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Heritage Grains & the Advent of Columbia Plateau Agriculture

Heritage Nutrition Biodiversity

Richard Scheuerman and Don Scheuerman

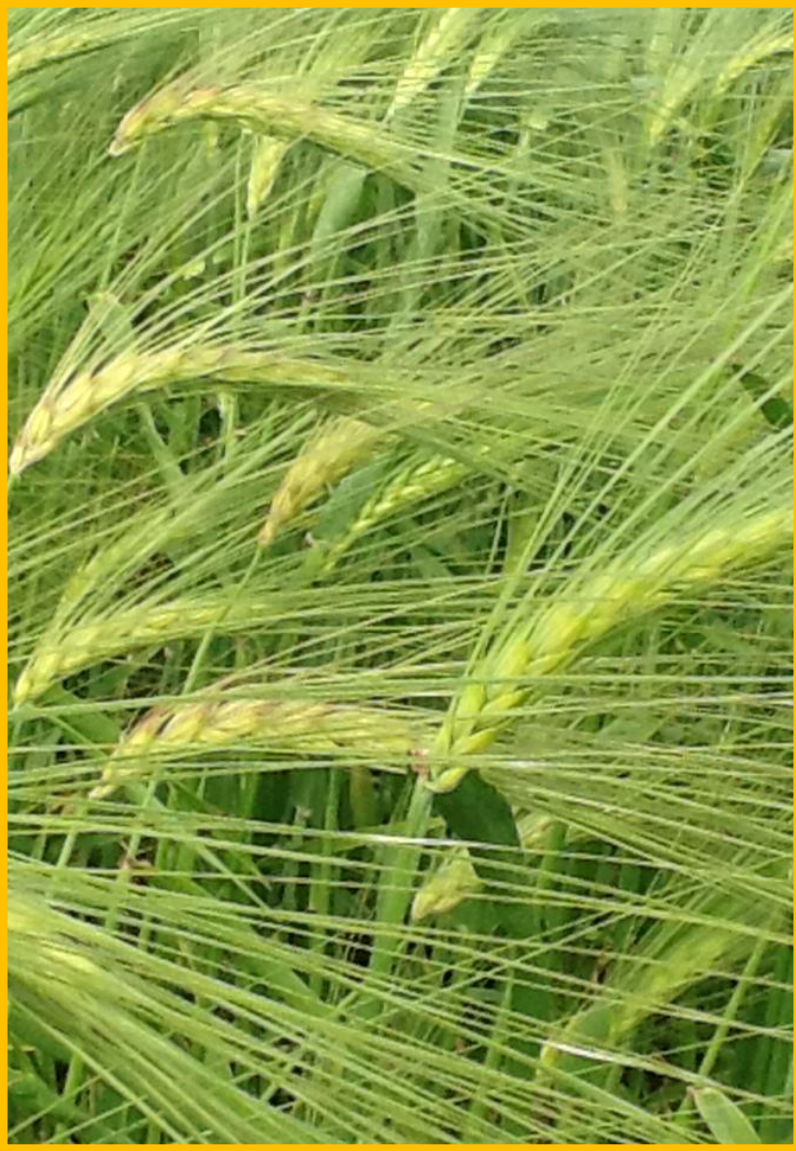
Palouse Colony Farm



“After a while the young man sat up and looked at the heavens, at the twinkling white stars, and then away across the shadows. The dreaming hills with their precious rustling wheat meant more than even a spirit could tell. Whence the first and original seeds, and where were the sowers? Back in the ages!”

“The stars, the night, the dark blue of heaven hid the secret in their impenetrableness. Beyond them surely was the answer, and perhaps peace. Material things—life, success—lost their significance and were seen clearly. They could not last. But the grain, the land, the stars—they would go on with their task.”

--Zane Grey, *The Desert of Wheat* (1919)



Landraces are ancient plant “land strains” of rich genetic diversity that adapted over many centuries to a particular home area from which many derived common names like Browick (English) wheat, Oderbrucher (German) barley, & Sisoslk (Russian) rye. Landraces predominated across Puget Sound during 19th century including English “White Winter” Lammas, hard Russian Red, and Spanish Yellow Sonora.

