DRY BEAN bulletin

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What the Numbers Say About Dry Edible Beans in Manitoba

WENDY MCDONALD, PRODUCTION AGRONOMIST – WEST, MANITOBA PULSE & SOYBEAN GROWERS

NUMBERS JUST IN FROM 2025, tell us that Manitoba farmers have about 208,000 acres of dry edible beans in the ground. This includes 22,000 acres of navy beans (also called white pea beans), 49,000 acres of black beans and 124,000 acres of pinto beans.

"The spring of 2025 for dry bean seeding went well. Soil temperatures stabilized and were on the rise when the black beans went in," explains Ben Martens, a long-time black bean and seed grower from Boissevain, MB.

"A couple things that were remarkable. The emergence and germination were exceptional. Our fields were fairly clean as far as weeds go, but the black beans seemed a little short on account of the warm weather early on and just barely had enough moisture to keep things going. We are a little shorter of moisture than we would like to be, but we did have a wonderful rain, half an inch, mid-July."

"As we move into the end of July, the dry beans are just starting to flower. It seems like a little bit later than previous years. Last year some varieties were noticeably taller. If we could get a little more rain, these dry beans could be very good. They do look good. Some of these fields had an inch and a half of rain all at once and we did have some drowned out areas, due to spotty storms. With moisture lacking in areas of the province this year, we're hoping for a few timely showers to help us achieve yields close to or similar to last year."

PHOTO: WENDY MCDONALD

Ben Martens stands in one of his bean fields near Boissevain, MB.

Manitoba Pinto Bean Production

Year	Total Number of Acres	Total Number of Farms	Provincial Average Yield (lbs/acre)
2024	108,282	344	2,233
2023	80,791	261	2,069
2022	62,799	230	2,362
2021	84,780	300	1,257
2020	93,881	362	2,296
2019	54,126	235	1,324

Source: Manitoba Crop Insurance

Manitoba Crop Insurance numbers from the Variety Yield Data Browser tool, show Manitoba farmers grew about 182,600 acres of dry edible beans in 2024.

A closer look at the 2024 data shows there were 344 farms who grew pinto beans on 108,282 acres with a provincial average yield of 2,233 pounds per acre. Based on acreage, the top two varieties grown in Manitoba were Vibrant and Wind-

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breaker. On average Vibrant was the highest yielding variety. The Rural Municipality of Oakland- Wawanesa saw an average yield of 2,653 pounds per acre from the variety Vibrant grown by six farms for a total of 5,915 acres.

For black beans, 160 farms grew 45,422 acres at an average yield of 2,031 pounds per acre. Eclipse was the most popular variety, followed closely by Blackstrap. Blacktails were the variety with highest average yield provincially. The Rural Municipality of Louise had three farms, who grew 1,695 acres of Blacktails averaging a yield of 3,263 pounds per acre.

For white pea beans (navy beans), there were 42 farms who grew 10,970 acres, averaging a yield of 2,013 pounds per acre. The top two varieties grown based on acreage were T9905 and AAC Argosy.

Across the province, the top yielding variety was AAC Argosy at 2,417 pounds per acre. Three farms totalling 1,090 acres in the Rural Municipality of Portage La Prairie grew it. When comparing each individual municipality, the top yielding variety in the Rural Municipality of Thompson was T9905, grown on four farms, with a total of 1,060 acres being planted at an average yield of 2,531 pounds per acre. The municipality growing the largest number of acres was Glenboro-Cypress, where seven farms grew T9905 on a total of 1,469 acres averaging 2,104 pounds per acre.

Kidney beans were grown on 20 farms for a total of 4,877 acres at a provincial average of 1,943 pounds per acre. The top two varieties by acreage were Pink Panther and RedHawk.

Cranberry beans had a provincial average yield of 1,465 pounds per acre and were grown on 3,698 acres spread out over 23 farms. The top varieties grown were Crimson and Cran34. The Rural Municipality of Rhineland had 888 acres of Crimson grown by seven farms averaging a yield of 1,875 pounds per acre.

