



# Cover Crop Nitrogen Calculator

## Get the most from your cover crops' nitrogen supply

### The Challenge

For growers seeking to reduce inputs while maximizing profits and sustainability, practices such as reduced tillage, integrated weed management, and cover cropping are key. Cover cropping can decrease soil erosion, improve soil health, crowd out weeds, conserve water, and impact nitrogen management of subsequent cash crops. Estimating nitrogen release from cover crops is challenging but crucial to applying the right amount of fertilizer at the right time.

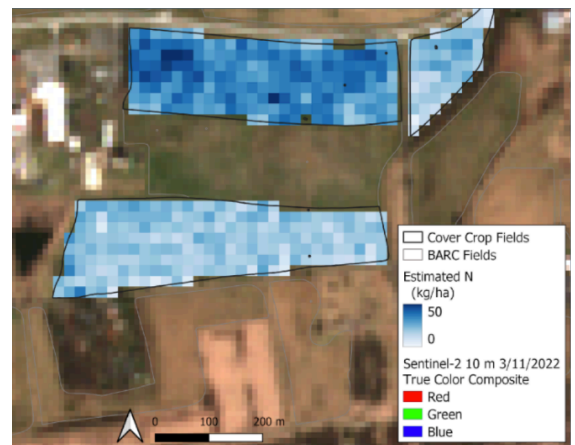
### Our Response

To help farmers across the U.S., we developed the online Cover Crop Nitrogen Calculator ([covercrop-ncalc.org](https://covercrop-ncalc.org)), a nitrogen release and biomass decomposition calculator. We partnered with growers in 25 states to identify how climate, soil, and management practices influenced cover crop decay and resulting nitrogen availability. The calculator provides tailored information on cover crop residue (meaning mulch) persistence and the amount and timing of nitrogen availability (see image at right). It also estimates cash crop nitrogen needs and makes fertilizer recommendations.

### How to Use the Cover Crop Nitrogen Calculator

1. Create a free account for a personalized history and seamless cross-device experience (optional).
2. Indicate the field's location by entering an address, moving the pin, and/or drawing a polygon. The tool pulls soil properties (organic matter and bulk density) from NRCS's Soil Survey Geographic database (SSURGO), daily soil moisture and temperature from Iteris, and weather data from our own weather API to estimate surface residue environmental conditions. Adjust these values if you wish.
3. Enter the cover crop species, termination date, and biomass.
4. Enter the cover crop forage quality, or let the tool estimate it for you.
5. Enter cash crop species and planting date; the tool supplies the yield goal and target nitrogen fertilizer rate; you may adjust both.
6. After the nitrogen output calculation, choose to view Nitrogen Released or Residue Remaining.
7. Select the Advanced button for more details.

We're improving the Cover Crop Nitrogen Calculator as new data and technologies become available. Upcoming revisions will offer users the choice to enter cover crop forage quality values themselves or opt for satellite-derived calculations. The output of satellite calculations will be maps showing the amount of nitrogen from residue (shades of blue at right) that will impact fertilizer applications.



Satellite-derived nitrogen calculations



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