



## The Whole Grain Connection

### Newsletter number 33

### July 2020

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#### ***Some Red Fife history & experience***

The story of the original introduction of *Red Fife* wheat into Canada is by now a colorful legend. David Fife was a Scottish pioneer farmer in Ontario, Canada, desperate to find a wheat suited to the climate. Legend has it that he asked a friend in Scotland to check out the wheat being shipped from Russia to the port of Glasgow, in Scotland. His friend caught enough of a shipment of some Russian wheat seed in his tam o'shanter hat, to send over to David Fife in Canada. This seed from Russia succeeded in Canada and has been known ever since as *Red Fife*.

After its establishment in Canada, *Red Fife* was recognized as identical to a variety known as *Galicia* from Galicia in Eastern Europe. The *Galicia* variety is represented in the USDA Small Grains Collection as (CItr 2463), which was collected in Germany in 1904.

There were Mennonites also pioneering in Canada in the late 1800s and they must have been reasonably successful with their *White Russian* wheat likely brought from their previous homeland in Russia, in the 1870s. *White Russian*, is a spring habit wheat with light colored kernels. Both *White Russian* and *Red Fife* wheat might have been grown together on some farms. Indeed, a USDA cultivar (selection) called *White Russian*, was found in a *Red Fife* crop before 1908, and is now listed in the USDA Small Grains Collection as *White Russian* (CItr 5277).

Might this *White Russian* wheat have been the variety brought by the Mennonites? Unfortunately, the USDA tests suggest that it does not have good disease resistance. Still we have learned from our experiences with several old

wheat varieties, that practically all can be successfully grown to be disease free, if we choose to plant them with suitable timing in the climate zone matching their origin. It is likely that this *White Russian* wheat was tested for disease resistance, under modern conventional conditions. Also, we have recognized that varieties of wheat with light colored bran are best grown where the summer is very dry. We have also learned to plant relatively sparsely (900,000 seeds per acre, maximum) in contrast to the conventional high density seed planting recommendation.

The current revival of *Red Fife* was begun by [Sharon Rempel](#) in British Columbia Canada in 1988, with one pound of seed obtained from the Canadian Gene bank. This was after losing *Red Fife* from the wheat seed repertoire, as a result of the breeders' *short stature hard red wheat revolution* beginning in the 1950s.

A sample of *Red Fife* that I worked with recently was surprisingly soft in character and this observation was why I looked again at the literature. Always, I had assumed that *Red Fife* was flinty, a hard red spring type. By now I have realized that the *Red Fife* currently available to us is immensely variable; it's not just the one selection, as I had previously imagined. Even in 1907 (*Canadian Wheat bulletin* 57 – 67) *Red Fife* varieties were described as hard or soft and even recognized as *Smith's* and *Garton's*, among several other named selections.

Stone milling this soft *Red Fife* sample from Saskatchewan was the first indication as to how soft it was. The bran came through my small kitchen mill (Mock Mill 200) in large flakes, even on a fine setting. I thought that the sample must be rather wet, since it produced such large flakes when stone milled. So, I dried it at warm room temperature on my food dehydrator and removed 7% moisture. After that the bran and germ flakes in the flour were much smaller, but still very prominent. Finally, I sent the flour through the mill again, being careful to sprinkle it into the hopper so that the mill did not choke. *A hopper full of flour cannot flow through the mill, because the needed air supply is smothered out by the flour.* Even after all of this treatment, the bran flakes were still very noticeable in the flour.

However, the pan bread dough made up with a sourdough starter, had a desirable gently elastic character. The bread texture was open and pleasing. The flavor was mild, the color was quite dark, but the bran flakes were still evident in the texture of the bread. I'd say this is the kind of wheat to use for all those wonderful dark whole grain breads, often also including some rye and flavor seeds, that are so much loved in Northern Europe. Better yet, I think this kind of wheat could be more successfully milled to a whole wheat flour using an air swept impact mill such as the Unifine, or Reynold's Pulverizer. The bran would be made fine enough to disappear in the flour.

Most of the other heritage landrace wheat varieties available now have been started from a single selection made by an interested grower like Bob Quinn with his *Kamut*®, Dan Jason with his *Ethiopian Blue Tinge* durum or one of the many collectors for the USDA Small Grains Collection. *Red Fife* seems to be the only currently available heritage variety that may have had several starts based on more than a single selection from a landrace; so it may sometimes show up as a soft textured red wheat. In this there is yet another lesson: soft wheat can be just as good a bread-maker as hard wheat ..... it all depends on the variety and growing conditions and not on the hardness!

## *Calling all Californian farmers, millers, seed suppliers & maltsters*

Completely in tune with the many new and established voices in California's localized grain farming, milling and baking, the *California Wheat Commission* is producing a webtool to enable the best possible connection between this growing number of enterprises. What's more this *Golden State Grains* Web tool should enable many more customers to find locally produced grain products, in California.

The *Golden State Grains* webtool is due to be live by the end of August 2020. In the meantime, [\*farmers, millers, seed suppliers\*](#) and [\*maltsters\*](#) in California can sign up with their contact information and background story, in readiness for customers and connections. *Note that links to these same forms are given again by Claudia Carter below.*

From Claudia Carter, Director of the [\*California Wheat Commission\*](#):

The *California Wheat Commission* is developing a website that will connect grain growers with grain users such as millers, maltsters and bakers. Currently we have more and more entities looking to source local grains, yet they have struggled to find a single source of information. We hope this web tool will generate new markets and opportunities for growers, more effectively meet the needs of grain users, build California grain as a brand, and illuminate otherwise opaque systems and transactions. We are currently gathering information from farmers, millers, maltsters, and seed suppliers who would like to be represented on the site. We hope to have our first version of this web tool available at the end of August.