Other dry edible beans (mostly Great Northern) were grown on 3,692 acres by 12 farms with an average yield of 2,331 pounds per acre. ■

Digging into Dry Bean Regional Variety Trials: Trends and New Trials in Manitoba

JENNIFER MCCOMBE-THEROUX, REGIONAL VARIETY TRIAL AGRONOMIST, MANITOBA PULSE & SOYBEAN GROWERS

THE MANITOBA DRY BEAN landscape is made up of a diverse mix of market classes including pinto, black, navy, kidney, cranberry and some smaller niche type dry beans. However, the majority of production is concentrated into three market classes: pinto, black and navy beans. These three market classes accounted for 93 per cent of the seeded dry bean acres in 2024, 92 per cent in 2023 and 91 per cent in 2022, which reflects the market demand and opportunity in Manitoba.

Dry beans in Manitoba are grown under both wide-row and

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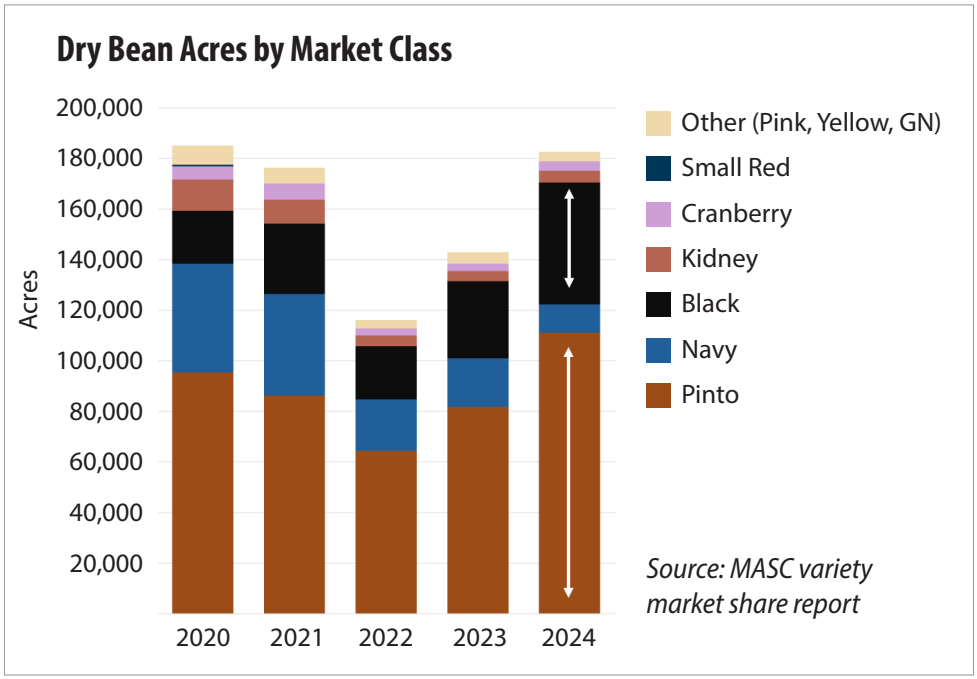

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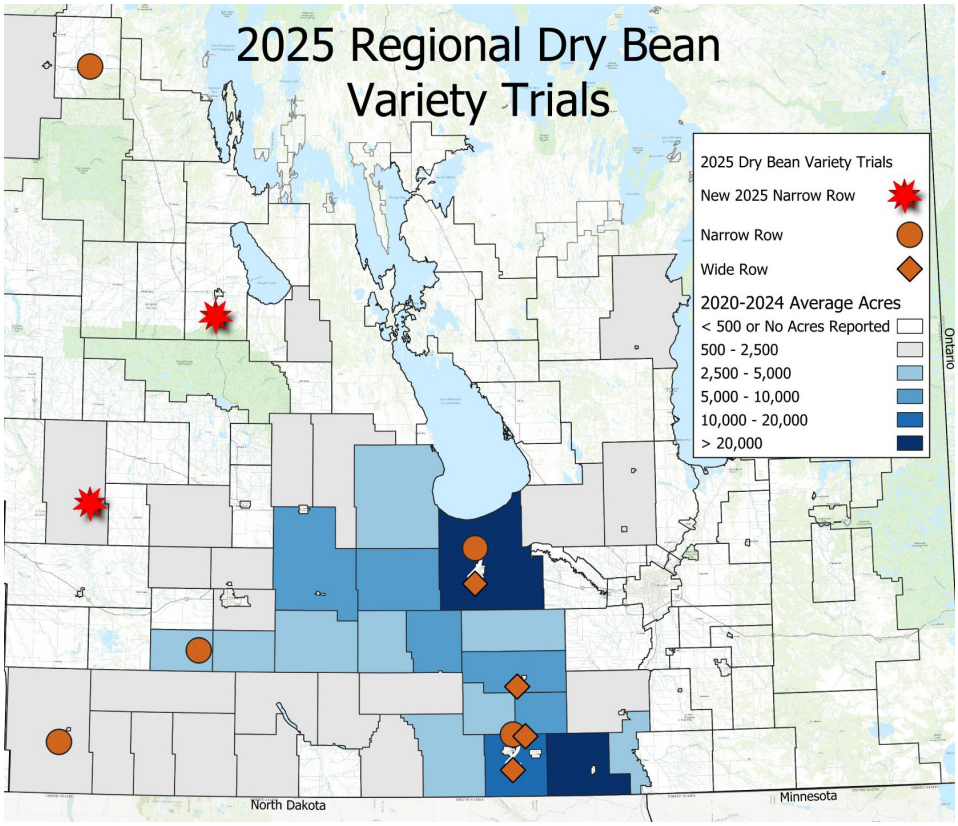

