



## Suggested Micronutrient and Secondary Nutrient Rates

The Micronutrient rates suggested below are recommendations based on general wide-ranging geographic requirements. Recommendations are compiled and adapted from a wide variety of sources.

Application rates may vary for different soil types, climates, crop conditions, crop variety, and local agronomic practices.

Recommended rates assume the fertilizer meets minimum water-solubility requirements. Less soluble products will require proportionally higher application rates.

### Rates Are Pounds of Actual Nutrient per Acre

	<b>Boron (B)</b>	<b>Copper (Cu)</b>	<b>Iron (Fe)</b>	<b>Magnesium (Mg)</b>	<b>Manganese (Mn)</b>	<b>Sulfur (S)</b>	<b>Zinc (Zn)</b>
<b>Alfalfa</b>							
Broadcast	1 - 4	1 - 3	3 - 5	20 - 30	3 - 10	15 - 40	2 - 4
Band	*	*	*	*	*	*	*
<b>Dry Beans</b>							
Broadcast	0 - 1	1/2 - 1	10 - 30	15 - 20	5 - 30	10 - 40	5 - 20
Band	0	1/8 - 1/2	3 - 10	5 - 10	1 - 5	3 - 6	1 - 5
<b>Cole Crops</b>							
Broadcast	1 - 4	1 - 5	5 - 10	20 - 50	3 - 10	15 - 50	3 - 8
Band	1/8 - 1/2	1/4 - 1	1 - 3	15 - 20	1/2 - 3	5 - 15	1/2 - 3
<b>Carrots</b>							
Broadcast	1 - 2	2 - 5	5 - 10	15 - 50	5 - 30	15 - 50	2 - 6
Band	1/8 - 1/2	1/4 - 1/2	1 - 3	5 - 10	1 - 3	5 - 20	1 - 2
<b>Corn</b>							
Broadcast	1/2 - 2	1/2 - 2	10 - 30	20 - 40	5 - 30	15 - 50	5 - 20
Band	1/8 - 1/4	1/4 - 1/2	5 - 20	10 - 15	1 - 3	5 - 20	1 - 5
<b>Cucurbits</b>							
Broadcast	1/2 - 2	2 - 4	5 - 10	20 - 40	5 - 15	15 - 70	3 - 6
Band	1/8 - 1/2	1/4 - 1/2	1 - 3	10 - 15	1 - 3	5 - 20	1/2 - 2
<b>Onions</b>							
Broadcast	1 - 2	2 - 4	5 - 10	15 - 50	5 - 20	5 - 50	5 - 10
Band	1/8 - 1/4	1/4 - 1/2	1 - 3	5 - 10	1 - 3	1 - 5	1 - 3
<b>Peppers</b>							
Broadcast	1/4 - 2	1/4 - 3	5 - 15	20 - 40	5 - 20	20 - 150	2 - 6
Band	1/8 - 1/4	1/8 - 1/2	2 - 4	10 - 15	3 - 5	5 - 30	1 - 2
<b>Potatoes</b>							
Broadcast	1/2 - 1	1/2 - 1	5 - 20	15 - 50	5 - 30	15 - 80	5 - 10
Band	1/4 - 1/2	1/4 - 1/2	2 - 6	5 - 15	1 - 5	5 - 20	1 - 2
<b>Soybeans</b>							
Broadcast	1/2 - 1	1/2 - 3	10 - 30	15 - 30	5 - 40	15 - 70	5 - 10
Band	1/8 - 1/4	1/4 - 1/2	2 - 10	5 - 10	2 - 5	5 - 20	1 - 2
<b>Sugar Beets</b>							
Broadcast	1 - 4	1/2 - 3	10 - 30	30 - 45	5 - 40	15 - 60	3 - 10
Band	1/4 - 1/2	1/4 - 1/2	3 - 10	10 - 15	1 - 6	5 - 20	1 - 2
<b>Tomatoes</b>							
Broadcast	1 - 2	2 - 6	10 - 20	15 - 50	5 - 30	15 - 150	5 - 15
Band	1/4 - 1/2	1/8 - 1	2 - 6	5 - 10	1 - 6	5 - 10	1 - 5
<b>Wheat</b>							
Broadcast	1/2 - 3	1 - 5	3 - 10	10 - 15	5 - 30	20 - 50	2 - 4
Band	0 - 1/2	1/2 - 1	1 - 3	3 - 5	2 - 6	5 - 10	1/2 - 1

\* banding is not a typical fertilizer application on alfalfa

1. Because of potential toxicity to seedlings, broadcasting is usually preferred for boron (B). If banding, do not exceed recommended rates.
2. Broadcasting iron (Fe) on high-pH soils is not usually recommended. Recent studies in high-pH soils have shown good response to high Fe rates (10-30 lbs soluble inorganic Fe/acre) banded with or near the seed at planting.
3. Banding is usually a more effective application method for Mn and Zn, especially on high pH soils. The highest rates of Mn and Zn shown may be needed for broadcasting on high pH/calcareous soils.
4. Banding of excessive amounts of Copper and Boron can be toxic and inhibit root development. Use with caution.

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