

# MEASURE AND MANAGE

## Asparagus

Tissue sampling protocols for asparagus

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The spears can be tested in the spring as well as the ferns after harvest in mid and late summer

Spears should be sampled when they are 8 to 10 inches tall. The spears are growing from the crown reserves that were stored after last years summer growth. Submit 8 to 10 spears

### Mineral Composition of Spears

N	P	K	Mg	Ca	Zn	Mn	Cu	Fe	B
4.63	0.57	3.4	0.16	0.36	75	28	20	400	27

These values were associated with an extended shelf life of 19 days post harvest stored at 2 degrees C and 95% relative humidity. Positive correlations were found for calcium, magnesium, iron and copper.

### Mid and Late Season Fern Composition

N	P	K	Mg	Ca
2.4-3.8	0.3 -0.35	1.5-2.4	0.15-0.2	0.4-0.5
Zn	Mn	Cu	Fe	B
20-60	10-160	6-11	40-70	50-100

Sample 18 to 36 inches of mature ferns at mid growth. (Late June to mid August) Submit 6 to 8 ferns per sample.

Fertility requirements of established asparagus are modest. Before spear emergence apply up to 50 lbs each of N, P, K, and incorporate shallow. Soil testing is the most appropriate way to determine nutrient needs for establishment and maintenance of asparagus stands

Soil pH is best between 6.8 to 7. However pH up to 7.5 is acceptable if micronutrient levels are high. For new plantings that require pH adjustment with limestone, plough down half the rate and incorporate the other half by secondary cultivation the year before planting. This assures thorough incorporation of limestone and facilitates reaction and allows time for pH adjustment to occur. Ag Index 75 lime may need 3 to 4 months to fully react. Coarse lime with Ag-Index 25 will need 3 times the rate and up to a year or longer to react and change pH.

Although a deep rooted perennial the **water needs are high**, especially after harvest. Irrigation in late June and July to maintain vigorous top growth is important. The top growth provides the energy and nutrients to restock the crowns so they can support spear production next spring. Irrigation is especially important if the spring harvest season has been dry. Dry soil may delay development of spear and fern growth. Withholding irrigation in the fall may encourage dormancy. Late season fern growth may use up stored carbohydrates that otherwise would be used next spring for spear development.