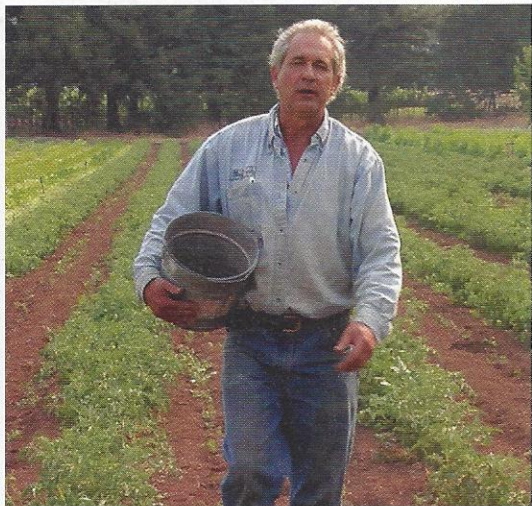




Better Soil, Better Spinach



A scene from *Dirt! The Movie*, in which Bob Cannard is a featured expert.

Bob Cannard pays attention to what plants need because he knows that healthy plants make healthy food. Best known as the produce supplier for Alice Waters's Chez Panisse restaurant in Berkeley and as one of the pioneers of the organic farming movement in California, Cannard has watched big, industrial farms hijack the "organic" label. He's now trying to return organic farming to its roots by promoting local food grown with respect for the land.

At Cannard Farms in Sonoma and at the Green String Institute, an educational nonprofit he founded with winemaker Fred Cline, he teaches future farmers the finer points of soil biology. "We want to grow soils, and to make soils progressively more vital, while we feed and grow our own bodies," he says.

We talked with Cannard about how good soil makes better spinach and healthier people.

What should we look for in great spinach?

It should have strong, sturdy leaves with good symmetry and a high level of resistance to bruising, equalness in color between the younger leaves and older leaves, and a very mild, clean, clear, spinach-y taste and aroma. Conventional spinach is grown in soil that is pumped up with nitrogen-rich fertilizer; as a result, the spinach has a sharp edge and a nondigestible quality to it.

Do you have a farming philosophy?

I believe that plants have complete immune systems, and if they are growing in a nutritional, foundational environment that provides everything they require, they won't have any deterioration. Here at the Green String Institute, we have an aversion to killing bugs because when plants are healthy, they have natural defenses against pests. In conventional farming, a plant doesn't have true nutritional soundness, and so when it gets bugs, you go out and kill the bugs with pesticides and insecticides.

What's the advantage of buying locally grown spinach?

With spinach, there is a loss of vitamins within hours after harvest. So, ideally, you want to buy from somebody who's growing, harvesting and delivering the spinach more rapidly. Cut, bagged spinach that has a two- or three-week shelf life has fewer vitamins and nutrients.

Why does soil quality matter so much?

A lot of our physical ills are associated with nutrient deficiencies, especially deficiencies of minerals, which are critical to all kinds of biochemical processes. Many of our mineral deficiencies are the result of eating foods grown in depleted soils — a huge problem with conventional agriculture. I sincerely believe that if we were to learn how to grow nutrient-dense foods sustainably on a worldwide scale, we would vastly reduce our rates of disease and chronic illness.

NUTRITION KNOW-HOW

- Spinach contains more than a dozen flavonoids, which fight inflammation and cancer.
- In addition to flavonoids and carotenoids, spinach provides vitamin C, vitamin E, beta-carotene, manganese, zinc and selenium, making it an excellent antioxidant.
- Researchers are beginning to discover links between the health of our nervous system

and the unique phytonutrients in the chenopod plant family, which includes spinach, beets and chard.

- Cooking spinach releases lutein — a carotenoid that helps prevent macular degeneration — making the nutrient more available to the body.
- The high level of vitamin K in spinach helps maintain strong bones.



Prewashed baby spinach (above) is a convenient option for consumers, but it is quite different — in both flavor and texture — from the more hearty, broad-leaf varieties such as curly Savoy, smooth flat-leaf and heirloom types of spinach.