

## *What You Should Know About* **Fertilizer Numbers**

27-3-3, 6-12-0, 8-8-8, 4-3-3; fertilizer numbers are becoming more and more confusing as an increasing array of chemicals, designed to solve every agricultural problem, flood the market. What do these numbers mean and what should they mean to the farmer or gardener seeking to increase yield while reducing the use of traditional agricultural chemicals?

First, the numbers expressed on the label of a fertilizer are called the product's grade. The numbers refer to the amount of nitrogen, phosphorus and potassium (known as NPK) contained in the product for example 8-8-8 signifies that the fertilizer contains 8% nitrogen (N), 8% phosphorus (P), 8% potassium (K) by weight. More simply, 100 pounds of an 8-8-8 fertilizer would contain 8 pounds each of nitrogen, phosphorus and potassium.

AGGRAND Natural Fertilizer, like chemical-free products, is considered a "low analysis" fertilizer. Its guaranteed analysis provides that it contains 4% nitrogen (N), 3% phosphorus (P), and 3% potassium (K). AGGRAND Natural Fertilizer's analysis is based on the fact that it contains *absolutely no chemicals*^ normally added to boost the NPK level of a product. Does this mean that AGGRAND Natural Fertilizer is less effective than a chemical fertilizer whose NPK designation is greater than AGGRAND'S? Not at all! In fact, testing has demonstrated that *AGGRAND Natural Fertilizer is even more effective than the chemical fertilizers it has been tested against!*

What does all this mean? To gain some insight into the origin of the "numbers complex" it is valuable to look back on the evolution of agricultural research.

Agriculturists used to believe that plants literally "ate" the soil. But with the birth of Justus Von Libel in 1803, the seed of radical change was planted in agriculture. Among the discoveries backed by his chemical laboratory was the fact that plants merely extract certain substance from the soil, particularly, nitrogen, phosphorus and potassium (Richard W. Langer, *Grow It!*, 1972).

From Liebig's new theory there were several corollaries to be drawn, and the nineteenth-century assault on traditional agriculture was soon in full sway. If you added enough of the right chemicals, you could even grow a bumper crop in sand - or, for that matter in a water solution. The chemical industry rose to the challenge (Langer, *Grow It!*).

What happened was that chemical fertilizers alone were suddenly deemed an essential ingredient of agriculture. No heed was paid any longer to the tilth, or physical quality of the soil. What did the soil matter? Just add more chemicals if your corn wasn't growing and everything would be all right. The only problem was, as more chemicals were added over the years, the organic quality of the soil was lost. Once friable, rich earth turned into hardpan. The essential chemical ingredients were there all right; the high crop yields weren't. The reason? Simple. You can't grow abundance on macadam (Langer, *Grow, It!*).

Finally, in the past couple of decades agriculturists rediscovered soil — good, natural, organic earth, the way it used to be, and the natural cycle that nourished it.

However, the trouble arose that many organic chemical-free growers suffer from a "number complex". Because some expert told them to use 8-8-8, they're going to struggle to match it - only with organic fertilizers instead of chemical. Aside from the endless mental activity (perhaps even anguish) caused by this complex, there are other disadvantages (Robert Rodale, *The Basic Book Of Organic Gardening*, 1971).

First, it's often difficult to equate the organic ratio with the chemical one. The result may be that the "new" organic method is difficult or confusing (Rodale).

Secondly, and perhaps the most common trouble, a lot of gardeners and farmers make the big mistake of not using organic fertilizers heavy enough on their first applications. We found this to be true time and again. Advertisements of chemical companies who have just come out with an expensive fancy mix or super blend may advise applying at the rate of 200 pounds per acre, or a pound or two for the whole vegetable garden. Then, when the organic grower wants to convert, he still thinks of such applications (Rodale).

That's what harm the "number complex" can do in terms of worry, confusion, and inefficiency. Our advice is to forget about the numbers, and concentrate on a long-range fertilizing program. Once this is begun the result will be that yields will begin to increase (Rodale).

AGGRAND Natural Fertilizer is the first step on the road to a long-range comprehensive fertilizer plan, which results in stronger, more disease-resistant plants, greater harvests and increased soil fertility.