Maximizing Production in Dry Beans

Part One

Dry bean production in Manitoba covers roughly 500,000-750,000 acres in any given year. Market classes include navy beans, pinto beans, black beans as the top three with a variety of kidney beans and cranberry beans in smaller acres. The Manitoba Pulse Growers provide a wealth of knowledge on their webpage with regards to all aspects of production and marketing. For more information, visit https://www.manitobapulse.ca/ .

My goal here is to give you a brief overview of things to consider if you are looking at adding dry beans to your rotation or are looking for any new ideas to maximize productivity of your dry bean acre. Dry bean production is not for the feint of heart. They are a high input, high management crop with the potential to have particularly good returns on investment. However, because they are all food grade quality is of the utmost importance.

Market Class of beans covers the type of bean you might grow. Largely navy beans (white), pinto beans and black beans tend to be the most widely grown. These three tend to have varieties that are more upright in stature which helps to make management a little easier. The stature helps to increase the amount of air movement through the canopy which minimizes disease, while the standability makes for easier harvest. Beans such as kidneys and cranberry's tend to be bushier plants that can fall over causing management issues and in turn decreases in quality are more likely.

Plant Stand Establishment is a component of production that includes many things. Soil type is crucial in providing a very low salt, well drained soil in the medium to course textured range. Beans can be successfully planted in wide to narrow rows. Recent information from NDSU suggests narrow rows (14") in black beans and navy beans having a better yield potential and pinto beans yielding better in an intermediate spacing (18-21"). Plant populations of 70,000 in pinto beans to 115,000 in navy beans. Seeding at too high of a rate especially in narrow rows increases your chances of diseases like white mold. More information can be found by watching this video at https://www.youtube.com/playlist?list=PLSOmVfcVwGi2J2o0QFgMRAw7HxuB4PhmA . Seeding in late May and into the first half of June gives you ample time to spread out the seeding of other crops first.

Fertility of dry beans is done mostly with commercial fertilizer. Dry beans are a legume and do make nodules, however at this point there is no widely used inoculant. Typically, growers will add nitrogen at 65-85 lbs/acre depending on the soil test and yield goals. North Dakota and Manitoba numbers are around the average of 70 lbs/acre of nitrogen between soil and fertilizer. If your soil phosphate levels are above 10-12 ppm and addition of 20 lbs of P is sufficient. Research being done in Ontario shows very little response to phosphate. However, what you need to remember is your dry beans will still extract phosphate from the soil and therefore additions of phosphate will need to be made eventually or soil test levels may begin to fall. The same can be said for potash, with 80ppm soil test levels being adequate for growing your dry bean crop. Sulfur also had no influence on the yield in dry beans in trials conducted in Ontario. Again, I think the most important thing you can do is soil test, record your dry bean yield and determine the amount of nutrients that are being extracted from the soil.

You can discuss all aspects of your soil tests with your local Shur-Gro Farm Services Sales Agronomist!

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