

EINKORN TALKING, SEPTEMBER



Hello there, Einkorn here.

Einkorn seed, to be precise – September is planting time on the Columbia Plateau. Some fields get seeded as early as late August, at which point it's not unusual to see combines harvest on one side of the road, grain drills busy on the other side.

What does it feel like, as seed getting placed in that integument of firm soil, wet for the sprouting? Is there any kind of awareness that 11 out of 12 of your siblings were milled for flour or sprouted for malting, you the survivor to carry on species spread? Or does the seed wake up only when moisture swells the kernel to its sprouting point, enzymes changing?

Tell you what, the farmer feels good after seeding. It's a job done and now nature will take place. At no other time in the farming cycle is the verge between nature and farmer so close. You seed. Seed sprouts. A thousand nature-caprices will affect your crop, but first and foremost the seed must metamorphose to life. It's the split second between having tossed the ball and watching it land in the hoop – the holding-your-breath split second. We're blessed that cereal seed is reliably viable, given the right conditions of course.

On the low-rainfall areas of the Plateau (less than 12 inches average annual precipitation) the summer-fallow acres have waited for seed for a year: it takes that long to "bank" enough soil moisture for a crop. Typically a grower will raise crops on half his land while the other half lies fallow. The fallow ground is managed so neither volunteer cereal nor weeds take up the moisture that's being "banked." The cheap way to do this is by applying broad-spectrum herbicide; tillage is the other option. Regular tillage leaves the soil vulnerable to erosion, so the forward-thinking farmers use an undercutter in what's called conservation tillage, in effect just cutting the roots of the weeds close to the surface.

The summer-fallow system doesn't protect you from a drought year when soil moisture stays too deep down. Then the seed gets "dusted-in," the grain drill placing it right near to soil surface, or even just on top. Dusting-in happens late in the year, close to the winter rains and snow that'll supply the moisture for the seed. The later you seed, the less yield, though.

Grain drills are large implements that lumber behind the tractor on a long row of hunky, tightly stacked metal wheels, the “press wheels.” The top part of the drill consists of a rectangular box with several sections, that’s where the seed grain goes. Up front of the implement protrude shanks with triangular points that dig into the ground, leaving furrows, the row spacing 14, 16 or 18 inches wide. The tractor’s hydraulics lift or lower the drill to adjust furrow depth. On the bottom of the seed box are openings that correspond with the furrows; small wheels with rounded teeth inside the openings regulate the amount of seed that flows into tubes which drop the seed into the furrows. The press wheels close the furrows partially over the deposited seeds, assuring good soil contact.

Modern dryland grain drills are not made for the hulled grains that are so much bulkier than wheat and barley; at Lentz Spelt Farms we had to find an old-style John Deere “hoe drill.”

Even in a year with a fair amount of precipitation, soil moisture in September will be “half the way to China” as local farmers like to say, 10 or more inches down. The furrow accounts for most of that depth, still, it’s a long way for a little sprout to push before it reaches daylight. Since Farro gets seeded in the hull it takes longer than wheat to emerge, soil moisture having to soak through the hull before it reaches the seed kernel. The emergence is less uniform than that of wheat – from the start the Farro displays its willful character. Autumn’s cooling temperatures cause the moisture layer in the soil to rise up closer to the surface; due to that phenomenon the sprouted grain can hold out until rains finally come.

Ah, but rain right now, after seeding and before plant emergence, threatens the crop, counter-intuitive as that sounds. Rain, especially heavy rain, can cause the sandy soils of the Plateau to form a crust, a crust so hard that the little sprout is unable to poke through: in growing it hits that crust and bends back upon itself, and once it’s bent it’s done for, the farmer needing to re-seed. That’s never a good thing.

Before planting, the preparations include testing the seed lot for purity and germination. It’s common sense to make sure that no weed seed gets planted together with the Farro, nor other types of small grain. The germination check will indicate if the seeding rate needs adjusting: 100 kernels are counted out and laid in rows between wet paper towels; after several days the seeds that have not sprouted are counted; if five didn’t sprout you have germination of 95 percent.

Seed is measured out in terms of pounds per acre, or by bushels. One acre measures 43,560 square feet, approximately the size of a football field. On this low-rainfall dryland, industrial wheats are seeded at about 50 pounds to the acre; Farro’s planted in the hull, at 100 to 140 pounds per acre. With wheat, the 50 pounds of seed wheat will return about 50 bushels per acre – 3000 pounds of grain – in a good year, whereas Spelt Farro will yield 3000 pounds but that’s in-the-hull pounds that after dehulling amount to about 2400 pounds naked grain per acre; Emmer Farro yields around 20 percent less, Einkorn Farro another 20 percent less. In the higher-rainfall dryland areas such as the Palouse, seeding rates and yields are almost double these figures. And under irrigation you get slightly more yield yet.

Overall, the productivity of cereal grasses is astounding, isn’t it. Millennium after millennium nature kept offering better-yielding genotypes for farmers to select; land-races, meanwhile,

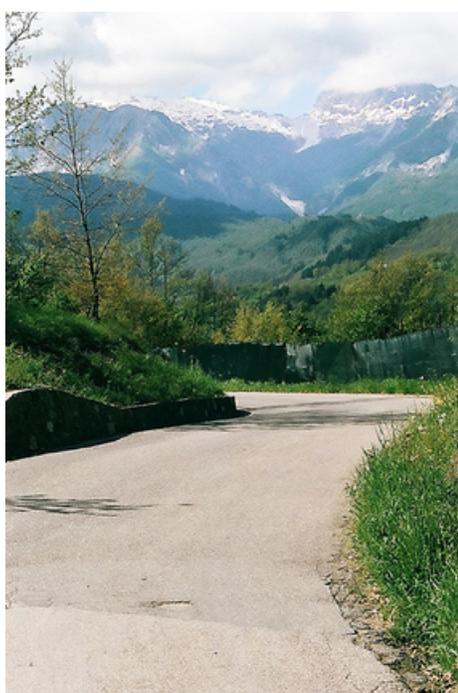
adapted to environmental changes such as climate swings. But it wasn't until industrial breeding that yield increases really boomed, although at the price of reduced nutrition – you get what you pay for, in the end.

