

Advice on Lowering Soil pH

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Interest in establishing blueberries is increasing. From a soil pH perspective, establishment is often easy because blueberries are well adapted to the acidic soils very common across our state. However, when sites are chosen that have been limed for many years to accommodate other crops, questions arise about the best way to "correct" soil acidity prior to planting.

The NCDA&CS soil testing section recommends

a pH of around 4.8 for blueberries, but the crop can tolerate lower pH. To prepare a site for production, NCDA&CS suggests taking soil samples at two different depths: 0–6 and 7–12 inches. If test results indicate a significant disparity in soil acidity between the two samples, deep plowing, which mixes the more acid lower soil with the less acid upper soil, may be a good option.

In cases where soil pH needs even further reduction,

elemental sulfur (90% S) should be applied. It is available in both powder and pelleted forms. Sulfate-sulfur is not an effective option; it has no effect on pH.

Rates of sulfur application depend on current soil pH, soil type and target pH, but range greatly depending on these conditions. As much as 400–800 lb/acre may be required to lower soil pH by a single unit, for example, from 6.0 to 5.0. The lower rate is most appropriate for sandy soils with little organic matter and the higher rate is most appropriate for clay soils.

Lowering soil pH is a relatively slow, trial-and-error process that can take several months. The best approach is to apply half the expected rate, re-evaluate pH in six months and apply more only if necessary. Sulfur application will be most effective if it is incorporated into the soil during land preparation; periodic cultivation after initial incorporation may benefit reaction.

Note: If the crop will be irrigated, it is also advisable to submit source water samples for analysis. Irrigation with high alkaline water can exacerbate a soil pH problem.

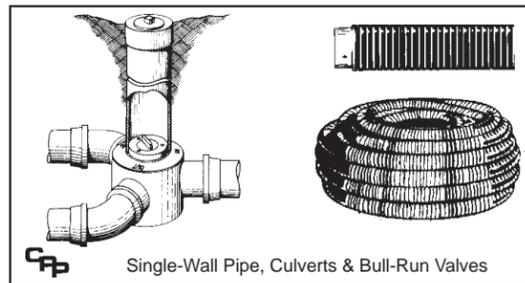
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