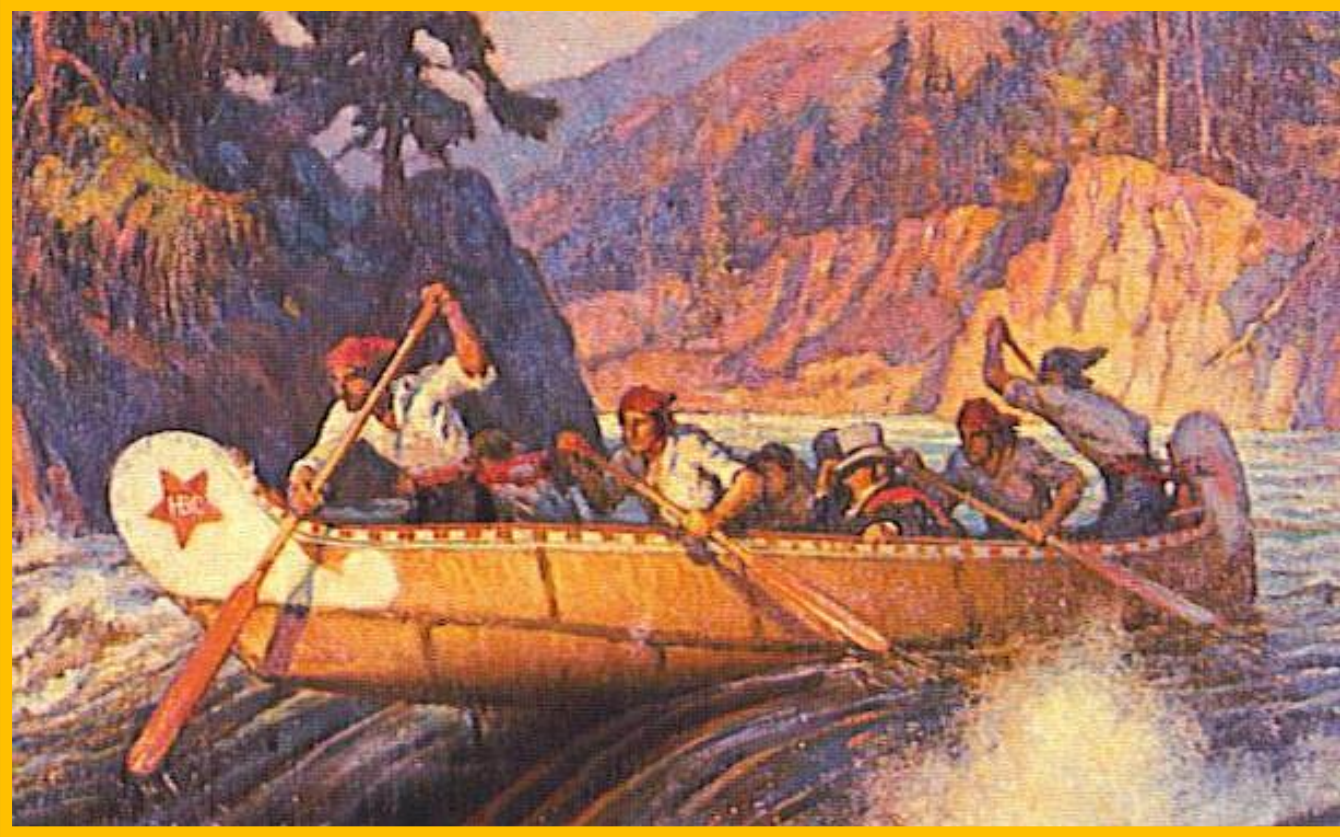
White wheat or else red, red rivet or white,
For passeth all other, for land that is light.
White pollard or red, that so richly is set,
For land that is heavy is best you can get.

Maine wheat that is mixed with white and with red
Is next to the best in the market man's head:
So Turkey or Purkey wheat many do love,
Because it is flourie, as others above.

Gray wheat is the grossest, yet good for the clay,
Though worst for the market, as farmers may say.
Much like unto rye be his properties be found,
Course flour, much bran, and a peeler of ground.

