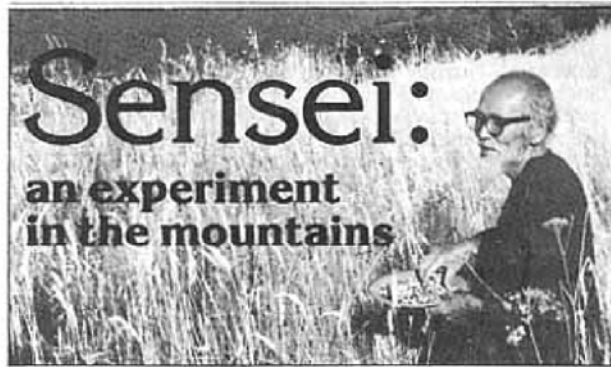


Sensei: an experiment in the mountains

By: Mark Musick

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*Masanobu Fukuoka is a Japanese farmer. He is also the author of *The One-Straw Revolution*, a book which describes the natural farming techniques which he developed over a period of thirty years.*

In Japan Masanobu Fukuoka is referred to as Sensei, a word which means teacher or the master of an art form.

In our previous issue Peter Giffen wrote of Sensei's first visit to North America. This continuing report is based on talks Sensei gave to a remote community in Northern California. His talks were translated by Larry Korn and edited by Mark Musick.

When Masanobu Fukuoka came to California for the first time in late July he saw immediately that some- thing was profoundly wrong. He did not see the famous golden hills of Northern California as a sign of beauty. Instead, he saw the bleached grasses and parched earth as a symptom of an ecosystem seriously out of balance.

"In America," he said, "the 'nature' that we see now is not true nature—it is an imitation nature created by human beings." Although people living there cannot believe that it is happening, Sensei saw clearly that much of California is rapidly becoming a desert.

In our last issue Peter Giffen reported on the talks that Masanobu Fukuoka gave at French Meadows in the high Sierras. While in California Sensei took an intense interest in the health of the landscape around him and learned all he could about the natural history of the region. From an old Yurok Indian he learned that the hills of California were not always burnt brown by mid-summer. Before the coming of the Spanish with their cattle and sheep the landscape had been clothed with deeply rooted perennial grasses.

In addition to livestock, the Spanish also brought with them "cheap" European annual grasses such as foxtail and wild oats. They are called "cheap grasses" because, while they grow quickly

in the spring, they have little nutrition and they literally pump water from the soil. They mature quickly, set seed and die, their bleached stalks intensifying the heat of the summer sun which bakes the soil, destroying the humus and leaving the topsoil vulnerable to erosion.

How to turn the tide and re-establish the bounty of the natural environment was, of course, the central question people asked of Masanobu Fukuoka while he was in California. The potential for adapting natural farming methods to the conditions of North America was put to the most extreme test when Larry Korn took Fukuoka-san to visit a community known as Seika's place high in the rugged mountains of Lake County in Northern California. It was steep, rocky land at about 3,000 feet in elevation. What native trees there had been protecting the land—black oak, Douglas fir, Ponderosa pine, madrone and manzanita—had long before been cut to clear pasture land. The native bunch grasses are gone, overgrazed and forced out by wild oats and foxtail. And the topsoil, which had been two or more feet deep, eroded away until only 6 to 8 inches remains.

Upon seeing this parched land, Sensei's first reaction was, "Oh, my God Larry, how come you brought me here?" From the barrenness of the site they had chosen it was obvious that the people living there were not farmers. "Most professional farmers would never try to farm here," he said, "so I feel as if the people living here are living like the immortals, the Oriental sages who live high in the mountains on wild herbs and grasses. But, no," Sensei continued, "these people want to farm, so I think that they are like little babies. They are the weakest, but in other ways the strongest, so I can't leave these people all alone."

Walking around the place and finally discovering the community's small organic garden with its compost pile and carefully prepared raised beds did little to lift Sensei's spirits. Using those labor intensive methods, he foresaw five or ten years of effort and hardship before a garden could be established large enough to fulfill the group's aim of self-sufficiency. And, while they might eventually be able to feed themselves, their garden would do nothing to revitalize the landscape around them nor would it feed other people in addition to themselves.

Discouraged by what he saw, that night Sensei went to bed early. Then, hours before the sun rose, he woke up to walk the fields and meditate. In the pre-dawn light he pondered ways to return life to this soil and make it productive once again. He came to realize that there was important work that could be done there, and in time he got a few hints of where to begin.

The next morning he gathered people around and told them that there was a way to begin right now to bring the green back to California. "The first step in making California green again," he said, "is to get rid of the foxtails and wild oats." The weedy annuals must be eliminated and life returned to the soil by planting legumes, especially white clover, and nitrogen-fixing trees.

