

## **The Down Side of a Good Thing!**

Nitrogen – the first number in 10-10-10 fertilizer and the element that makes crops grow bigger and better – can be a problem. Alas, there can be too much of this good thing. We do keep hearing over and over to the point of exasperation about the mistakes made in prior decades. Most of us were not even born and those of us who were among those present either hadn't a clue about what was going on or had no input anyway.

However, and you know there is always a 'however' – now we do know and we are here and we are making some of the same mistakes. Today it is time for us to check the use of 10-10-10 in our own gardens! I plead guilty: a recent bag I purchased reads 12-3-5, way too heavy on that first number. What was I thinking!

Farmers world wide benefit from the use of nitrogen but also are responsible for the fact that the world is awash in man-made "reactive" nitrogen, the chemically active form. What happens from overuse of nitrogen is that the amount not taken up and used by the plants washes into lakes, rivers, even the oceans. This feeding creates the growth of algae that imperils fish nurseries.

Actually, it is not just agriculture that produces this effluent. Nitrogen blossoms from smoke stacks worldwide as well. Blowing in the wind from power plant smokestacks, some nitrogen compounds settle as acid rain. Other nitrogen gases stay in the atmosphere nibbling away at the ozone layer. We don't hear much about ozone these days. Nothing has a shorter shelf life than news. Its expiration date has nothing to do with its importance: it is quickly supplanted by any trivia more current, more alarming, more scandalous.

One report says that nitrogen oxide is nearly 300 times as potent as carbon dioxide and the third most threatening of the greenhouse gases as reported in the journal 'Nature'. In 2009 reactive nitrogen was identified as one of nine key global pollution threats and second worst in terms of having already exceeded a maximum "planetary boundary". A University of Virginia professor, James Galloway, professor of environmental science and nitrogen researcher, is quoted in the Christian Science Monitor as acknowledging the benefits and lauding the importance of nitrogen's role in feeding the world but adds "the problem is how to maximize nitrogen's benefit's while diminishing its negatives, - especially waste."

In the US 40% of reactive nitrogen is wasted, the run off creating oxygen-depleted 'dead-zones' in surrounding waters. Overuse of nitrogen is critical in China. A nitrogen expert at the University of Manitoba in Winnipeg, Vaclav Smil, believes as much as 75% of the nitrogen used in rice production is wasted.

Farmers, usually ahead of industry, are already devising ways to decrease their nitrogen fertilizer use without negatively impacting their crop yields. Suburban lawn devotees are just as likely as Chinese rice growers to be using three times as much

nitrogen as that lovely green carpet needs, greedy feeder though it is. Time to check out that bag of 10-10-10. Use less than advised, not more. Remember, the companies that produce these garden essentials are in business to maximize sales.

We need to remind ourselves that the use of a mower that leaves the grass clippings on the lawn to nourish the roots greatly lessens the requirement for fertilizer. Have your soil checked so that you are amending only what needs amending. Even though we have read so often about the huge sums of money wasted on the unnecessary pampering of our small estates, somehow we feel perfection in lawn care is the only goal worth pursuing. We weed and feed as if our role as citizens is being judged as derelict if green weeds mingle with our fescue. Have you noticed that even the most elegant golf courses are studying ways to diminish their use of fertilizer, experimenting with newer grass hybrids and different cultural practices. They find their results still pass for perfect when viewed by sweeping TV cameras.