

These results have been converted into a table showing the relationship between the total percent nitrogen and PAN (Table 1). This table is found in the calculator's *Table 1* worksheet. The algorithm representing this relationship is incorporated into the calculator so that the 28-day and full-season PAN estimates are automatically provided in the green columns E and F in the *fertilizer analysis* and *nutrients provided* worksheets (Figures 1 and 2).

The full-season results are from field trials. The 28-day PAN results are from a combination of field trials and laboratory incubation studies. The field studies were done in Corvallis, Oregon. The laboratory incubation studies were done at 70°F. Field conditions such as soil moisture and temperature, agronomic practices such as the timeliness of fertilizer incorporation, and climatic conditions such as rainfall, air temperature, and wind can affect the rate of mineralization and nutrient loss to the environment.

Data for this PAN model were from solid organic fertilizers applied to soil. These PAN estimates are not designed for use with liquid fertilizers, but calculations for other nutrients based on guaranteed label analyses are valid.

Table 1. Relationship between the total percentage of nitrogen, C:N ratio, and PAN that is used in the calculator. Shown here as a percentage of dry weight.

Amendment total N % dry weight	Amendment C:N	Plant-available N estimate	
		28 days % of total N	Full-season % of total N
Uncomposted materials			
1	35:1	<0	0
2	18:1	0	15
3	12:1	15	30
4	9:1	30	45
5	7:1	45	60
6	<6:1	60	75
7	<6:1	60	75
8+	<6:1	60	75
Composts			
1	30:1	0	5
2-3	10:1 to 15:1	5	10

ADDITIONAL INFORMATION

We invite you to use the fertilizer calculator and let us know how it works for you. We will continue to update the calculator based on your input and new research, so be sure to use the most recent version by registering to receive updates or regularly checking the OSU Small Farms website. *We encourage you to register using the online form so that you can receive information about updates.* It is also helpful for us to know who is using the calculator so that we can make improvements that meet your needs. If you would like help using the calculator, please contact Nick Andrews at OSU Extension. Phone: 503-678-1264, ext. 149. E-mail: nick.andrews@oregonstate.edu