Farro, up from wild Einkorn, its Soul on Karacadag in Kurdistan, pleased farmers and bakers and brewers for hundreds of centuries. Then it disappeared under industrialization's mass regime. Almost: from the lands of *Urgetreide* – Germany, Austria, Switzerland – we shall travel to the Heart of Farro, one of the rare regions where Farro didn't vanish completely. The stronger the Farro resurgence there, we expect, since we're going where the word "Farro" originated in recognition that Einkorn, Emmer and Spelt are not "wheat." On the international market Farro has cachet: when Lentz Spelt Farms introduced Emmer to the Pacific Northwest over a decade ago, the grain didn't resonate with gourmards until we labelled it Emmer Farro. Ah, Farro!



You're thinking Italy. Right. Tuscany in particular. More precisely, according to the literature, Garfagnana in the north of Tuscany. (The second 'g' is silent: Garfañana.)

We approach through Frignano, a high-mountain region in the Apennines. The highway winds up and up to the Radici Pass where, among sunken snowbanks still remaining mid-May, the road sign welcomes us: TOSCANA.



The surprise is that the view from top looks nothing like the Toscana of a thousand photos. Instead of bucolic lands amid undulating hillsides, Garfagnana presents itself as mountain country sheer; opposite the high Apennines of granite that Radici Pass has climbed, tower the calcite Apuan Alps famous for their over 600 caves, renown for their marble even in Michelangelo's time. Garfagnana is framed by snowfields in the sky on both sides of the valley.

Up to the 5000 to 6000 feet-high alpine reach spring-green beech woods; from there long mountain flanks bow in green descent, the forest changing to mixed deciduous growth as the road curves grapple with steep gorges. It's second-gear driving. The gorges resound with tumbling, crashing creeks that define the Serchio River watershed. Where the forest slopes open you have views of stone villages below, clinging

to climbing hillsides, a balancing act. Far below, the valley bottom, gravelly and narrow.

No, this is not Toscana as we'd imagined it. We see small pastures where mountainsides mellow to more gradual steepness. And exactly where would the Farro grow?



The road, always winding, takes us through some of the villages we'd seen from the top of the pass. Stone, built of old, shaped to fit contours of the land: charm. Old churches with square towers. A defying castle. Single rows of wine grapes, the vines supported by irregular sticks cut in the woods.

We arrive in Castelnuovo di Garfagnana, a little city of about 6000, the largest population center in Garfagnana. It's obvious this was long ago the market town of the valley. We wander through cobblestone streets to the tourist information office. Farro? The ladies are quick to hand us four different brochures on the subject. These promotional materials are glossy, deft, highly professional, featuring Farro in all its glorious incarnations from soup to risotto-type dishes, and tortes to top it off.

But what's this?, three of the brochures translate Farro as "Spelt." Isn't Garfagnana Farro *Triticum dicocum*, the Emmer grain? Well, yes, it is, we're told. A mistake in translation.

We should look for Farro farms up valley. Can they put us in touch with an interpreter? Yes, they can.

Castelnuovo is a busy place. Restaurants beckon when the shops close at noon. We eat Farro soup. It's definitely Emmer we're enjoying, not Spelt.

Up valley, in San Romano, we find a nice hotel offering special off-season rates. The balcony overlooks the valley. Villages in the mountain folds, pastures and extensive woodlands. A beautiful scenery.



But it's still a mystery where they grow their Farro in this vertical landscape.

The next day we meet with the interpreter the tourist office had arranged for us. Pierlugi Pellizzer works as guide at Podere Braccicorti, one of the many Agriturismo – "Farm Holiday" – places in Garfagnana. A score of English are just leaving. "They're almost

all teachers, they come here when they have holidays in May in Britain," Pellizzer says.

What's with the Toscana shine so absent here in Garfagnana? Not only the landscape but mind-set, too, differs from the "real" Toscana, Pellizzer explains. "After the Romans and the Visigoths and all that, and the Lombardis, in the 1400s almost all communities in Garfagnana shifted their allegiance from the duchy of Lucca (a short way to the south, in the Toscana) to the duchy of Modena (a stretch away across the Apennines, in the Emilia-Romagna region)." Modena, he said, had already established trade routes through the territory, primarily to reach the Mediterranean for its salt, so Garfagnana's allegiance shift was a welcome development.



Modena is rightly famous for its culinary traditions – *Prosciutto* and *Mortadella*(pork products) and *Parmigiano* cheese –, and Garfagnana did well to follow suit, Pellizzer says.

If gastronomic and cultural ties are stronger to Modena than to Tuscan Lucca, ultimately it's the geography that makes the folks of Garfagnana a sort of insular people, he points out. "It's a closed valley, that makes people stick to their own traditions. Here every group of communities even has their own pronunciation."

In Garfagnana two foods stand out, Farro and chestnuts. "The chestnut the people call the 'life tree'," Pellizzer says. Every time a war raged, marauding soldiers took the people's crops and livestock; were it not for the chestnut Garfagnana farmers would have starved – "especially in 1944 when this was the front line."

