

Fenugreek is a non-host crop for *Aphanomyces* root rot and provides an alternative pulse crop option for growers struggling with *Aphanomyces* in peas and lentils. The lack of agronomic controls such as seed treatment, inoculants, herbicide etc. are current barriers to increasing adoption of fenugreek in Saskatchewan. This project aimed to establish tolerance and efficacy data of a commonly used pulse seed treatment in western Canada, Vibrance Maxx RFC in fenugreek. The trials were conducted at Indian Head, Prince Albert, Scott, and Swift Current in 2022 and 2023. Treatments consisted of an untreated check, Vibrance Maxx RFC at 100 ml/100 kg of seed (1× rate), Vibrance Maxx RFC at 200 ml/100 kg of seed (2× rate), and Apron XL at 10 ml/100 kg of seed (standard rate).

Seed treatment had a significant effect on plant density at 2-3 weeks after seeding (WAS), but not at 3-4 weeks after emergence (WAE). Apron XL reported the highest plant density at 2-3 WAS across four locations (Table 1). Plant height was used as an assessment for plant health and the results indicated that the 2× rate of Vibrance Maxx RFC reduced plant height by 8% compared to the untreated check at 3-4 WAE (Figure 1). This is a noteworthy effect as a high seed treatment rate of Vibrance Maxx RFC may in fact hinder plant development rather than provide a boost. On average over 8 site-years, fenugreek yields were not significantly different between seed treatment products. In 2023, all sites achieved yields greater than the average (1500 kg/ha) except the Swift Current site; [Indian Head (2721 kg/ha), Prince Albert (2331 kg/ha), Scott (2237 kg/ha), Swift Current (850 kg/ha)]. The Swift Current site experienced a significant hailstorm which greatly reduced yields. Root rot severity was reduced with application of seed treatment products; however, differences between products were minimal. Greater differences between products may have been observed depending on the type of pathogen species present in the soil.

In conclusion, performance of fenugreek was improved and root rot symptoms lessened with application of seed treatments, although differences between products were minimal.

Table 1. Mean plant density (plants/m²) for fenugreek planted with seed treatment products across four sites in Saskatchewan, 2023.

Product	Plant Density (plants/m ²)
At 2-3 WAS	
Untreated Control	176 a
2× Rate Vibrance Maxx RFC	176 a
1× Rate Vibrance Maxx RFC	170 a
Apron XL	183 a
Overall Mean	176
p-value	0.050
At 3-4 WAE	
Untreated Control	167 A
2× Rate Vibrance Maxx RFC	164 A
1× Rate Vibrance Maxx RFC	156 A
Apron XL	165 A
Overall Mean	163
p-value	0.081

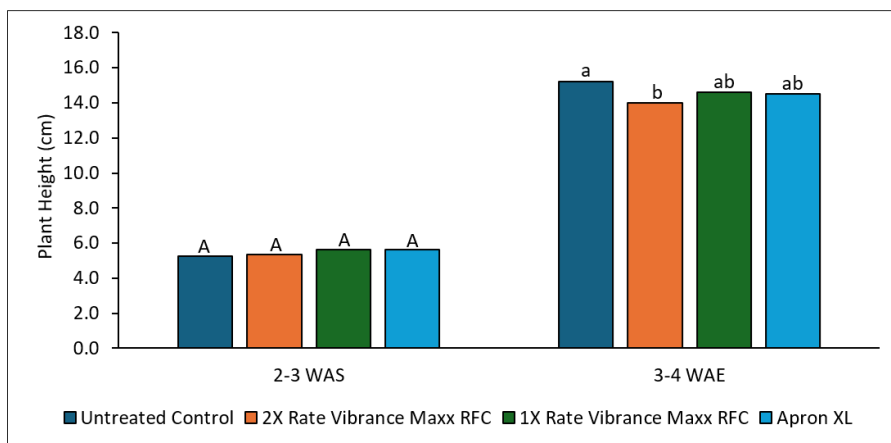


Figure 1. Effect of seed treatments on plant height (cm) of fenugreek at 2-3 weeks after seeding (WAS) and 3-4 weeks after emergence (WAE) across four sites in Saskatchewan, 2023. Means followed by similar upper-case or lower-case letter are not significantly differ.

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