Dirt Poor: Have Fruits and Vegetables Become Less Nutritious?

They don't make 'em like they used to.

True about cars, refrigerators, radios, and virtually every other consumable good–including food.

Beside compromises in flavor, the nutrition of vegetables and fruits aren't what they used to be.

Over the last fifty years, food has been cultivated with higher yields and pesticide resistance in mind. The number of varieties of apples, for example, has dwindled from the thousands to less than one hundred that are grown to be sold in the marketplace. The sacrifice of higher yield is nutrition.

"Nutrient decline has occurred because the focus of plant and animal breeders, farmers, and agribusiness has been on increasing yields, not on food nutritional quality. The reason for this focus is clear–farm commodity markets, federal farm policy, and those funding agricultural research have rewarded yield increases above all else."[1]

A study published ten years ago found that the levels of key vitamins and minerals in forty-three fruits and vegetables declined significantly between 1950 and 1999. Riboflavin (vitamin B2), vitamin C, calcium, iron, phosphorus, and protein contents have all decreased in much of the produce we eat. A British study of minerals in vegetables and fruits from 1930 to 1980 showed reduced levels of not only calcium, but copper, iron, magnesium and potassium as well.

The Dirt on Plant Nutrition

In addition to the selection of varieties now grown commercially for food, the nature of the soil has changed by virtue of a switch to chemical fertilizers and changes in farming techniques.

"Early studies of fertilization found inverse relationships between crop yield and mineral concentrations—the widely cited 'dilution effect'…recent side-by-side plantings of low- and high-yield cultivars of broccoli and grains found consistently negative correlations between yield and concentrations of minerals and protein."[2]

Conventionally-raised produce is fertilized with synthetics to make it grow faster and larger. Plants don't behave as they naturally would, growing longer root systems to get enough nutrients to grow. The chemicals don't nourish the soil adequately, or the micro-organisms that are so necessary to the health of the earth and the plants from which it grows.

Crop rotation, employed for thousands of years, is much less prevalent on factory farms than it used to be; nutrients taken from the soil aren't naturally replenished and eventually soil loses the ability to feed the plants sown–leading to wider use of fertilizers. Weeds and insects become tolerant of the herbicides and pesticides used, leading to other and more toxic chemicals to kill them.

Nutrient decline isn't limited to produce.

In addition to fruits and vegetables, grains are less nutritious than in the past. Proteins in wheat, corn, and soybeans have declined a great deal in the last fifty years although the volumes grown are greater.

Hundreds of studies have shown that organic produce is more nutritious. This is due in part to the methods uses for farming: soil is nourished using compost, manure, and cover crops. Crops are regularly rotated, which reduces the incidence of pests and disease. Micro-organisms thrive in the enriched soil and in turn feed the plants. Many would argue that organic produce is more flavorful as well.

The implications aren't limited to the nutrient content of an individual food.

Greater nutrient density means you not only get more necessary vitamins, minerals, and phytonutrients but your body won't prompt you to eat more to get what it needs. Americans eat plenty–but the nutrition in the foods we eat is questionable. Part of the reason we overeat is because our bodies aren't getting enough from what it is we are eating.

It is certainly feasible to put the nutrients back into our food by returning to natural farming. The quality of the food we eat is more important than the quantity. On top of that, we are all stewards of the land and all its inhabitants. How we treat it directly affects us and future generations.