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MINISTRY OF AGRICULTURE
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Aluminum soil test foils growers

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Occasionally, on some soil reports, you may find aluminum reported. Each season there are questions about whether or not there should be any concern about the levels reported.

It is true that available aluminum (Al3+) can be toxic to plants. But aluminum is found in several different forms in the soil, depending on the soil's pH. These other aluminum forms are not considered to be toxic to plant growth. To tell if aluminum could be a problem, check the reported soil pH.

At a soil pH 4.0 - 5.0 Aluminum (Al3+) may be a problem in a soil with a pH below 5.0, especially for aluminum sensitive plants. This available aluminum inhibits plant root growth.

At a soil pH 5.5 - 6.0 When the soil pH is between 5.5 and 6.0, aluminum (Al3+) is not likely to be a problem. The aluminum is primarily in a hydroxyl form (OH?) and is not toxic to plants.

At a soil pH 6.0 - 7.0 At this soil pH, the soil does not contain any exchangeable aluminum (Al3+). When the soil pH is above 6.0, Al3+ is almost certainly not a problem.

If your soil pH is low enough to indicate possible aluminum toxicity problems, lime your soils as indicated by your soil test report. For most soils in Ontario, the reported aluminum level may be interesting, but it contributes little to improving your management of your crops.

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