Garfagnana was included in the Toscana when the Italian government designated Toscana as one of 20 official regions in 1976. At that point the people of Toscana looked down on Garfagnana. "They considered the people here ignorant farmers." Oh, but didn't that change!: for the last two decades Garfagnana is praised as the most beautiful jewel in the crown. "Garfagnana now is a symbol for pure nature (even the wolves are back), and for great gastronomic traditions, and, laid-back living," Pellizzer says.



We still haven't seen a Farro field, though Pellizzer tells us, yes, Farro fields are plenty here, but they're small fields. All the Farro export to America has to come from somewhere, we're thinking, and take the address off a Farro retail package: a company in Lucca.

We travel south through the lower reaches of the Flume Serchio. Galliciano. Bolognana. Borgo Mozzano. Don't those village names roll off your tongue like ice cream flavors – summer in May, the bright warmth invites to roll open the sunroof of the old Mercedes, with merely a thought to cool and cloudy lands north of the Alps somewhere. Oh, it'll rain later, when the afternoon temperatures turn too intensively hot and the clouds gather over the valley to shed their weight, late afternoon rain an almost daily occurrence. Meanwhile the cloud pillows float up by the snowfields as though the tourist ministry had ordered them for photogenic reasons, the valley drenched in sunshine.

Along the highway the little towns protrude with newer buildings, but the village centers are of old poise, stone and flowers.

Should we discuss the Italian character? Joie de vivre Italian style happens streetside with tiny cups of strong coffee. The lilting linguistic rhythms set the tempo of a brook over little waterfalls, contrary to the body language that gives the scene all the time in the world. This isn't north of the Alps where people live to work, here, one works to live, life comes first so we'll have another cup, a Cappuccino this time... It's unimaginable what Italy was like before the ubiquitous coffee machines. We're not at the sea but the Mediterranean languor is pronounced, the people relaxed, enjoying the day. Until one gets up, car keys jangling, and behind the wheel a whole other personality emerges, a bat-out-of-hell disposition of driving. Automobile traffic is a free-for-all in Italy, a pedal-to-the-metal race of ring-around-the-rosy. No clue why they bother to put up traffic signs.

And so we proceed with caution on pinball highways. Through a tunnel the road leads, and all of a sudden the landscape broadens to the plain surrounding Lucca. Hello, Tuscany. We understand now why many Toscana maps end at Lucca.

Since we're after Farro we navigate to Guamo, a small satellite town of Lucca. In an industrial park we get lost driving back and forth peering at company signs. The third person we ask gets on the phone to help us with directions; ah, they don't have a sign out, we're told. "Look for a building with yellow doors."

When the manager comes down the stairs he's all apologetic. There is no Farro for sale here, he says, hands up. So sorry we came all this way, he says in broken English, explaining that this is only a packaging facility. On the shelf in the office the *Farro Perlato* packages stand shrink-wrapped, their yellow label exclaiming *Eccellenze d'Italia, farro varieta triticum diccocum*. We tell him we're after information; ah, he says, disappears up the stairs and comes back with an American gourmet magazine – we're not the first to be interested in Garfagnana Farro. Yes, San Francisco is one of the markets they ship to, he notes as he gives us the name of the person we should talk to, Signor Paolo Magazzini at the Cooperativa Agricola Del Colli. We'd find him in Petrognola, far up valley in Garfagnana.

Before he lets us go he fills a shopping bag for us with Farro product samples from the shelf.



Petrognola lies half-way to the sky past San Romano, Piazza al Serchio, San Anastasio. We espy a little store amidst the stone houses. Would the storekeeper Signora know where we can find Signor Magazzini? Sure she would: "He's my husband."

Leaving the store in charge of an elder relative, Daniela Magazzini leads us along a path – "this is a shortcut."

She grew up in Australia, she says, hence her English. She'll translate for us.

Built into the mountainside, the Magazzini grain conditioning plant receives the in-hull Farro on the lower level. Today it's a farmer from Parma, north of Tuscany, who's brought his Farro; he's unloading grain sacks from his small Kia van; it's his job to empty the sacks into the small hopper, seeing to it that the hopper never runs empty because in grain cleaning the flow of grain has to be steady.

Upstairs we meet Signor Magazzini by one of the Italian-made Zanotti machines. He checks some settings, then leads us through to the room where packaging equipment waits silently – here it's better to talk than by the machine rumble. "His father grew Farro, his grandfather, his great-grandfather..." So they're one of the families whom the most poetic of the brochures describes: "...against all reason (they) conserved the old forms of agriculture, without nostalgia but only for a sense of justice."



Signor Magazzini speaks more in a matter-of-fact vein. "Wheat's not worth growing," he says through the Signora. "Today I would get 30 Euros for 100 kilograms of wheat; Farro is worth 80 Euros for 100 kilograms (48 cents American per pound) to the farmer. In the whole of Garfagnana only maybe 1000 kilograms of wheat are grown."

He farms about 160 acres. And these acres would be patched together from how many fields?, we ask, looking at the vertical landscape all-surrounding – much of what had appeared as sloping pastures from afar are actually Farro patches, we learn. "Oh, about 100 fields," Magazzini answers. "The largest ones are about one hectare (2.6 acres). The highest of my fields are at about 1000 meters (3000-plus feet), the lowest are at 500 meters. Some of the fields I own, some fields I rent, and some fields I farm for free because the owners want some of their ground to remain open, they ask me to farm there because they don't want the forest to spread there.

"Not all my fields are planted to Farro. I also grow pasture for my cows. They're outside all year eating grass. They're for meat. This spring I have 45 cattle, counting the calves."