Thomas Tusser

from *Five Hundred Points of Good Husbandry* (1580)



Sir George Simpson Aboard the Columbia Express (1825)

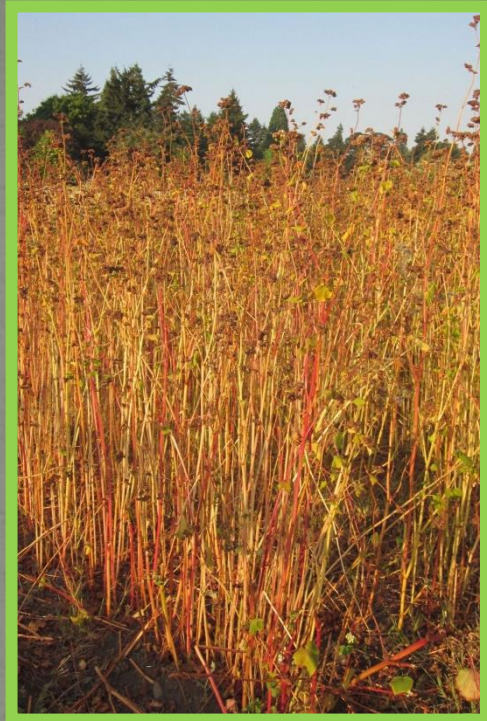
“It has been said that Farming is no branch of the Fur Trade but I consider that every pursuit tending to lighten the Expence of the Trade is a branch thereof...”



Ft. Vancouver, est. 1826

Named for 1790s British Puget Sound explorer (and brewer!) George Vancouver

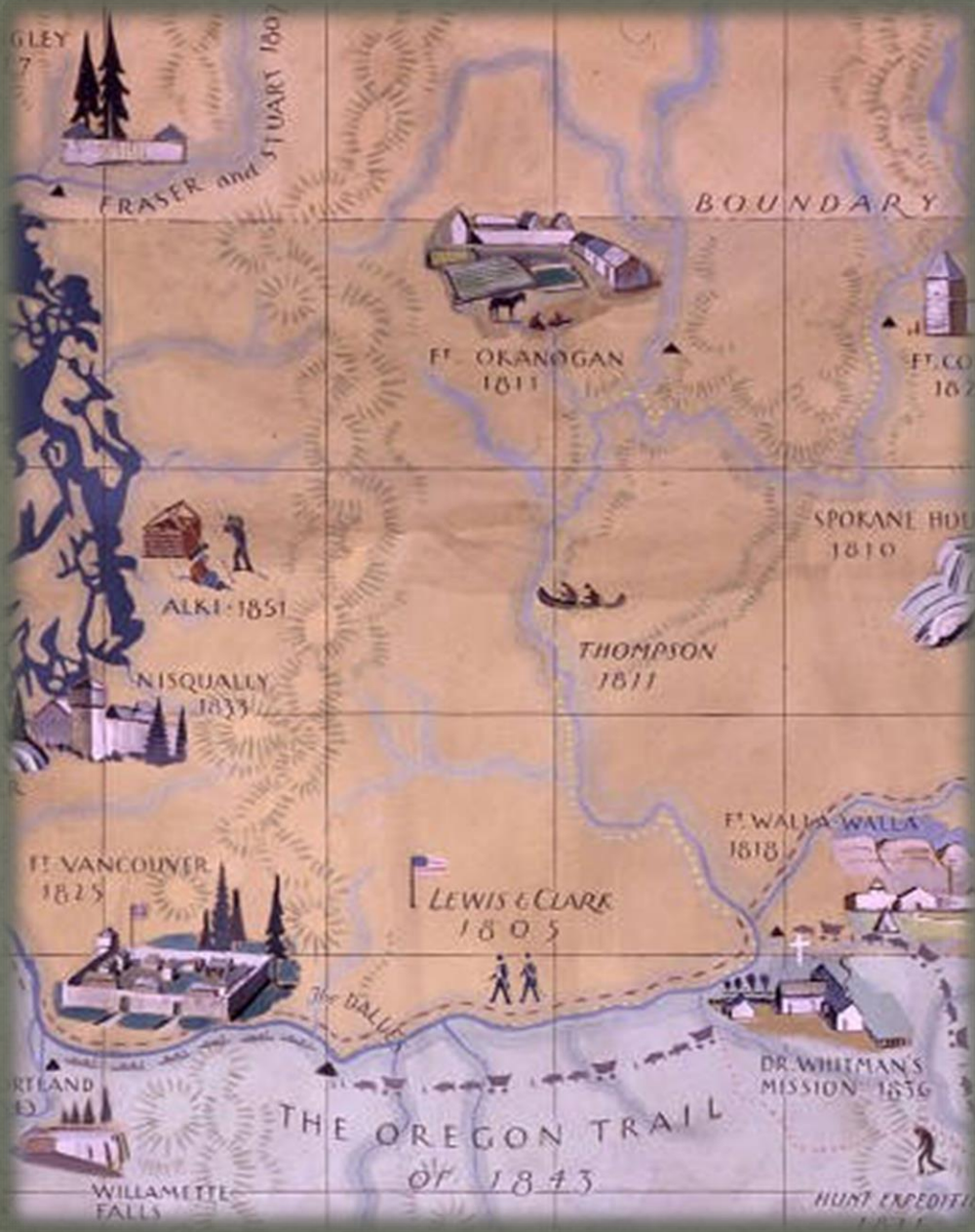
1830s-40s Chief Factor: Dr. John McLoughlin



