

Crop Production and Environmental Protection

Since man first began to cultivate the soil for the purpose of growing food, crop production has had an impact on the environment. It affects both soil and water quality, and those effects have not always been positive.

In the early history of America, most farmers tilled their fields, harvested their crops, and gave little thought to putting back the nutrients the crops removed. Over a period of time, soils became infertile, resulting in poor yields, increased erosion and runoff, and the pollution of rivers and streams. As soils 'wore out', farmers and their families moved on to new locations and began the process all over again.

In many parts of the world even today, poor soil and water stewardship is practiced by farmers, many desperate to grow enough food to survive. Sloping, hilly soils are cultivated, often resulting in massive loss of topsoil and surface water pollution. Soils are mined of their fertility, then left to the ravages of nature. The environment suffers.

However, farmers in North America and many other parts of the world have helped to change the relationship between crop production and the environment. They are good stewards of our soil and water resources and are aware of this important role they must play. They recognize that crop management and planning, including the use of fertilizers, must consider the long term—for sustained production—rather than simply those results expected for the current crop year.

As the world population grows and the demand for food increases, farmers are challenged to produce more crops per acre of land. To do this, they use fertilizer to supplement soil nutrients. At the same time, though, they must be careful to maintain a close balance with nature, and they are doing a credible job of that. The results tell the story.

Per-acre yields are continuing to increase. So does the efficiency of fertilizer use, as reflected by the fact that significantly more units of crops are now being produced per unit of fertilizer applied to the soil. What does this mean? It means that the economics of crop production are improving, and that's good for farmers and their families. It means that more of the fertilizer is going into crops, not staying in the soil to be potentially washed into surface waters or leached into groundwater. It means that more fragile lands can be taken out of crop production and set aside for wildlife, human recreation, wetlands, and other uses protective of the environment.

There is often a thin line between environmental protection and potential damage to our soil and water resources. Modern farmers walk that line every day. **It's good to know that because of their concern for the environment, high yield agriculture will continue to feed the world well into the foreseeable future. EB**