So in addition to raising Farro he's also a grazier; the work in this steep terrain must be healthy? "Oh, yes, I feel healthy," Magazzini smiles.

He shows us the grain conditioning process. From the little hopper downstairs the in-hull Farro – *buccia* – gets elevated by augur into the first machine on the top floor. “First the Farro goes over three screens, then through a vertical dehuller, then through an aspirator,” Maggazzini explains. At this point in the process the product is *decorticado* – whole-grain dehulled Farro. After a further cleaning the cereal grain gets pearled – *perlato*.

“You lose some nutrition when you pearl,” Maggazzini allows. “But our Farro is traditionally pearled, that’s what the market wants.”

Signora Maggazzini puts in that pearled product cooks so much quicker than whole grain does. Also, pearled Farro after cooking has a much softer mouth-feel than cooked whole-grain Farro.

The dehulling, conditioning, and pearling machines sprout various chutes from where pours byproduct. There are pails filling up with cracked grain that’s mixed with some chaff and small rocks. “That’s chicken feed.” Elsewhere clean cracked grain gets collected. “That’s what gets milled to flour,” Maggazzini says, giving us directions to an old watermill where his flour was produced the traditional way until recently. “We have a bakery,” his wife tells us, noting that quite a bit of their crop is sold as baked goods. The bulk of byproduct, and right bulky it is, gets sucked off into a silo outside, namely the empty hulls. “Those go to the cows.”



His harvest he stores in big tote bags, Maggazzini says. “That’s not very efficient. One of these years I will put up a silo.”

Harvest is late July; planting in October, he notes. “That way the plants have grown strong enough roots to make it through the winter. I haven’t had any winter kill.”

In addition to his own crop he buys Farro from 10 other

growers. At Lucca some of the crop gets further purified by a Sortex, a machine that picks out impurities with visual sensors.

Maggazzini explains that the marketing success of Garfagnana Farro rests on the Indicazione Geographica Protetta – the exclusive terroir claim officially sanctioned as such by the European Union.

While we’ve been talking, the small lot of Parma Farro has been cleaned and pearled, Maggazzini’s son helping. Now Maggazzini steps up to the scale; letting the pearled Farro run into a grain sack he watches the read-out, stopping the flow at exactly 50.75 kilograms. He points to the .75. Then to an empty sack. Ah, that’s the weight of the sack.

The Parma farmer had carried his in-hull Farro by hand, two sacks at a time. Now he's using a handcart to move two sacks of clean grain at a time to his Kia van – cleaned grain is a lot heavier than the fluffy in-hull Farro. He direct-markets his Farro around Parma, he tells us. He also raises a little bit of Piccolo Farro, *Triticum monoccocum* Einkorn, but the restaurants do not want that. "It's not traditional. Only a few families are buying it."

Where he farms by Parma the fields are on hilly ground not so steep as here in Garfagnana where he wouldn't want to farm. Why not? He has us follow him a few steps so that we have a view of the opposite mountainside. He points: a great gash of a landslide mars the slope. Not a place that again will grow Farro.

As we say good bye to Signor Magazzini, he says we should visit a brewery close-by. We follow the Signora back to the store where she shows us the packaging of their Farro baked goods. Under the auspices of Presidio Slow Food the production includes Biscotti di Farro, Focacce, Torte Tipiche, as well as Farro Farina – flour.

As for the brewery, "it's just down the hill." As the crow flies, that is. We track the narrow road back down the steep slope, curve after curve after curve, to Le Magnifiche di Pretrognola.



From the dry-sweet cereal grain smell at the grain conditioning plant, we've come to the amber aroma of steaming brews in stainless-steel-gleaming vats when we enter the brewery. This is the realm of Roberto Giannarelli. He shakes our hand most friendly-like, but he doesn't speak English. "Sandy," he calls. A young woman appears. She's his daughter. She knows only a little bit of school English, but her computer has translation capacities.

So up in her office we type our questions; she answers looking at the screen.

Birra Artigianale are their business, "artisan brews" including five Farro beers. "My father had a passion for beer. He went to a friend in Baladin (Italy) to get the information on how to brew beer. This company was started about 10 years ago."

It's a family affair – Giannarelli's wife also works at the plant.

For beer they use Farro *decorticato*, the whole grain not pearled, Giannarelli says. "We were the first to make Farro beer. Now there are other breweries in Italy that produce it, too."

Except for one Farro beer he uses barley malt from Germany and Britain. (Which is how the Germans brew their Emmer and Einkorn beers, with the help of a little barley malt.) But that one 100-percent Farro beer is really unique. “I send the Farro to Germany for malting,” Giannarelli says.

His five Farro brews are a nice spread in taste, color and lightness, ranging from 4 percent alcohol content to the 5 percent of the *Bianca al Farro*, to the 5.5 percent of *Ambrata al Farro*, and the 7 percent *Rossa Forte al Farro* named “Sandy.”

That’s named after you?, we ask. She nods. We’re curious: Sandy isn’t an Italian name. “My father really liked the movie *Grease* with John Travolta,” she relates, grinning.

The brewery sells both kegs and bottles. Most of their sales are in Italy, but they’ve cornered some export to Japan and Australia as well.

Is he glad he got into the brewing business a decade ago? “Nein, nein, nein,” Signor Giannarelli says, for some reason lapsing into German. “Italy is a difficult country for business,” he explains. Costly regulations and high taxation depress the profit margin. “I work, work, work, but the income is not so great.”



But his beer sure is!

