

NEW LATE-SPRING SOIL NITRATE TEST PUBLICATION

John Sawyer and Antonio Mallarino, Professors, Department of Agronomy, Iowa State University

A new Extension and Outreach publication, [Use of the Late-Spring Soil Nitrate Test in Iowa Corn Production](#) (CROP 3140), has replaced the previous publication (PM 1714). The publication is available from the [ISU Extension and Outreach online Store](#) at <https://store.extension.iastate.edu/Product/Use-of-the-Late-Spring-Soil-Nitrate-Test-in-Iowa-Corn-Production>.

Publication update

The publication provides an overview of the test, research on correlation and calibration, specific procedures for using the test, and interpretation of test results. The basics and interpretation of the test are generally the same as the past. Guidelines are now specific for interpretation in manured fields and corn following alfalfa, and an additional soil test category was added for those interpretations.

Figures have been included to document research on correlation and calibration of the test over time. Also, additional information was added providing more detail explaining various aspects of the test and soil test reliability and precautions on use.

A major change was removal of nitrogen rate guidelines for corn (non-test based) as those are now in the [Nitrogen use in Iowa Corn Production](#) (CROP 3073) and the [Corn Nitrogen Rate Calculator](#) (<http://cnrc.agron.iastate.edu/>). The publication focus is now just on the late-spring soil nitrate test.

Considerations for use in the spring of 2017

The late-spring soil nitrate test sampling time is when corn is six to twelve inches tall (measured from the ground to the center of the whorl). That timing is usually late May to early June. With some of the corn planted late this year, and the cool spring periods slowing corn growth, consider collecting soil samples in early June even if the corn is not to the suggested height. This sample timing caveat is described in the time and depth of sampling section of the publication.

There have been some areas of the state with greater than normal rainfall this spring. Therefore, consider using the adjusted soil test critical value of 20-22 ppm instead of 25 ppm if you've had more than 20% above normal precipitation since April 1. This adjustment is explained in the test result interpretation section.

Resources for nitrogen rate decisions

[Corn Nitrogen Rate Calculator](#) – <http://cnrc.agron.iastate.edu/>.

[ISU Extension and Outreach Soil Fertility Web Site](#) – <http://www.agronext.iastate.edu/soilfertility/>.

Soil Fertility: Current Topic

May 25, 2017

[Nitrogen use in Iowa Corn Production](https://store.extension.iastate.edu/Product/Nitrogen-Use-in-Iowa-Corn-Production) (CROP 3073) -

<https://store.extension.iastate.edu/Product/Nitrogen-Use-in-Iowa-Corn-Production>.

[Concepts and Rationale for Regional Nitrogen Rate Guidelines for Corn](https://store.extension.iastate.edu/Product/pm2015) (PM 2015) –

<https://store.extension.iastate.edu/Product/pm2015>.