



April 2012

Soil Testing and Fertility for Juneberry/Saskatoon Production

Juneberries/saskatoons have been observed yielding good harvests in a variety of soil types and fertility conditions. Even though there are no stringent fertilization guidelines for Juneberries/ saskatoons, growers must correct for nutrient deficiencies to ensure good yields of fruit and maintain plant health.

Pre-planting soil testing

Take a soil sample from the intended Juneberry/saskatoon orchard site for a complete analysis. The soil laboratory will probably not be able to provide soil amendment recommendations for Juneberries/saskatoons, so these guidelines will help you see if your soil is deficient in any of the key nutrients:

- Nitrogen (N) range: 60 – 120 lbs. / acre
- Phosphorous (P) range: 120- 250 lbs. / acre
- Potassium (K) range: 750 – 1400 lbs. / acre

Nutrient management

The following guidelines are intended to provide proper nutrient management:

To have a record of baseline soil fertility, take a soil sample prior to establishment and submit the soil to a testing lab for a complete soil analysis. The sample should represent the

profile of the top 10 - 12 inches of soil, collected from several areas around the proposed orchard. The analysis should include parameters typical of fruit production: pH, organic matter, nitrogen, potassium, phosphorus, magnesium, calcium, manganese, zinc, copper, iron and boron.

Contact your county Cooperative extension office for details on taking and submitting a soil test, which will range from \$15- \$30. The testing lab will probably not be able to provide fertility recommendations for Juneberries/saskatoons, but the grower should know what soil conditions are present early on.

Some nutrients, like potassium, phosphorus, magnesium and calcium, are difficult to supplement after the plants are established. When possible, amend the soil with these materials prior to planting.

Incorporate natural organic matter along the rows before planting, and at regular intervals during cultivation. Finished compost is an excellent material to increase the overall biological health and diversity of soil in a Juneberry/saskatoon orchard. Apply composted plant matter, rotted manure, or related soil amendments like fish emulsion or kelp and seaweed products.

Nitrogen is important for Juneberry/saskatoon growth and blossom development. The key is to maintain nitrogen in the soil consistently. As a soluble nutrient, it can leach out of the soil during irrigation.

Split applications of fertilizer are preferred, resulting in lower fertilizer rates, more

Component		Mod. Morgan ppm	Mod. Morgan lbs/acre	Morgan Equiv. lbs/acre	Soil Test Levels					
					Very Low	Low	Medium	High	Very High	
Phosphorus (P)		10	20	24	*****					
Potassium (K)		243	487	491	*****					
Calcium (Ca)		971	1,943		*****					
Magnesium (Mg)		183	366		*****					
Water		Calcium Chloride		No Till		Organic Matter (%)	Nitrate-N (ppm)	HWWS Boron (lbs/acre)	Soluble Salts (mmhos/cm)	Total N (%)
pH	Buffer pH	pH	Buffer pH	pH	Buffer pH	2.8				
6.6	6.2									
Other Nutrients, Mod. Morgan, lbs/acre										
Sodium (Na)	Aluminum (Al)	Sulfur (S)	Zinc (Zn)	Manganese (Mn)	Iron (Fe)	Copper (Cu)	Boron (B)	Molybdenum (Mo)		
	69.1		1.8	16.1	4.4					

frequently applied. For example, an application of 100 lbs. per acre of 15-15-0 fertilizer should be applied at 33 lbs. in early spring, 33 lbs. after petal fall, and 33 lbs. in autumn.

Growers must monitor the color and physiology of leaves and stems for symptoms of nutrient deficiency. For example, the mature leaves may appear pale, which could indicate a nitrogen deficiency. Yellowing of the leaves in between dark green veins indicates an iron deficiency.

The information presented in this publication was supported in part by the Northeast Sustainable Agriculture Research and Education program (NESARE) under a 2010 Partnership Grant.

On-line at www.juneberries.org

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