Source: MASC harvested acres from 2020 to 2024

narrow-row systems, depending largely on market class, variety and available equipment. Variety selection is important in narrow-row systems and farmers should choose a variety with upright growth habits and higher pod height for effective straight cutting. This information can be found in MPSG's Pulse and Soybean Variety Guide. Among the market classes pinto, navy and black beans are most commonly grown under narrow-row systems. With narrow-row acres increasing in Manitoba and acres expanding both west and north two new additional dry bean sites have been added in Dauphin and Hamiota to provide data for these expanding growing areas.

The dry bean regional variety trials are conducted in both wide-row (>24 inches) and narrow-row (<15 inches) production to provide specific variety information for both production systems. In 2025 wide-row trials are being conducted in Carman, Portage, Morden and Winkler and narrow-row trials are being conducted in Morden, Melita, Portage, Souris, Swan River and new this year in Dauphin and Hamiota. This data provides regional, practical information to help with variety selection and information when considering diversifying into dry beans on your farm.

The data you can find from these trials from the Yields by Location table:

- Annual yields per location
- Long-term yield per cent of check
- Average days to maturity (+/- check)

The data you can find in the wide-row Variety Description table:

- Long-term yield per cent of check
- Average days to maturity (+/- check)
- Site years tested to show the stability of results over time
- Thousand seed weight
- Lodging score
- Pod height (per cent >5 cm)
- Disease ratings (white mould, common bacterial blight severity and incidence)

Stay tuned for the upcoming trial results. If you would like these straight to your inbox, sign up for the Bean Report. ■

MPSG's Pulse and Soybean Variety Guide

The Bean Report

Seedling Issues in Dry Beans

WENDY MCDONALD, PRODUCTION AGRONOMIST – WEST, MANITOBA PULSE & SOYBEAN GROWERS

EARLY IN 2025, SOME DRY EDIBLE bean fields faced challenges. Using seed with low moisture content, combined with handling and bouncing through air seeders, caused cracking in some dry bean seed coats.

It's possible to determine your percentage of seed coat cracking by performing a soak test on the seed in the field. You can then readjust your seeding rate if you're finding levels of seed coat cracking at higher than 10 per cent.

Dry bean plants that emerge from seeds with cracked seed coats can turn into "bald head" plants (image one). Typically, these occur in low percentages, but they are easy to spot in the field. "Bald head" dry beans have a damaged or missing growing point, so the plant, rather than developing normally, is stunted and will be non-productive.

Although symptoms present in the field can initially mimic bald head, they may be the result of rapid growth due to warm temperatures. In spring 2025, this was the case in some fields we visited (image two).

We also noticed dry bean seeds that seemed a little confused as which way to start growing (image three). We suspect this was due to seed being planted into warm soil but then experiencing cold rain water and dealing with other stress, in addition to having a possible cracked seed coats.

Some dry bean seedlings were found to be infected by fusarium root rot. When digging up plants with yellowing leaves (image four), reddish-brown lesions, forming on the root, were found (image five). These caused stunted growth, which is known to reduce yield. ■

PHOTOS: WENDY MCDONALD

Image one: Dry beans in June 2025 near Lake of the Prairies, MB.

Image two: A dry bean plant in June 2025 near Melita, MB.

Image three: Dry bean plant in June 2025 near Plumas, MB.

Image four: Dry beans in June 2025 near Plumas, MB.

Image five: Reddish-brown root lesions on abnormal plants.

