The Whole Grain Connection Newsletter #32
April 2020

Fruit and Nut Extravaganzas & some cheaper thrills – to make at home
http://wholegrainconnection.org/sitebuildercontent/sitebuilderfiles/fruitandnutextravaganzas.pdf

Pandemic reflections
In our previous bustling daily life just a week or so ago, many were mesmerized by easy access to ready prepared foods for take-out and eating with plenty of company in restaurants. We can in fact still have ready-to-eat food, but not in the social setting of open restaurants and bars. The pandemic has caused most of us to stay at home, and venture forth only to replenish our food supply at a grocery store and to exercise. Under these new circumstances the way in which shelves of food items in local grocery stores have been disproportionately depleted is revealing of another way of eating, and I would suggest a better way. Three very obvious staples have vanished fast from grocer's shelves: beans, flour and tomato paste.

I'll digress, but I hope you will understand the relevance. In a recent paper https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7059907/ researchers made the observation that if we change nothing else in our lifestyle other than increasing our dietary fiber intake up to 35 grams a day, from the norm of about 20 grams a day, we could see a huge reduction in our susceptibility to modern Western disease; diabetes, cardiovascular disease and colon-cancer especially. This other way of eating would give us the chance to manage that much needed daily increase in dietary fiber up to 35 grams per day or more. Amazingly the needed increase in daily dietary fiber intake can be brought about easily by adding a serving of beans each day and eating all the basic grain foods in the whole grain form. It's quite difficult to increase the daily dietary fiber intake up to the needed amount, with fruits and vegetables alone. Also, it seems that we benefit from eating a wide variety of dietary fibers. You can calculate your daily dietary fiber intake using the tables in the book *"What's with Fiber?" by Gene and Monica Spiller.*

Today, *March 25, 2020*, I have read a new article in JAMA (Journal of the American Medical Association), with the title: *An acute respiratory infection runs into the most common non-communicable epidemic* – COVID-19 and cardiovascular disease: In other words, if we were eating our full quota of dietary fiber there would theoretically be far fewer people likely to need the intensive care that is overloading our hospitals as result of the COVID-19 pandemic.

The disappearance of flour from grocery shelves at this time suggests that bread, pizza, pasta and more are now being made at home. All of these are much more enticing when freshly made. Here, though is an immense opportunity for transforming the bread, pizza and pasta that we eat, to whole grain versions. It all becomes possible with a small modern electric stone mill, and your own stock of grain, a grocer nearby selling bulk grains, or orders placed online to suppliers selling bagged clean grain. Clean dry grains can be stored for years if kept enclosed and protected from moisture. Milling just enough grain to fresh whole grain flour for the next bake at home, becomes possible with these latest available mills. Ideally the chosen grains will have been grown

organically and from these you can also easily make your own sprouted and malted grains
http://wholegrainconnection.org/sitebuildercontent/sitebuilderfiles/wheatsprouts2008.pdf
and sourdough leavening,
http://wholegrainconnection.org/sitebuildercontent/sitebuilderfiles/simplesourdoughstarterjanuary2018.pdf
as well as freshly milled whole grain flour. *I invite you to try this other way for producing, caring for and using a simple sourdough starter; it is highly predictable and reproducible.* Even if you can only manage to make whole wheat bread
http://wholegrainconnection.org/sitebuildercontent/sitebuilderfiles/panloaveshardredwheat2020.pdf
at home during this pandemic, you will have learned to appreciate the whole grain basics and be more discerning when making your choices of bread and pasta produced commercially.

To achieve the whole grain benefit from grains such as rice and barley that are not generally milled to a flour, they need to be chosen in the truly whole grain form as for example, brown rice, naturally hull-less barley that has not been pearled and corn masa nixtamalized from corn that has not been de-germed.

Mill reflections

If we ever needed proof that our flour milling system is too greatly centralized, we have it now. Centrally milled flour has disappeared from supermarket shelves and has not been replaced at the same speed. Why? Because it must be milled in huge batches, shipped out in bulk, shipped further out on pallets, and then somehow, somewhere it needs to be repackaged in small bags and distributed further still, in order to stock supermarket shelves.

Consider then, the local miller, or the miller with a bakery with their own store of grain: The local miller can mill and package flour into small bags right away, and only needs to ship across town, or even have people simply pick up at the back door! Bravo! Brava! to those local millers who are working round the clock to supply home bakers, especially at this time. Thank you for your foresight in appreciating exactly the need.

What kind of Mill?

The stone mill has reigned supreme since people began crushing their grains, beans and seeds to flour. A well-engineered stone mill still wins for its wide range of possibilities from just cracking the grain into large chunks, all the way to face-powder-fine flour; bran and germ included.

At the same time, bakers have shown us fine bread texture when the bread is made with super-fine textured flour. The majority of us, very evidently like our sandwiches and toast to be made with soft bread or soft buns. In practice, we have understood that in the stone mill, the bran and germ form flakes, while the endosperm pulverizes. Only the most expert stone millers seem to know how to produce fine bran and germ particles together with fine endosperm particles in the flour in a single pass. Has any other milling system been invented that would easily and simultaneously produce fine particles from each of the grain components: bran, germ and endosperm, and also keep the flour cool?

Some well-engineered modern “high speed impact mills” have been invented for pulverizing rocks, and even powdering materials that are potentially explosive. These high speed impact mills are therefore designed to also include a system for keeping the product cool, hydrated, dry, hot, or without oxygen and more, with a flow through of cooled, humidified or heated air, inert gas etc. Surely here there is the possibility for designing a pulverizer for grains, such that the flour stays absolutely cool, and all three components of the grain are made really fine. Indeed, this technology exists and is actually being used for making flour. To be fully efficient the bran and germ are recycled within the high-speed impact mill before being expelled as part of the totally fine whole wheat flour. This recycling within the mill is achieved with an incorporated air classification system or similar return system for particles not yet small enough to exit as fine flour.

The pulverizer mills, “high speed impact mills” with a return system, and cooling air flow, are pricey because they are so precisely engineered with durable materials. Examples currently installed at milling enterprises are still few, perhaps because these mills are pricey and generally fine-tuned to suit the customer, rather than being “off the shelf”. Examples are the "Unifine",
http://awmachineworks.com/
and the "Pulverizer".
http://www.reynoldseng.com/html/products.html

Rouge de Bordeaux wheat

The French have such a great reputation for their bread that any wheat variety with a French name is immediately interesting, *Rouge de Bordeaux* included.

You can do the same as I did which was to search on www.ars-grin.gov
https://npgsweb.ars-grin.gov/gringlobal/search.aspx
for some information on its history.
Eventually I searched simply using "Bordeaux wheat". *Rouge de Bordeaux* varieties are selections from the Russian wheat *Noe,* which came from Russia. Since *Noe* was in the USDA collection by 1916 it is most likely a landrace or just a simple cross between similar varieties.