The next day we meet up with translator Pierluigi Pellizzer to speak with Bruno Giovannetti at Podere Braccicorti. Giovannetti used to work as ranger in the nature park of Garfagnana. When the family decided to get some of the tourism Euros (well, Lire back then), he had to learn to farm because the government stipulates that Agriturismo must be true to its name.

His Farro are narrow strips of fields bordered by single-row wine grapes. It looks pretty, the pattern reaching up the mountainside, but in economic terms the Farro farming doesn’t cut it on this small a scale, Giovannetti tells us. His Farro production is a good asset nevertheless, if seen in the gastronomic context because traditional cuisine is a strong draw for visitors. “Farro is a good combination with legumes and meat – traditionally that’s pork lard. Pearled Farro is great in soups, in salads; and Farro flour makes fine cakes.”

He works the field strips with a tractor, first plowing, then tilling. The October seeding he does by hand, followed by light tillage with the tractor that gives the in-hull seed good soil contact. “For

Farro you don't need a lot of fertilizer," he notes: a little bit cow manure suffices. More than that and the stands would "fall down," lodge, that is. Despite the threat of its lodging, Farro is easier to farm than maize, he notes. Neither plant disease nor pests seem to bother the Farro; only after harvest a little butterfly threatens the crops that aren't put up in tightly-sealed storages.

At harvest the Farro stands about a meter (about 3 feet) tall. For harvesting the co-op sends their combine.

In Garfagnana the Farro had almost disappeared, too, excepting in a very few places higher up the slopes in the 1950s and 1960s, Giovannetti remarks. In fact, farmers were disappearing, too, which concerned the government so it took the step of supporting agritourism as a means to make Garfagnana farms once again economically viable.

Meanwhile, it wasn't long before the population on the whole began missing that old Farro, Giovannetti relates. "Farro starts again in the 1970s and 1980s because people wanted to get back to their local gastronomy roots. After that the market requests more and more Farro. The IGP (terroir designation) really helped the market grow."

Is he a happy Farro farmer? Not this year, he says. "After I seed in October it rains and rains, water stands still on the fields for weeks." Because of that his stands are a lot thinner than usual.



On the whole though it's a good life for the Giovannettis. They wouldn't trade their Garfagnana for any other place.

Pellizzer remarks on local agritourism trends that, in general, the average age of visitors is older now than a decade ago. "Most of the people we get here are from Britain."

A six-hole golf course is also part of Podere Braccicorti. That draws mostly locals, Pellizzer says.

His English he learned at a six-month stint at Leicester University, England. At Italian universities he studied economics and computer science. "During the winter I do web programming."

The next day we follow Pellizzer to the Garfagnana Coop Alta Valle Del Serchio. Lorenzo Satti is the co-op manager. The facility is larger than the one at Petrognola;

those two are the only two conditioning plants in the Serchio Valley, although two farmers have small lines set up for cleaning just their own crop, Satti says.

“The co-op has 19 members,” he elaborates. “We also buy from 30 other farmers.”

The co-op’s dehulling and grain conditioning equipment is of Italian engineering, manufactured in Germany. The dehulling technology that Satti prefers is a grinding mechanism, rather than the impact dehulling more common in Germany. “I think the grinding technology is better adapted to our Farro,” he says.

The plant began operations in 1996. “In 1997 we produced 2000 kilograms. Now we produce over 200,000 kilograms a year.” Such business growth surely is indication of most proficient management? “Yes,” he says and grins – what did we expect him to say?

He seems an easy-going fellow; currently he’s supervising a staff of seven. Early on there was a little hick-up in that the health department made them change some of the set-up, insisting on installation of stainless steel surfaces. Otherwise, though, business has gotten easier. “In the beginning we had to market the Farro on our own. Now we have contracts with big sellers.”

In the fields, too, Farro farming has improved. “In 1996, Professor Tallarico of the University in Firenze (Florence) selected a low-growing Farro variety from germ plasm that originated in the Garfagnana.”

The co-op has come to be the main representative of local Farro business, Satti says. “The government watches us closely, to make sure that our Farro meets IGP (terroir) specifications.”

Come July, how does he determine the harvest schedule, seeing how everyone of his growers will probably want his fields harvested first? “Oh yes, the farmers always fight over that,” he acknowledges. “What we do is simple, we go on up the road, and harvest the fields as they lie close – the first one on the road gets harvested first.”

The established seeding rates surprise us, at 60 to 70 kilogram per hectare when Farro is seeded with grain drill, 100 to 110 kilograms per hectare when it’s hand-seeded. (The grain drill rate is only a third of the rate at which Emmer is seeded at Lentz Spelt Farms.)

Production varies, but averages out at 2000 kilograms per hectare (1700 pounds per acre in-hull). “The Spelta Farro that’s farmed with chemicals (elsewhere in Italy) produces four times as much,” Satti notes. “But that we farm only organically is part of our IGP (terroir) specifications.”

Their pearled Farro tests at 9.35 percent protein.

All their Farro is pearled. Here, too, the clean cracked grain is used for flour, although this co-op has their own mills with millstones 1.2 meter in diameter. In addition to Farro they also mill chestnuts, which is a cumbersome affair because chestnuts leave a doughy layer so that the stones have to be dressed a lot, as often as five times in a day’s work. In addition, they mill a maize variety also typical of Garfagnana. “And we mill a little bit of bread wheat.”

Last stop of our sojourn to this Heart of Farro, the watermill at Pieve Fosciana. Ercolano Regoli was the fourth-generation miller here for a half-century. Now, at 68, he's retired, although occasionally he still gets the heavy millstones turning to demonstrate the power of 1700s technology. Everything is in good working order.