An Evolution in Dry Bean Nitrogen Management – A Made in Manitoba Opportunity!

TERRY J. BUSS, PRODUCTION AGRONOMIST – EAST, MANITOBA PULSE & SOYBEAN GROWERS

WHEN IT COMES TO THE PRODUC-tion of dry beans in Manitoba, we're fortunate to have a Manitoba dry bean research community that's both practical and forward looking. The Manitoba Pulse & Soybean Growers (MPSG) On-Farm Network, the Soybean and Pulse Agronomy Lab - a joint collaboration between the University of Manitoba (U of M) and MPSG and Agriculture and Agri-Food Canada (AAFC) - are all key players.

For a food crop like dry beans, sustainable production practices and consumer perceptions must be priorities. Dry beans are capable of nitrogen fixation to some degree but ensuring optimum soil nitrogen (N) levels through fertilizer use is standard practice. Is there an opportunity to decrease production costs while increasing sustainability and customer appeal for Manitoba produced dry beans through biological N fixation?

Applied N and Dry Beans

Kristen MacMillan, MPSG-UM agronomist in residence, and leader of the Soybean and Pulse Agronomy Lab at the U of M, along with Romona Mohr with AAFC Brandon, conducted several replicated small plot trials testing dry bean yield responses to a range of N rates from 2017 to 2022. In the U of M work, yield was increased only when the highest N rate (140 pounds per acre) was applied. But, based on return on investment (ROI), the economic optimum across the trials was to apply no N fertilizer at all. In the AAFC work, there were no dry bean yield increases at different N rates as compared to the unfertilized check in nine of 10 site years.

PHOTO: CASSANDRA TKACHUK

Decreasing nodulation with increasing nitrogen fertilization from the field scale trial for the 2019 On-Farm Network.

The MPSG On-Farm Network conducted six field scale trials from 2019 to 2023 testing yield response of dry beans to a range of N rates. Yield responses to N rate were inconsistent across trials with only one trial demonstrating a significant yield increase of 151 pounds per acre when 70 pounds per acre of N was applied. That yield increase was profitable when the cost of N was less than $1.00 per pound and bean prices were greater than 50 cents per pound.

Nodulation and Dry Beans

In the work outlined above, the formation of effective N fixing nodules on dry bean roots by native rhizobia populations was found. The numbers of nodules per plant varied across research sites and years but the trend of decreasing nodulation with increasing levels of applied N was noted. The conclusion drawn was that biological N fixation was contributing in a significant way to the N requirements of the dry bean crops grown.

There continues to be a limited number of commercial dry bean rhizobium inoculants available. Regardless, products were sourced for both small plot and field scale evaluations from 2019 to 2023. In small plot research, the application of inoculants resulted in increased levels of nodulation compared to uninoculated checks but this wasn't consistent across products, sites or years. Economic dry bean yield increases due to the use of inoculants were noted on two occasions. In four field scale trials in 2023, no significant increases in dry bean plant nodulation or yield were found as compared to uninoculated checks.

The Future?

The research has demonstrated that nodulation of dry beans is occurring and that biological N

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fixation is contributing to the N requirements of dry bean crops in Manitoba. Clearly there's an opportunity to better understand and then to increase the ability of biological nitrogen fixation to supply N to dry beans. Manitoba research continues on measuring the biological N fixation of Manitoba grown dry bean varieties, examining the effectiveness of various inoculant products as they become available and exploring the native rhizobia strains nodulating dry bean plants.

Bottomline, a made in Manitoba evolution of dry bean production practices that will decrease production costs while increasing sustainability and customer appeal for Manitoba produced dry beans is definitely in our future. ■

Interested in Taking Part in the On-Farm Network?

THE ON-FARM NETWORK (OFN) WORKS WITH DRY BEAN farmers to conduct scientifically robust field scale research using your own equipment on your fields with minimal time commitment. Please join us for the 2026 field season.

THE FOLLOWING TRIAL OPTIONS ARE AVAILABLE FOR 2026 BUT OTHER TRIAL IDEAS ARE ENCOURAGED:

- Nitrogen rates
- Seeding rates
- Fungicide
- Inoculant
- Row spacing
- Strip tillage
- Precision agriculture experiments
- Non chemical desication

On-farm research can help improve your production practices and create production savings. By being part of the On-Farm Network, you gain insider access to results of all of on-farm research projects and receive support from qualified agronomists.