

Spelt and Emmer letters. May 2013.

Dear spelt and emmer growers,

How are your plantings of spelt and emmer? Your progress is of great interest because the evidence is strong for spelt, and emmer in some cases, to be the wheat type of choice in regions where the summer is insufficiently hot and dry at the right time for common wheat.

Plant growing progress

In the fall, we had the adventure of finding enough *Swiss spelt* and *Spanish spelt*, already in our catalog, to spread among the growers who were in good regions for trials and who also wanted to grow spelt on their farms; that is, in the coastal fog and rain belts, and in the Sierra foothills. Some of you planted Ethiopian Blue Tinge emmer or already have an emmer wheat that grows well. Meanwhile I selected 14 varieties from the USDA collection, including two emmers, and planted them on my balcony in pots. Prof. Giles Waines, planted these also in his greenhouse at UC Riverside in special sand tubes so that he could see how large would be the roots. All of us should be aiming to save the seeds this year.

Now, I've seen the *Swiss Spelt* handsomely headed, and growing locally in Ron's backyard, with irrigation to counter the lack of significant rain since January. Some weeks ago Jani sent photos of both *Swiss* and *Spanish spelt* that had grown well but faced heading up in pretty dry soil. Spelt should be able to stand this, but as I saw from Ron's plot it would do so much better if the soil was vegetable garden rich and well watered.

I'm eagerly watching to see which balcony spelt plants do best and then hope to have help from Prof. Jorge Dubcovsky to discover whether any have those baker friendly, elastic gluten genes, similar to the *Swiss spelt*. One of the emmers headed in mid April two weeks before any of the others. Here's hoping this will be an emmer of choice for California.

Hulling and other processing needs

John Piazza II in Ohio, with the help of his son, successfully repaired by Japanese huller, so I can come and demonstrate the hulling process if needed. The requirement will be that the spikelets and grain are really well dried. By my estimation that means in the 10% moisture range so that the chaff on the spikelets is nice and brittle and releases the grain easily in the huller. From this comes another requirement in the field: very dry heads of spelt and emmer are likely to breakup and drop the spikelets in the field, so we shall need to learn to harvest just before they are totally brittle-dry. Anyway, in the foggy regions it is almost impossible to actually dry grain to brittleness in the field, so the other equipment to consider is a dryer. The simplest is a stack of perforated trays with a chimney arrangement through the center and a gap beneath for an optionally heated fan.

There are hullers available, and a few are compact and likely to please the small farmer. A rice huller which appears to be an updated version of my repaired Japanese huller can be found at: www.calibrationplus.com, based in Woodland, California.

Sadly John Piazza II passed away in April this year, after a long and very productive life as an engineer and family man. However his son John Piazza III, is interested in growing spelt in Ohio and also continuing his fathers engineering hobbies in the machine shop that they steadily built together over the years.

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Products from spelt and emmer

The cuisines of the main spelt growing areas all make bread as the main product, which means that the varieties originally grown had the good genes for enough protein in the grain, and gave good flavored bread. In my own quest I see that one stumbling block when making whole wheat bread is not so much the protein type as the fact that the flour was stone ground in a single pass. This means that the very soft spelt flour is especially likely to have little or no starch damage, the starch granules roll under the millstones and remained unbroken, so reducing their ability to quickly absorb water and swell during bread making. One cure for this is to jump-start the bread making process by using a hot water (140 degrees F) mix with a portion of the flour e.g. 10 - 50%, and adding the starter and remaining flour and other ingredients after the mixture has cooled. This allows some of the starch granules to swell nicely so that you can produce "proper bread" texture, and leaves most of the natural flour enzymes untouched by the extra heat. Whole wheat bread dough needs a longer flour time, so that these enzymes can help with the dough development. Modern milling methods can generate the required amount of damaged starch in the flour, but the processes are generally applicable to refined endosperm flour and may not be suited to processing whole grain flour.

Please let us know how you are faring with the spelt and emmer planted, and I hope you will not give up on those plants that have struggled to remain in existence through this drought. We need the seed, and you'll discover which plants can make it through such a rough season.

With many thanks,
Monica

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