Originally the mill was community property, Pellizzer translates. When it was put up for sale to the highest bidder, the Regoli family purchased the mill. Ercolano Regoli is the last of the line of millers.



Four ponderous mills are set up on the heavy-oak construction in the ancient stone building, the creek running beneath the house. Two of the mills are for chestnut flour, one has different type of



millstones for Farro, and one for the maize, the *formentone*. Legend says that a returning emigrant smuggled the eight-row maize of bright yellow and reddish, almost burgundy color into the country, the kernels hidden under his hat band. In opposition to the hybrid corn trend, Garfagnana farmers made the *formentone* maize their tradition to this day.

We ask Regoli at what age he started working in the mill. He shrugs – as long as he can remember – “I grew up with it.” In his father’s day the Farro arrived in-hull at the mill. A short, wooden fanning mill with screens stands by the entrance (also still in working order); the in-hull Farro was cleaned of chaff on this contraption, the handle turned by hand. Next the Farro was dehulled by millstones, the distance between lower stone and upper adjusted in height for the job. Then, cork was placed between the millstones to assure just the right setting for the pearling. “Around 1990 the Farro started coming here already dehulled,” Regoli recalls.

“Back in the old days, the grain was handled in 100-kilogram sacks. Then the sacks weighed 50

kilograms. Today, they're 25 kilograms," Regoli says. Are we getting weaker? It would appear so, he muses.

Milling Farro flour was a job from morning to dinner time, Regoli recalls. But when chestnut flour was to be milled, the millstones turned 24 hours a day.

It seems to Regoli that Farro kernels used to be smaller in the old days. Of course he remembers how the harvests became a trickle, in the disappearing phase of Farro. But he always stayed friends with the Magazzini family of Petrognola.

And then, the rebound. "Farro became like a 'fashion food'," he puts it. On the wall in the mill hangs a Slow Food document attesting to Regoli's craftsmanship. "That's from 1999 when I participated in a Slow Food event in Florence."

Four times national television has visited the mill and interviewed him. So he's *famoso!* "Oh, yes, I've been on television," he says with a wink.

The last years of his milling did become right busy. In 1994, one of the lakes dammed in the 1920s by an electric company, was to be emptied of water, exposing the flooded village like a water-logged ghost town. The community made a big event out of it, and Regoli had to work the mill hard to get the chefs enough flour for the festivities.

"And when the time of mushroom harvest came, I always worked a lot, that's when a lot of people want to eat mushrooms and polenta."

When we ask Regoli about mill maintenance, he lights up. He explains how the scoop-shaped paddles turn an iron shaft that's held in place by rings of olive wood, the point being that olive contains oil and therefore no grease is necessary. There are also bronze parts of the turning mechanism. And of course he speaks of dressing the stones. And so we recognize the distinction of yesteryear's craftsman such as a miller, by his intimate relationship with the machinery that simply exists no more in our age of electricity and computer-steering.

In the house vis-à-vis the mill we visit shortly with Lucia Regoli. She's vice chair of the county government, and the question we want her to answer is, why does the government put a limit on Farro production? To wit: "By law production can not exceed 2.2 tons per hectare."

The regulation is part of the Garfagnana IGP (terroir) designation, she answers. "The government thinks that if farmers were to increase traditional harvest levels, that would change the traditional way of doing things."

The government also supports a disappearing cattle breed with subsidies, Signora Regoli says. "*Mucca garfagnana* is a cow for milk and work," she elaborates. "The meat is a little bit hard. The traditional way is to eat the meat raw, after it's cured down in a well."

Not surprisingly, the conservation tilts to traditional Farro dishes – the Garfagnana folks really do love their Farro. Regoli says she eats Farro about once a week. "The meals are different in the summer than in the winter," she remarks. "In the summer we eat cold Farro with fish, lettuce,

tomato. Another common dish is pasta, *Taglietelle*, with mushrooms, or with game. In the winter we eat thick soup, Farro and beans with lard and different vegetables, and olive oil, oil is important to the soup.”

For visitors, among the best restaurants to experience culinary history is Vecchio Mulino in Castelnuovo. “The name means Old Meal.”

As we drive back to San Romano that evening it occurs to us that in Garfagnana a social experiment is taking place. Farmer exodus was stemmed with a boost of agritourism coupled with a resurgence of Farro farming. The result is an organic valley of scenic beauty, the steep lay of the land keeping agriculture small and checking development: We’d come to Garfagnana looking for farmers and found agrarians.

From the Einkorn perspective a fine turn of events!: if the archetype grains had enabled civilization with all its horrifying aspects, here and now Farro is key to a sustainable, peacefully profitable future.

For the last time we follow the Serchio out of Garfagnana, on our way to Pisa this time. There must be another Farro area in Italy, the Garfagnana production we ferreted out is simply not large enough to account for all of America’s Farro imports, so we make an appointment with Professor Mario Macchia at the Pisa university. Surely he can point us in the right direction.

Pisa: the famous leaning tower and the adjacent historical constructs draw immense crowds, we can’t imagine what a circus this will be in the tourist season. You shuffle along among people gawking, guides speaking in every which language, everyone taking photos of images that are in a thousand publications – yes, the place looks just like in the books, only bigger in real life...

The agricultural branch of the university we find in a large building not far from downtown. It’s how they built Big a hundred years and more ago, imposing, portentous halls with grand stairs, every step echoing from the high ceilings. The professor we find busy with a post-graduate student on the computer.

