

# Whole Grain Connection Newsletter

## January 2018 #16

### Who wants whole grains?

*All our local grain efforts are for naught unless we aim for 100% whole grain products.*

The reality is that most people do not really want 100% whole grain foods. For all of our agricultural history the goal has been to make flour without any accompanying bran or germ. However, when this goal was finally achieved nearly 140 years ago by now, refined flour, polished rice and de-germed corn became available to all who wanted them. Then the folly of such a desire was revealed, but slowly. It took more than 60 years to establish and appreciate the existence of B-vitamins in the discarded bran and germ, and their power to stave off pellagra, beri-beri and the related obesity and type-2 diabetes. It then took another 60 years before the lack of folic acid and dietary fiber were tied respectively to spina bifida birth defects, Alzheimer's disease, obesity and the diabetic syndrome, digestive system problems and cancers. All this evidence for the need to eat grains in the whole form has still not deterred the continued production and purchase of refined grain products as the most usual form for grain foods. The disheartening answer is that even people in revered organizations such as EcoFarm, CAFF, CCOF and Slow Food, the New York Times, PBS and KQED, have not given full support to the challenge of helping to produce and eat whole grain foods. The old refined flour and refined sugar recipes and products are still proliferated by the news media and publishers.

The localization of grain growing, so necessary for regenerative crop and pasture rotations, provides a glimmer of hope for change. The local grain grower can choose to serve the local whole grain miller and baker, as well as the home whole grain miller-baker. However, all is lost if local grains are serving the local miller who refines or sifts out the bran and germ, or the baker who still insists on a supply of sifted or refined flour. Local grains produced for refinement are in direct competition with *Big Milling and Baking* and can never hope to win ultimate local economic success, and are certainly not promoting the increased well-being of the community. But *Big Milling and Baking* does not have the equipment needed to properly produce pleasing 100% whole grain products. Here then is the huge advantage for the new local and more agile producer of grains, provided that they aim to support the production of local 100% whole grain products, sweetened if so desired with fruit concentrates or small amounts of local honey.

Bravo! To those local millers and bakers who have the courage to work on the front lines of this movement to provide truly healthful and appealing 100% whole grain foods. This is the wave of the future.

The people who really do want 100% whole grain foods without added sugar are the ones who already enjoy the benefits of these foods, most likely by making them for themselves. Just a few good examples of 100% whole grain breads are available and these are highly sought after. The difference in well-being achieved by eating all grain foods in the whole grain form and omitting refined sugar from the diet is phenomenal!

If you are trying 100% whole grains in your diet for the first time, you should know that it takes at least two weeks for the body to adjust, and before the true appreciation can be realized.

## Mineral nutrition from whole wheat bread

*How much mineral nutrition do we really lose when basing the diet on refined flour products? Since the bran and germ are the main source of minerals in whole wheat, the refining process removes practically all the minerals. Calcium and iron are added back to refined flour that is enriched; un-enriched organic refined flour does not have this addition.*

Eating six slices of sourdough leavened whole wheat bread per day provides around half the daily requirements for iron, zinc and copper, two thirds of the requirement for magnesium, and almost 80% of the requirement for phosphorus. See whole wheat nutrition tables (page 15) at [www.wholegrainconnection.org](http://www.wholegrainconnection.org). If refined flour bread is eaten instead, all these minerals must be supplied by other foods and that generally leaves a deficit especially for people eating a poor diet. Calcium and potassium are needed in large amounts compared with the other minerals. Whole wheat supplies significant amounts of calcium and potassium, but still only 10 and 20 percent of the total required. Milk products, whole nuts and seeds contribute larger amounts of calcium and all whole plant foods contribute significant amounts of potassium.

## After the holiday panettone experiments

The Sonora whole wheat panettone worked well, but I should say do not try suspending the newly baked panettone upside down! Provided it has been well baked this is not at all necessary and can actually lead to a disaster after all that careful preparation. I succeeded in suspending a 5-inch diameter panettone after baking, but as soon as it was suspended half the panettone fell to the countertop, so ending any desire to take any such action ever again. Luckily this was still an experimental panettone, and not yet intended as a gift. After this episode, I realized that baking for a long enough time was the essential step to ensure that there would be no sagging after the panettone was taken from the oven, at least when using the formula that I had developed.

Another side to this was the accumulation of quite a few egg whites, since only the egg yolks were used in the panettone. The egg whites were destined for holiday macaroons. The egg whites were beaten to stiff peaks with some salt and cream of tartar, and sweetened with date sugar, flavored with vanilla extract and turned into a macaroon dough by adding either finely ground almonds or creamed coconut. Small macaroons were baked and afterwards dried to a crisp in a food dehydrator. The wonder was the sweetening with date sugar, which was used in much smaller amount than refined sugar would have been. Date sugar is actually well dried dates which have been pulverized. So the sweetening was from whole fruit and in the case of the coconut macaroons sweetening was from both the naturally sweet coconut and the date sugar. Sweet pleasure really does not need any refined sugar.