Hudson's Bay Company Northwest Post Farm Crops
l to r: coleseed, buckwheat, mangle root



Ft. Vancouver Heirloom Vegetable & Herb Garden
Worcester Squash, Love Lies Bleeding Amaranth, Cannellini Beans



The HBC's Northwest Agricultural Network (1839-1860s)

Ft. Vancouver (>1500 A)

Ft. Colvile (~400 A)

Ft. Nisqually (~1200 A)

Cowlitz (Prairie) Farm, (3,600 A)

Ft. Walla Walla (30 A)

Left: Paul Gustin Mural, UW Library



**John Mix Stanley (after G. Sohon, June 1855), *Source of the Palouse*
(c. 1860)**

Watercolor over pencil, 7 x 10 ¼ inches

Paul Mellon Collection, Yale University Art Gallery



**John Clement, *Moscow Mountain Morning Squall* (2010)
Digital image on paper; John Clement Gallery, Richland**



John Mullan, *Map of Military Road From Fort Walla to Fort Benton*, 1863

Note Snake River tributary and Stevens (1860) seven farm locations from "Palus to Alpowa"



White “Hudson Bay” Lammas Wheat
Palouse Colony Farm



Palouse Colony Harvest, 1910
R. R. Hutchison Photograph

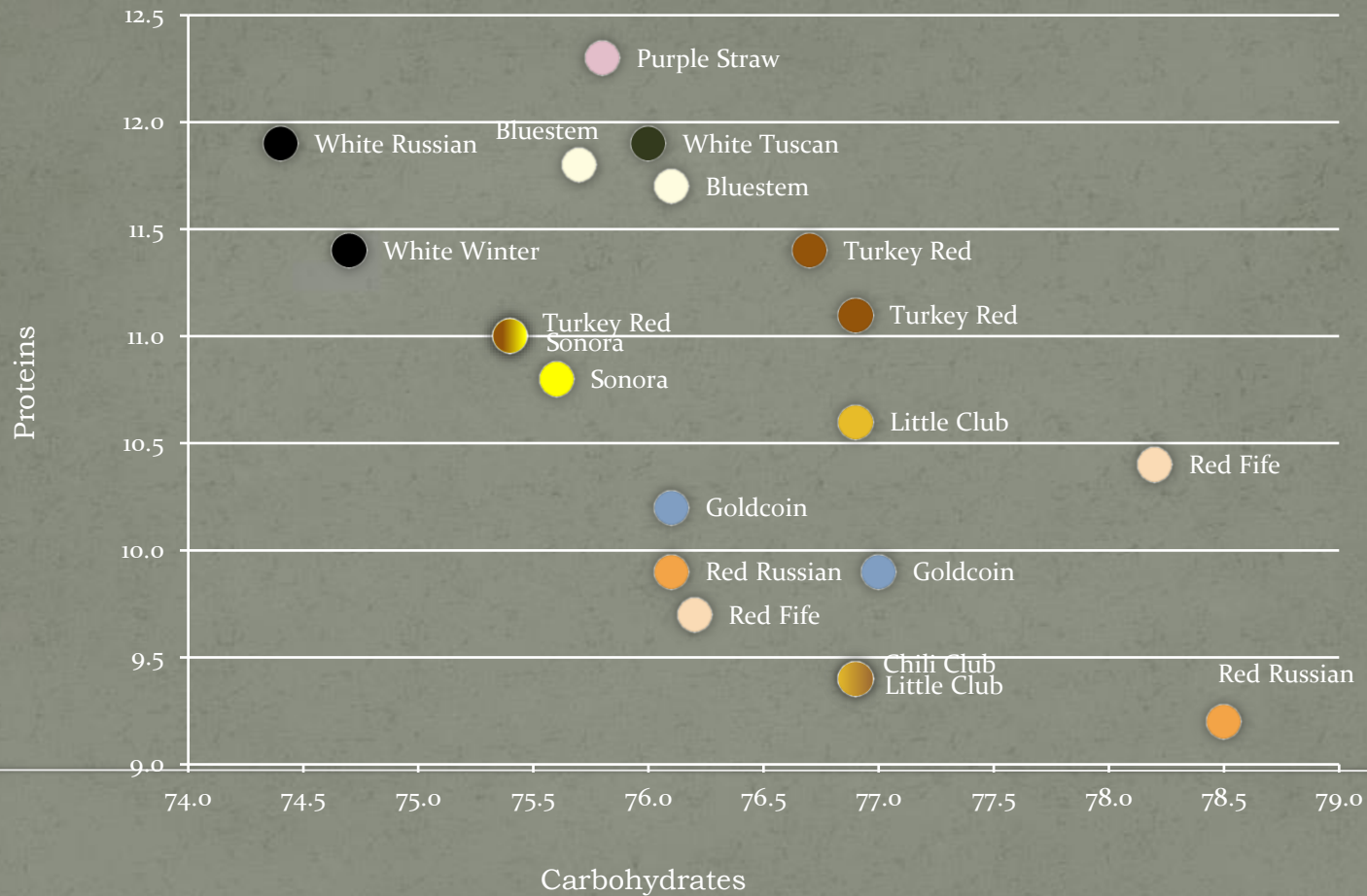


Bringing in the Sheaves
John Clement Photograph
Palouse Colony Farm

Landrace Relevance for the 21st Century:

- Higher mineral levels than modern cultivars (esp. iron, magnesium, phosphorus, selenium)
- Fuller bran layer
- Significant genetic variation for disease resistance
- Distinct culinary attributes (e.g., English Lammas / French Touzelle / Spanish Sonora specialty flours)
