The Art of Bonsai
By Eugene Howell

Every time we buy a bag of fertilizer we see the large numbers on the front that look something like this; "8-6-4". Most of us understand that these numbers represent the major elements contained in the fertilizer, but how many of us understand what these elements do for the bonsai, or for that matter, what it means when the numbers are higher or lower, such as 18-35-8 or 35-0-4?

At the risk of boring you to death, I want to discuss these because each bonsai enthusiast must know how to relate these to the needs of each type of bonsai. So let's just jump in and go.

In a previous article we learned that these numbers represent the content of Nitrogen (N), Phosphorus (P), and Potassium (K) contained in the fertilizer, in that order. The numbers are actually percentages. So the number 5-3-15 means 5% of the weight of the bag of fertilizer is nitrogen, 3% is phosphorus, and 15% is potassium. One benefit of knowing this information is that you sometimes can use it to stretch your dollar. Everything else being equal, if the price of a 40 pound bag of 5-10-5 is $5 (as an example) and the price of a 40 pound bag of 10-20-10 is $8 then you get double the amount of active elements for only $3 more by buying the second bag. In other words, the more costly bag will go twice as far as will the inexpensive one. Very frequently you will find this type of price bargain. Just remember to compare numbers on the bags as well as the price of each bag.

OK, you have now stretched your dollar by buying the slightly higher priced bag with the numbers that happen to be double the ones on the first bag, so are these numbers helpful in any other way? Since this article hasn't yet ended, you may quickly come to the conclusion that the answer is "yes". (I'm trying hard to keep you awake with wittiness).

Each of the three major elements serve a different purpose, so if you have a clear idea of what you want your plant to do, then you know which combination of numbers to select at the store.

Nitrogen, the first number on the bag, has the important function of stimulating vegetative growth. It is essential for the development of leaves and stems. So, if you have a deciduous bonsai, when you fertilize for the first time in the Spring it will help the plant put out lots of healthy new leaves by giving it one with a high first number. A number in the range of 20 to 30 would be appropriate for this goal. So you might use one that looks like this; 25-6-6.

Phosphorus, the second number on the bag, does the job of developing bright, healthy flowers, fruit and seeds. A fertilizer with a high middle number would be appropriate for use on such bonsai as azalea, bougainvillea, camellia, and gardenia, among others. Again, a middle number in the range of 20 to 30 would be appropriate for these trees when the flower buds are just barely beginning to form. In this example the number combination might be something like this; 8-30-4.

Potassium, the last number on the bag, does the job of creating healthy roots. It also increases the plants resistance to disease. Obviously, if you have a plant on which you have just done some root pruning, or which needs a more robust root system, then you use a fertilizer with a number in the range of 18 to 25. In this example, one with the numbers such as 6-4-18 would do the job.

After having discussed all this, don't be confused about general fertilizing. If you are doing periodic fertilizing for the normal health and general growth of the tree, then a fertilizer with all three numbers in the mid-range is perfectly adequate. This might be one with numbers such as 6-5-6, or something close to that. If the numbers are lower than 4, then you are only giving the tree a bare minimum of nutrition. But do not get trapped into thinking that more is better. If all the numbers are high and you fertilize too often, then you very likely will burn the roots of the tree. Never overdo it when fertilizing. Common sense is important.

Keep this information in mind when doing your fertilizing program and you should have trees that are robust and very healthy.