If you start early in the spring, clover can be sown in the damp soil before the annual weeds begin their explosive growth. The weeds will serve as a nurse crop for the clover, and then should be cut back frequently to prevent them from flowering and setting seed. If the ground is not disturbed by cultivation (which would stir up more weed seeds), the annuals will then die out, making room for successions of vegetables and grains sown into the standing clover.

At Seika's place, however, Sensei was faced with a more difficult situation. It was now early August and the foxtail and wild oats had already set seed. What occurred to him in his walk was that, by cutting or forcing over the grasses so that all the seed touched the ground, it would be possible to trick the weeds into pre-mature germination.

First, he told the group, sow clover and whatever vegetable seeds you have available into the standing grasses. Cut the grasses to serve as a mulch, and then water the entire area. The grass seeds will germinate along with the clover and vegetables and, when they do, pull the water off.

The seedlings of the weedy annual grasses, tricked into growing in the heat of summer, will be stunted and then killed off by the cold of winter. Some of the clover and vegetables will survive and some won't, but they will help protect the ground and build the soil. "We should begin this experiment now," Sensei said, "so that in two or three months we'll already start to have results

and begin to establish some sort of direction.”

As the group left the shade of the trees and went out into the already scorching morning sun, Sensei talked with people about techniques for sowing the clover and vegetable seeds and demonstrated how to cut the weeds.

The soil of the place was filled with weed seeds. “If you want to farm in an area like this,” Sensei said, ‘you’ve got to find a way to farm without plowing. Otherwise you are going to be continually struggling with these weeds. Around here I’d say that a scythe would be a more important tool than a hoe or other digging implements.”

“Now,” he said, “about growing vegetables in clover and weeds. For the most part, you can just scatter the seeds out on the ground. Sometimes you have to cut a swath first and spread the cuttings back over the seeds for a mulch. In the first year you will need a lot of seed to toss around, but after that most of these plants will re-seed themselves or you can collect seeds. It’s a big investment for the first year, but after that not so much.”

“Even so,” he added, “there are some vegetables, like tomatoes and eggplants, which, if you just toss the seed out, they won’t make it, and those you have to grow separately in little pots and then transplant.”

“It might be interesting to try some water melon over there by that damp spot,” he said. “Turnips should be really easy. Carrots would be good around here, too. And wild radish, of course. The big seeded beans will germinate all right, but if there’s not enough moisture I suggest that you put them in the ground slightly or scratch the surface a little. Just cut a little furrow, just deep enough to put a seed in. Or put them right on the surface, but covered with mulch. Sun- flowers and pearl onions will do well because they are drought resistant, so everybody grab a few seeds and toss them out and take your turn with the sickle.”

Clover was sown thickly along with the vegetables. Sensei said to use primarily white clover because it spreads out in a dense mat to smother weeds and protect the soil (so well, in fact, that once established it may be necessary to cut it back close to the ground or lightly disc it in order to intersow other crops). Sensei also suggested mixing the clover with other legumes, such as vetch, lupine and alfalfa, to see what would do well. “But the most important thing,” he said, “is to get the clover ground cover established.”

Sensei also stressed the importance of planting a windbreak of fast growing nitrogen-fixing trees to heal the land and help bring the green back by enriching the soil, providing shade, and slowing the force of the drying winds. In Japan Sensei said he plants nitrogen-fixing acacia trees in his orchard, 15 to 20 per acre, alternating with his Mandarin oranges. At Seika’s place he suggested planting apples, persimmon and figs in amongst a wind break of acacia or red alder. There are several other trees and shrubs native or well adapted to the various climate zones of the Pacific Northwest. All of them will help heal the earth, but Sensei suggested that it would be best to use trees that grow tall and allow other crops to grow underneath. Nitrogen-fixing shrubs, such as Caragana, would be better used as hedge plants, and then in the open areas clover and vegetables or grains can be planted.

“If some of your experiments don’t work out,” Sensei told the group, “then some people will call that a failure. But actually a big failure gives you the possibility of great success later. It gives you the direction in which to keep working. Of course, scientific understanding and past experience do have their place and are practical to use sometimes, but on the other hand just try stepping naked into nature.

“I suggest you throw away all of your preconceptions,” he continued, “everything you thought about nature and about seeding time and good conditions or bad conditions, or pH, or whatever. Put all of those things out of your mind and just begin farming fresh, begin looking at nature in a fresh way. The first step in practicing natural farming is to empty your head of intellectual reality, intellectual knowledge. If you don’t have anything,” he concluded, “then you have everything.

The Wisdom of the Cave



“The human intellect is just like the wisdom of a cave and often I’ve drawn a picture of people living inside of the cave of the intellect. Someone is reading a book and someone is watching television. Someone else is plowing the ground or digging at the walls of the cave. The more you work with the intellect, the larger the cave becomes, the darker it gets and the more difficult to escape.

“I suggest that you don’t get involved with that way of thinking when you practice natural farming. Just live within nature and let nature be your guide.”

Masanobu Fukuoka