ZFSelect® Seed NEWS

A publication of Zeeland Farm Services, Inc.

Fall 2022

Short season soybeans can work for you

By Ben Glass, *ZFS Seed Division Manager*

I am fortunate to talk with many excellent farmers across Michigan and into Ohio and Indiana each season. Besides wildlife damage, one topic that keeps coming up is around planting shorter maturity soybeans.

I know part of the consideration is being able to plant small grains after soybeans, as this has been a struggle in past seasons. There is also the growing desire to plant cover crops.

First, when you look at trial data this past season, the traditional thought that you give up yield when planting shorter varieties is no longer holding quite as true.

Shorter day options that were not available just a few years ago are challenging longer maturities for the top spots in plots, but are they suitable for your management style and soils?

The local data available to give good insight on these early varieties is often very limited. Planting varieties substantially outside of the optimal maturity zone increases the risk of a disappointing harvest due to plant growth stages occurring at potentially more stressful times.

You are also inherently not taking advantage of the full growing season. There is a lot of risk management in farming, and one of the most basic is spreading your risk with crop maturities to take

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ZFS stock photo

KEEP IT SHORT: Improved seed technology and a wider variety of maturities make short season soybeans a viable option for many growers.

ZFSelect® 2023 grower meetings

Feb. 8, 2023
Bavarian Inn
1 Covered Bridge Ln.
Frankenmuth, MI 48734

Feb. 10, 2023
ZFS corporate offices
2525 84th Ave.
Zeeland, MI 49464

Keep an eye on your mailbox, social media and the ZFS website for more information.

In This Issue:

Can potash be eliminated to reduce costs?

By Mike Staton and Kurt Steinke, MSUE Extension

The high price of potash has many soybean producers asking if they can eliminate applications of potash without adversely affecting short-term or long-term yields.

Fortunately, most producers have the information they need in the form of recent soil test reports to answer this question on a field-by-field basis.

This article demonstrates how potassium soil test levels can be used to help producers make fertilizer allocation decisions.

Another important piece of the puzzle is the Tri-State Fertilizer Recommendations, which contains research-based information that supports MSU's nutrient management recommendations for corn, soybeans, wheat and alfalfa.

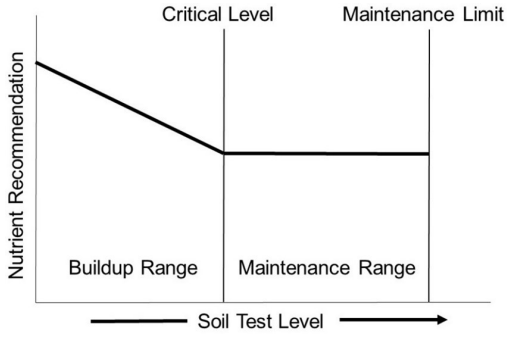
The Michigan State University Extension nutrient recommendation framework for K (Figure 1) includes the build-and-maintain philosophy. When soil test levels are below the critical level, K fertilizer recommendations are higher than crop removal to build up K levels in the soil. At soil test levels between the critical level and the maintenance limit, K fertilizer is recommended at the rate of crop removal to maintain soil test level, even though there is only a 3 to 5 percent chance of increasing yields.

Maintaining K soil test levels in the maintenance range is critical to producing high yields in the long-term. It also takes time to build K soil test levels once they fall below the critical level. When soil test levels exceed the maintenance limit, no additional nutrient applications are recommended, as soil test levels will not drop below the critical level.

The critical levels and maintenance limits for K are listed in Table 1.

Photo courtesy DTN

TO SPREAD, OR NOT TO SPREAD?: The skyrocketing cost of fertilizer has growers looking for ways to reduce usage. According to MSUE, soil test levels are a key component to calculating how to allocate fertilizer.



MSUE illustration

FIGURE 1: Michigan State University Extension's Phosphorus and Potassium Recommendation Framework.

Cation Exchange Capacity (meg/100 g)	*Critical Level (ppm)	Maintenance limit (ppm)
≤5	100	130
>5	120	170

MSUE table

TABLE 1: Potassium critical levels and maintenance limits for soybeans (based upon revised Tri-State Fertilizer Recommendations).