The Committee members assigned to help move this project forward are: Bill Cruickshank (farmer), Dennis Pelucca (farmer), Dan Mezger (seed supplier), and Nan Kohler (miller). Nan Kohler was assigned as the main project leader from the Committee. Nan and I are having regular meetings with our web designers ([\*Perpetual\*](#)) to build the web tool. We are calling it *Golden State Grains*.

We are currently inviting your participation by asking you to fill out the relevant form below. If you submit this information, we can include your business in the website so that potential collaborators and customers can more easily discover your business. Inclusion in the website is free of charge and the design of the site is being funded by the California Wheat Commission.

Farmer: <https://forms.gle/QuDMdNEevbkEbECE9>

Seed Supplier: <https://forms.gle/i8cQscWg6x61AhuU6>

Miller: <https://forms.gle/mNBGpB2VOG4bSwfd7>

Maltster: <https://forms.gle/fC8723ARZdUCvtXW7>

### *Golden State Grains Mission*

To develop collaborative networks, resources, and community engagement in the support of California Grain through the following initiatives:

- Establishing and Communicating the uniqueness of California Grown Grains
- Facilitating direct connections among collaborators from seed to table
- Providing educational tools and resources that support high quality growing and handling goals
- Engaging consumers and producers alike in discussion forums to build

### *Golden State Grains Vision*

We believe in the high quality of California Grain, and its importance in our state's food production landscape. We are developing this web tool as a support system for growers and collaborators of all sizes and shapes, up and down the coast. By facilitating deeper and more meaningful conversations and connections, striving for inclusion and diversity, we believe we can contribute significantly to the health of our communities, both rural and urban, by prioritizing healthy, profitable, and sustainable grain networks. We see a future where our high-quality grain meets and builds higher in-state demand for handling, milling, and baking California grown grain. California strong!

### *A funny thing happened to tomatoes and now wheat*

Tomatoes have come through a magnificent transition from being one intensely boring supermarket-ready type, to being produced in magnificently diverse abundance available from individual farmers. Perhaps the most valuable stimulus for this change has been the accelerated development of farmers markets since the 1980s.

What has happened to tomatoes in this time of farmers markets is a lesson. A glorious mix of named heritage varieties appeared and we the customers worked hard to remember all those names. Ah! Brandywine tomato was the one to seek out next time. But the farmers managed to introduce so many different varieties of tomatoes, each with a *name*, that my memory for all those names and flavors eventually blurred. Instead an appreciation of their look and a connection to the flavor on my plate became my guide. The broader classification of tomatoes into *large, small, plum, red, green, purple and yellow* is so much easier to manage. Thankfully, the farmers are still presenting us with a wide range of heirloom tomatoes. The difference now is that the farmers certainly know the variety names for their own tomatoes, but the customer can choose just by eye and knowledge of how the tomato tastes and cooks.

Heritage wheat with the plethora of named varieties now being presented, has reached a similar impasse to the heritage tomato.

As I understand it, the word *heritage* can be conveniently applied to any food plant with an *ancient* identity and at least a 20 year history; as an *ancient landrace*, as an *heirloom* developed by a grandparent, as a *PVP* (proprietary) *variety* developed by a breeder at least 20 years previously and in general to any variety with a history of successful growth and without legal ownership.

Just as with tomatoes, it is very important for the farmer to know their chosen wheat plant by name and the associated history and character. However, the home baker and indeed many professional millers and bakers cannot keep up with the ever-expanding list of individual varietal names for wheat. Hence, we have the commodity wheat classification into types that broadly allow farmers, millers and bakers to make their choices: *hard red, hard white, soft white, soft red, spelt and durum*.

With the increasing development of single pass whole wheat milling and whole wheat flour baking, we can now make use of the entire range of wheat varieties. The degree of hardness must be managed by the miller, but in single

pass milling all degrees of hardness can be easily accommodated. So, my list of general wheat classes to choose from still numbers six, but changes to the following: *einkorn, emmer, turgidum, spelt, red and white*

The one unfamiliar category name might be for the *turgidum* wheats. All are *Triticum turgidum* species in a modern classification, hence the name choice. There does not seem to be a well used name for this category that includes *durum, purple durum, Khorasan, Maparcha* and *Akmolinka*. However, the Latin word *turgidum* can be broadly translated as *large*. Indeed, most plants in this class are large and especially they generally have relatively large hard seeds.

Information about the individual variety will still be crucial to everyone using the wheat, but at least the choice can be made at first within a broad but meaningful classification that includes both heritage and modern wheat types. This is no longer a commodity classification it is instead a simplified natural [classification for wheat](#).

### *Wheat - a simplified natural classification*

Here's a link to an explanatory chart of [Wheat - a simplified natural classification](#)

## **The Whole Grain Connection Lists**

Search these lists for suppliers of grains and legumes and whole grain products and for enterprises in your home state, supplying whole grain baking accessories and more. We shall continue with these lists because we are interested to include those outside California. We are sorry that we cannot offer a better search system on our rather old and outdated web site.

(Undoubtedly the *Golden State Grains* web tool will make it easier to search for grain farmers and millers in California.)

If you would like to be listed on the [www.wholegrainconnection.org](http://www.wholegrainconnection.org) website or if you know of an enterprise that you think should be listed, please contact Monica Spiller by e-mail: [barmbaker@aol.com](mailto:barmbaker@aol.com)

[Farmers of Heritage Grains](#)

[Farmers, Bakers, Millers, Pasta-Makers and others supplying 100% whole grain products](#)

[Grain Mills & Accessories](#)

[Grain Cleaning Services](#)

[Heritage Seed Supplies](#)

[Professional Millers](#)