

How to read a label from a fertilizer bag or bottle.

All fertilizer labels should contain three numbers representing the percentage (by weight) of nitrogen, phosphorus, and potassium contained in the fertilizer. For nitrogen, the value listed represents the actual percentage of nitrogen contained in the fertilizer.

However, for historical reasons, fertilizers sold in the United States (and much of the rest of the world) list the percentage of phosphorus as P₂O₅ and potassium is listed as K₂O. To calculate the actual percentage of phosphorus, multiply the listed value by 0.43, and for potassium, multiply the percentage by 0.83. For example, 20-20-20 really contains 20% nitrogen, 8.6% phosphorus (actual P), and 16.6% potassium (actual K).

Nutrients other than nitrogen, phosphorus, or potassium are voluntarily listed on the label under the “guaranteed analysis” section and the values listed represent the actual percentage in the fertilizer. To be listed on the label, they either have to reach a minimum level (Ca at 1%, Mg at 0.5%, S at 0.5%, Fe at 0.1%, Mn, Zn, Cu at 0.05%, B at 0.02%), or they can be in the fertilizer but left off the label, or the label can contain “For continuous liquid feed programs” which exempts the fertilizer from the minimum critical level on micronutrients.

Ref: Bill Argo, Ph.D.