

Rice from Refurbished Soil

How Sustainable Methods Saved the Farm



A rotation of hairy vetch is disked in to provide available nitrogen for the coming rice crop. Mike Barosso is convinced that a switch to sustainable methods saved his farm — as well as increasing yields, as in the harvest for 2005.

Staff Report

Mike Barosso of Pleasant Grove, California, knows rice. He is also guided by a bit of doggerel: “If your output exceeds your income, then your upkeep will be your downfall.”

His 200 acres of rice could be a voracious consumer of inputs if he allowed the tail to wag the dog, but Barosso did what farmers do one at a time. He came to his senses.

Barosso is a third-generation rice farmer. His family bought the ranch he now occupies when he was a teenager. His granddad farmed about 60 miles south of his present location, the operation reaching all the way back into the

1930s, using the technology recommended by the republics of learning, Farm Bureau and Extension. “We’ve always had rice,” Barosso explains, “at one location or another.”

He was old enough to witness the changes in rice cultivation as he was growing up. This means he was excused from using the many sprays, meaning, as Barosso explains, “You learned to farm the old way, leaving land fallow every couple of years.” This meant a rotation, often a nitrogen-fixing crop such as hairy vetch, beans, tomatoes or hay — always to work back to rice as soon as possible.

“The fact is, we didn’t have a clue. We saw parity killed and chemical companies

fill the vacuum. Cultivation practices changed. Somewhere along the time when I was in my teens, the fallow years disappeared. It became rice after rice after rice.”

Then came rescue chemistry, Barosso recalls. It became a case of knock down and burn down the sedges and water grasses, “which came on like gangbusters.” A new vocabulary presented itself — 2,4-D and a raft of preparations

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that were “safe if used as directed,” according to the labels. The nostrums killed the weeds and left standing the food crop — perhaps damaged a little, but not enough to prevent marketability.

FALTERING EFFECTIVENESS

Mike Barosso can recite the passage of events in terms of staying power for the rescue chemistry. It would work for a couple of years, then control would falter, and a new herbicide would appear. “We accepted this as good agronomy on the advice of — as you say — our intellectual advisers.”

Just the same, the weed load kept getting heavier. “We put on what was recommended, 17-17-17, since that is what they had in the warehouse, superphosphate, heavy nitrogen, ample potash.” The name of the game was high numbers. “Five hundred pounds of 16-20 wasn’t unusual.”

To recite all the practices would seem to be a reflection on the intelligence of the reader, the drill is so well known.

“Dad wasn’t going along with most of the college advice, and he was getting better yields than the run of the mill. Dad was a hands-on guy. The way he worked the land and utilized the water, he managed to get 500 pounds more per acre than his neighbors. He was going easy on the hard stuff.”

As Mike took over, the problems multiplied. The soil changed. Finally, at an Acres U.S.A. Conference, Elaine Ingham explained to Barosso what had been happening.

The price of rice didn’t seem to care how many inputs were required.

“That’s when I started reaching back to the grandparents and their mutual experiences with rice,” Barosso recalls, adding, “but they were farming virgin ground.” On virgin soil the first few crops are excellent. After that, reality sets in. Barosso concluded that something was unbalancing that soil rapidly. Between crops, Barosso went back to school — the school of self-education. He read the works of William A. Albrecht. Out of that font of knowledge emerged a plan.

THE PLAN

The first visible result of the new plan was a nightmare of weeds. The conclusion was obvious. “We’d destroyed the soil,” is Barosso’s whiplash line. He concluded

that if weeds are nature’s markers of what is wrong or right with the soil, and since money was absent for amendments to remedy the situation, then why not *use the weeds themselves* as a remedy?

That was about eight years ago. Barosso decided not to incorporate stubble. He also permitted the weeds to assert themselves. The next year became a fallow year because Barosso had decided to become compliant with organic standards.

Soon came the spring crop of weeds. In late summer, Barosso flood irrigated the field and set in motion still another crop of weeds. “We got milkweeds that looked like a young forest.” The entire crop of weeds was merged into the soil with a stubble disc. A surgical chop, then seed flown on with overwatering to follow, that was the scheme. Barosso reasoned, with the aid of the Albrecht literature, that all that organic matter returned to the soil, together with the weeds, would make possible a return to real rice production.

“You have to find a source of cow manure,” Barosso advises. “Next to Elaine Ingham’s compost tea, it’s the greatest source of microorganisms that are an absolute requirement for a living soil.”

The buffet thus provided allowed the soil to rebuild itself. The results were dramatic. Once Barosso returned enough organic matter to the soil, together with the right kind of fertility, what was once an insurmountable problem now faded. In rice production, the flood procedure permits a measure of weed control.

“It was a paying crop all of the sudden,” Barosso reflects. He adds, “With a minimum of inputs.”

FERTILITY

Once you get up and running, Barosso points out, you can deal with calcium problems and lesser problems that need to be addressed year after year — his yields have gone up dramatically. As each new crop comes in, setting new records, Barosso “can travel around fixing lesser fertility problems because I can afford it.”

Mike Barosso puts it this way: “My way may not be *the way*, but it is one way. Albrecht often said, *If you want to grow any crop, grow a similar crop first and*

turn it in.” This has prompted Barosso to reflect. “The water grass looks like a rice plant. You have to take a close look to distinguish it from rice.”

Today Barosso figures his conversion to a sustainable system kept him in business. Most important, the conclusion has enabled Barosso to access the organic market through the agency of the Lundbergs, a major organic rice marketer.

THE TIME FACTOR

It takes time to “go clean.” There was a three-year transition factor that had to be accomplished while still running the farm. The laser leveling program had to be accomplished at the same time, as uniform and symmetrical paddies are an absolute must for good organic production.

To have all these things happen at the same time was an awesome task. Barosso does not like to reflect on the mistakes that happened along the way. He now feels he has parted company with most mistakes because he thinks for himself without reference to an approving authority. Looking back, he admits he had no idea of the fertility he was losing “because of slavish attention paid to experts who farmed with a pencil miles away from any rice field.”

The countdown for conversion took place one paddy at a time, and the last to be lasered and converted was the first to go entirely organic — a mistake! But mistakes happen, much as do battles. You can lose a battle now and then, but winning the war is what counts.

Withal, the learning curve is steep when you start from ground zero. You have to let go of that toxic folklore, Barosso says.

“I’m not sure I would have listened to Albrecht had not my Dad related his experience in the 1930s. The weed and manure idea — that was Dad’s.”

Knowledge passed down from elders to new generations is still a valued exercise.

Conversion is now complete, as far as Mike Barosso is concerned. He may even have time for a gig with his musical group. One DVD that came to Acres U.S.A. featured a soothing musical background accompanying Barosso’s recitation of Tomasso Campanella’s moving poem “The People”:

*The people is a beast of muddy brain
That knows not its own force, and there-
fore stands
Loaded with wood and stone, the power-
less hands
Of a mere child guide it with bit and rein.*

*One kick would be enough to break the
chain;
But the beast fears, and what the child de-
mands,
It does; nor its own terror understands,
Confused and stupefied by bugbears vain.*

*Most wonderful! with its own hands it ties
And gags itself — gives itself death and
war
For pence doled out by kings from its own
stores.*

*Its own are all things between earth and
heaven,
But this it knows not; and if one arise
To tell this truth, it kills him unforgiven.*

“That poem gets me to put on my boots, stand in the rice field, and observe,” Barosso said.

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