THE USE OF THE WORDS ANALYSIS AND FORMULA IN REFERENCE TO COMMERCIAL FERTILIZERS

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Should "analysis" or "formula" be used to refer to the percentages of ammonia, phosphoric acid and potash in a commercial fertilizer? There is, at the present time, a lack of uniformity in regard to the use of these two words. A recent issue of a farmers' magazine, important in those states where commercial fertilizers are used in large quantities, used the words analysis and formula at different places in the same article to refer to the percentages of ammonia, phosphoric acid and potash. Some textbooks on soils refer to these percentages by the use of the word formula and others by the use of the word analysis. Unless these two words are synonymous, they should not be used to designate identical ideas. Uniformity in usage of words is always preferable.

The fertilizer industry uses the word analysis to refer to the percentage of ammonia, phosphoric acid and potash contained in a fertilizer. Thus, a 3–8–3 fertilizer is one which contains 3 percent of total nitrogen calculated as NH₃, 8 percent "available" phosphorus calculated as P₂O₅, and 3 percent of water-soluble potassium calculated as K₂O. Many agronomists are using the word analysis with the same meaning as that used by the fertilizer industry. Other agronomists are using the word formula rather than analysis.

A study of the derivation of the two words will give an insight as to their proper usage. The word analysis is derived from two Greek words, ana, up, and luein, to loose, with the meaning to unloose, to resolve. The word formula is derived from the Latin word forma, meaning a model. The formula for a fertilizer refers to the recipe or model, by which a mixed commercial fertilizer is made, after the analysis of the various materials to be used in making it is known. The analysis, therefore, logically precedes the formula. If the analysis of the proper materials is known, it is easy to calculate the amount of each necessary to compound a mixed fertilizer and to give the

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