing is even more important in high-stress environments. Fewer plants are needed in wider rows compared with narrow rows or twin rows.

3. **Look at the impact of the yield environment on planting populations.** In addition to the hybrid type, the yield environment also dictates the ideal number of plants per acre. Higher plant populations are preferred in a high-yield environment with a uniform soil texture. In a low-yield environment with variable soil types, lower plant populations are acceptable.

4. **Realize having more plants per acre isn't always better.** More plants per acre do not necessarily maximize yield. Often, true flex-ear-type hybrids that are planted at extremely high populations can result in more plants with barren stalks and shrunken ears. In general, populations should not exceed the capacity of the yield environment. For example, in irrigated fields where moisture is not a limiting factor, the yield environment can handle a higher population compared with areas where rainfall is less predictable.

5. **Understand how the planting date can impact populations.** Because early planting dates can put more stress on seedlings than later planting dates, a higher seeding rate may be needed if corn is planted before conditions are ideal for emergence and optimum yield potential. Consideration also should be given for uniform planting depth. All plants should emerge at about the same time for optimum yield performance.

SUMMARY

Once you select the right hybrid for the yield environment, determine the appropriate planting population to maximize yield potential. The right population for each hybrid should be based on yield potential, row spacing, limiting environmental factors and timing.

For more information, contact your local Mycogen Seeds customer agronomist or trusted agronomic adviser.

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