Producers can make important potash allocation decisions by comparing their K soil test levels to the values reported in Table 1. If your K soil tests are at least 10 ppm above the critical level, eliminating fall or spring potash applications should not adversely affect 2023 soybean yields or drop K soil test levels below the critical level. The K levels reported in Table 1 are Mehlich III values. If your soil test reports K levels as ammonium acetate values, you can easily convert these to Mehlich III values by multiplying by 1.14.

*These soil test levels apply when K is reported as Mehlich III values and not converted to ammonium acetate equivalent.

If your soil test levels are less than 10 ppm above the critical levels, a maintenance level K application is warranted to keep the soil test from falling below the critical level. Because soybeans remove 1.15 lbs of K_2O per bushel, the maintenance application rate for a 60 bushel per

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Product Spotlight

ZFSelect® 1326

Attributes

- Non-GMO soybean variety
- Trial plot leader returns for 2023
- 15- or 30-inch rows

PRODUCT CHARACTERISTICS	RATING
Relative maturity	2.6
Yield	1
White mold	3
Processor preferred	Yes
Standability	3
Emergence	2
Soybean cyst nematode	R
Phytophtora	3
Plant type	B

1 = Best 5 = Poor R = Resistant B = Bush

Potash allocation (con't from Page 2)

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acre soybean crop is 69 lbs. of actual K_2O, or 115 lbs. of potash (0-0-60), per acre.

Potash applications are highly recommended whenever the K soil test level is below the critical level, as a yield response is expected. Producers should be aware of potential saltation issues that can occur with high rates of K fertilizer on fine-textured soils. Environmental factors may exacerbate these issues.

How much will my potassium soil test levels change if I decide not to add potash this year?

Soil texture plays a huge role in answering this question, with K soil test levels dropping faster in coarse-textured soils than in fine-textured soils. In general, soil test K levels will be reduced by 1 ppm for every 8 to 20 pounds of K_20 removed by the crop.

An example calculation demonstrating how potassium soil test levels are expected to change when potash will not be applied to very coarse-textured soils and very fine-textured soils is provided below:

For 60 bushels of soybeans/acre

- 60 bu/acre x 1.15 lbs. K_2O/bu = 69 lbs. K_2O/acre removed by the crop
- 69 ÷ 8 = ~9 ppm decrease in the K soil test level in coarse-textured soils
- 69 ÷ 20 = ~4 ppm decrease in the K soil test level in fine-textured soils

Recent soil test reports and the Tri-state Fertilizer Recommendations will prove to be very valuable this year as they provide essential information for making potash allocation decisions.

Short season soybeans (con't from Page 1)

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advantage of different growing conditions during the season. Also, remember, if you want to be able to harvest the variety early, the harvest date is also influenced by when you plant it. Any early variety planted late will not necessarily be ready any earlier than a longer maturity planted early. While shorter maturity varieties have a place on the farm, we need to ensure we do not forget about the fundamental concepts while we explore ways to take advantage of new opportunities.

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ZFS earns ProTerra membership

Zeeland Farm Services would like to thank the growers who participated in a recent survey that helped ZFS earn membership into the ProTerra Foundation, which has a long-standing history and experience in promoting sustainability in the food and feed supply chain and segregated non-GMO materials.

It is because of your diligence in the areas of sustainability and conservation that ZFS was able to gain membership into this prestigious organization.

Moving forward, it is our hope that we can continue to work together to protect the environment and our valuable farmland and help maintain its productivity.

ProTerra™

2022 Soybean Test Plot Yields

		South Region				Central Region		
	Maturity	MSU Hillsdale	MSU Lenawee	MSU St. Joseph		MSU Allegan	MSU Saginaw	MSU Sanilac
<2.0 Maturity								
e13H988	1.3					53.5	39.5	67.2
ZFS 1721	1.7					58.4	53.2	74.6
2.0-2.5 Maturity								
ZFS 2221	2.2	83.0	74.8	78.1		59.0	60.6	71.4
ZFS 24019HO	2.4	68.3	66.8	52.2		53.7	49.8	70.6
ZFS 2521HO	2.5	74.5	67.1	56.0		58.4	58.0	69.7
>2.5 Maturity								
ZFS 1326	2.6	80.4	77.9	77.0		58.0	61.3	75.3
ZFS 2819HO	2.8	75.8	64.4	66.4		54.4	59.4	58.4
Location Average		78.7	71.8	68.8		57.7	56.7	72.4