Macchia’s agronomy focus are the large crops of Italy, he tells us. As for Emmer, “the *Triticum diccicum* was the most popular grain of the Egyptians,” he says – Emmer is more of a historical footnote than ranking in Italy’s agriculture today. He has no exact statistics, but he assures us that Italian Farro production is minuscule compared to 1,200,000 hectares of durum wheat and 1,000,000 hectares of maize.

“The problem with Farro is that there is not much trade in it, the average Italian eats Farro maybe two or three times a year. Compared to wheat, Farro is not economical to grow,” he puts it.

Macchia has been to see the Farro in Garfagnana, but it’s been many years ago. He’s surprised when we tell him of stands one meter tall. “What I saw was 1.5 meters high.” Did Professor Tallarico cross the Farro with wheat to dwarf it, for the variety the Garfagnana farmers are growing since 1996? Macchia doesn’t know. He doesn’t think so, some land-races were probably less tall among the many that grew in Garfagnana in the old days, he allows.

“No *Triticum diccocom* variety exists in the official national lists of varieties in Italy,” he points out – land-races are not considered “varieties” here but genotypes.

What about GMOs?, we ask. “Genetically modified organisms are forbidden in Italy,” he emphasizes. “Although it’s not forbidden to import GMO crops for cattle feed.”

Macchia is clear about his take on the GMO issue. “The technology is dangerous for the ecology.” But he’s worried: Italy’s non-GMO policy only stands “for the moment.”

Back to Farro: he doesn’t know where to send us on our quest. “Maybe ask around near Siena.”

The professor’s hunch points us into the central region of Toscana. Here towns and country do the Toscana promotions justice, we recognize the landscape marketable in the extreme, hills



gentle, woods and open-space farms in flowing profile. How powerfully Toscana revs up its promotion can be judged by Tuscany influence on America’s high-end gastronomy – when Oregon and Washington boutique wineries needed to set themselves apart from California’s jug wine industry, they looked to the Toscana example of how a discriminating wine and food culture can lift the tide of commercial value. “Ambience!” Chefs weren’t far behind, sensing the antidote to charmless cooking in Toscana’s classy food styling. Follow the gourmands.

What happens when you travel to Toscana, the promoted idea of it already long in your head? We drive roads that wind from hilltop to pleasant vale and back up to heights where views reach onward over a blend of forest, much if it deciduous, and broad sweeps of fields alongside olive groves and vineyards, until old, old towns of stone break up the journey. Expansive estates – one intuits old, old money – manifest composure with large stone buildings that oversee from high points, their approach cypress-lined just like in the photos.



This Toscana does not inspire awe as Garfagnana does. Toscana does not take your breath away. In fact, it does the opposite: Toscana is a scape so quintessentially bucolic it makes you breath in deep. Precisely as the promotions and word-of-mouth tell you, Toscana is all about ambience.

Ambience, ambience. You wouldn't think that a term as vague as "surroundings" can conjure up streams and streams of tourists. Who're not disappointed if they come for subtle harmonies that flow from the calm scenery to wines and foods extraordinary, harmonies that seem to softly caress everything, the after-dinner espresso, the musical Italian conversations on the breeze, the slant of green spring eve sunlight as the cuckoo calls.

Garfagnana, that small land of wild-mountain folds tumbling to old villages perching, its traditional grain patches won from steep lands, we've called the Heart of Farro.

Terra Siena, the typical Toscana, is the Face of Farro framed by luscious hair, slender Emmer rippling as though sensuously brushed by the harmonious wind.

Poetic Toscana, yes. But in practical terms, big, big tractors at Pieve a Salti, up the road from Buonconvento south of Siena. Not grain patches here but spacious hectares of tall cereal crops. Large production so efficient that three people do all the farm work on 700 hectares (about 1800 acres), while seven workers keep busy dehulling and conditioning and pearling and milling the crops. The other branch of the business are highly sophisticated agritourism facilities, 120 beds in rooms and holiday apartments. A beautiful restaurant. Even a Beauty Farm – think Turkish baths, yoga... Horses to ride.

Farro: we climb the stairs of one of the centuries-old buildings and knock at the door “administration.” Leonardo Meiattini greets us. He’s the manager here; Elena Prandi and Gian Paolo Sandinelli are the owners.



Viable farms are essential for the continuation of Toscana’s ambience, Meiattini says: it’s a matter of landscape, the balance of open land farmed and the wooded slopes. Bringing back Farro for a growing global market, he says, “has given new life to the farms here in Toscana.”

They started small: two decades ago they decided to transition to organic farming at Pieve a Salti; the switch to traditional grains went along with their organic orientation, Meiattini relates.

“In the beginning we served the Farro at the restaurant, and offered it packaged for sale. The people who liked to eat Farro here then looked for Farro in the stores. We asked the stores to place our Farro next to rice, so people not familiar with Farro would make the connection that Farro cooks similar to rice.”

Over the years Meiattini developed an astute organic farming system. He points to a bag of dirt by his desk, explaining that’s a soil sample getting shipped to the university in Pisa. The lab tests there are

to monitor the soil fertility that he manages mostly by crop rotations. “For nitrogen we plant legumes – red lentils, chickpeas, fava beans, all soup ingredients.”

Weeds he counters with three tillages, spaced over a couple of weeks, before seeding relatively late. In spring, when the cereal plants have grown to about 10 inches, a light tillage aerates the ground hardened by winter wetness, at the same time eliminating spring weeds sprouting. This spring tillage also roughs up the crop some, which is why he uses a higher seeding rate, Meiattini says. “Usually we seed 20 kilograms per hectare over the recommended rate of 180 kilograms.” Later in spring the Farro itself wards off weeds: “It’s a strong and rustic plant.”

As for pests, Meiattini worries not. “Problems with dangerous insects only occur when the same cereal gets planted four or five years in a row” (in the same field).

Forage crops also fit in his rotations. “Here we raise the French Limousin cattle for meat; we also have a farm in the north of Italy where we raise cows for milk.”

His grain crops include white oats that, after dehulling, are processed to a “vegetable drink” similar to soy milk. And, for some years now Meiattini has grown Farro piccolo – *Triticum monoccocum*, Einkorn.

For his Emmer Farro, Meiattini obtained seed of the Garfagnana genotype. The first Einkorn Farro seed he sourced from “a little farmer” at Romagna in northern Italy, he says. “We could only get one ton. From that we grow more and more seed, every year.”

The rotational crop varieties demand correct timing of planting, so as to stagger the harvests. “We usually start planting the end of September, with fava beans. The oats we plant around the first of October, the Emmer by the end of October. Then we plant our durum wheat, barley, soft wheat, and the *monoccocum*. The forages we plant around the end of February, the lentils and millet after that. The chickpeas we plant last, end of April.”

Harvest commences early July with the fava beans. “We finish cutting the cereals in August.”

The grain conditioning facility at Pieve a Salti is quite the mix of engineering. “We have Italian, Austrian, English, and German machines. When these machines are sold they tell you that their machine can do all the (hulled-grain) crops. But we found that for each crop a different, specific machine works best. For our oats, for example, we have a vertical de-husker. For the Farro we use a machine that moves in a rotation so that the Farro de-husks itself, rather than the stones doing the de-husking.”

Before dehulling, the crops flow over screen mills. “It’s most important to clean the material because smell is the most important.”

After dehulling, the crops travel over gravity decks and through a metal detector. “At the end we have the machine from England that works on optics” (Sortex).

As in the Garfagnana, at Fattoria Pieve a Salti *Farro Perlato* is produced, that is, pearled Farro. “The *decorticato* (dehulled whole-grain) Farro has more fiber and more protein, but people are used to the *perlato*,” Meiattini remarks: their pearled Emmer tests at around 12.5 percent protein, their dehulled whole-grain at around 15 percent.

The Einkorn is not pearled. “Pearling would break it,” he says, pointing out the smaller kernel size of *T. monoccocum*.

Not held to a production limit by an Indicazione Geographica Protetta terroir designation, Meiattini quotes his yield averages in tons not kilograms: 3.2 tons of *T. diccicum* per hectare, 2.5 tons per hectare of *T. monoccocum*. That’s in-hull grain, he adds. “When we pearl we lose about 42 percent (of the incoming weight); if we just de-husk we lose about 35 percent.”

What happens to the enormous quantities of empty hulls produced every year? That’s an interesting story, Meiattini remarks, noting that a bio-gas facility had begun operations in a

neighboring district. “At the start, farmers cut green cereals for the bio-gas, but now we sell the husks there, so we have the grain and the bio-gas.” Some of the husks he applies to their own fields as a soil-building measure: “The husks add fiber and silicon.”

From seed to trucks of husks is a far stretch of management, but Meiattini is also involved on the hospitality and educational end of the business. On the day of our interview he’d guided a group of school children – “small children, about five years old” – on a farm tour. “The *agriturismo* goes together with the farming,” he puts it. “Parents like it that their children learn about farming and cows. Parents who come here are interested, too, so we give family tours. When people talk about the farmers, that’s a good thing.”

In the same vein, outreach by way of a blog called Tuscan Fields of Fattoria Pieve a Salti, has proved a great promotional tool for their Tuscan Fields label. “The blog is done by two people in Boston.”

Did Meiattini think that Farro grains would experience an ever-growing resurgence, back 20 years ago when he decided to “sell something different?”

His answer surprises. “Yes, that’s what I thought. And I’m not finished. I want to be on Big Street.”

He’s well on his way. His Farro production has increased to over 1000 tons of *T. diccicum*, over 600 tons of *T. monoccicum* a year, for markets that have expanded quickly. “In Europe – Denmark, France, Germany – we sell to companies who use their private label.” But America is his Big Street. “In the United States it’s a more difficult market,” he relates. “In the beginning it was easier to sell Farro on the East Coast, because many Italians live in places like Florida and Carolina. Then we expanded our market, we’re in Whole Foods. We’ve talked with Cosco. I was at the Expo West (food show) in Anaheim (California). But America is not a simple market, for the market to work it has to work big, everyone wants to know our (growth) potential.”

His Toscana location is an advantage on the growth front, he explains. The traveler who crosses the vast plain of northern Italy’s Po River assumes that’s where the country’s large farms are, but that’s not the case. “The farms in north Italy are small farms; here in Toscana the farms are a lot bigger.”

Already he’s expanded by renting ground from two neighboring farms, and, other growers in the area have started producing his Farro grains. “They grow for us because they know now that these crops are new life for the farm; they can stay at the farm and focus on production, which is what they like, and we sell.”

The story of Farro contributes to the cachet, what with the Roman angle. Global fascination with the Romans – those crowds in Pisa! – embraces their empire building which pictures *Roman legions marching on Farro*. As far away as at Hesselberg in Franconia, Germany the physical measure of a legion soldier’s Farro allotment is on display among the artifacts of the *Limes*, the Roman defence wall that crossed Europe.

Closer by, a fourth-century church ties Pieve a Salti to its name, Meiattini says. “It was one of

seven churches in the area where people could get baptized. Salti indicates a hill, the word comes from *saltare* which means to jump, as in jumping off, or, jumping from hill to hill.”



The Farro jump from one continent to another just took some business imagination, Meiattini concludes.

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