- Ecotourism

Source: A. A. Jaradat, *Wheat Landraces: Genetic Resources for Sustenance and Sustainability* (USDA-ARS, 2011)



Nutritive Values of Northwest Heirloom Wheats (1905/1910)

Genotype Group	Mg	Ca	P	S	K	B	Cu	Se	Fe	Zn
Primitive Grains (Einkorn, Emmer, Durum)	1,300	383	4,540	1,350	4,670	2.41	5.75	0.11	32.2	45.6
Spelts (Schwabian, Swiss, Oland)	1,280	327	4,280	1,360	4,150	1.95	5.50	0.10	38.0	39.2
Landraces & Old Variety Selections (Browick, Diamont)	1,330	408	4,670	1,310	4,050	2.10	5.33	0.18	38.5	41.6
Recent Cultivars (Varieties released since 1970)	1,240	388	4,020	1,230	4,070	1.59	4.49	0.11	33.3	36.2

**MEAN MINERAL CONCENTRATIONS (mg/kg) AMONG WHEAT TYPES
With Representative Varieties**

*Derived from “old material” (e.g, durum and bread wheat breeding lines) for organic cultivation.

Adapted from A. Hussain, H. Larsson, R. Kuktaite, and E. Johansson, “Mineral Composition of Organically Grown Wheat Genotypes,” *International Journal of Environmental Research and Public Health* 7:9 (September 2010).



**GOLDEN BERE
HARVEST ALE
ESTATE SINGLE MALT**

*“Unfashionably authentic—
the brew that gave beer its name.”*

**Landrace Bere Barley
Heirloom Golding Hops**

RED PINE BREWERS





Scotch White Oats Harvest
The Northwest's Original
Variety

Finley Ranch
Inchelium, Washington
August 2013



**Crimean "Turkey" Red Wheat
America's Milling Transformation
(Note W. J. Spillman's remarks to millers.)**



**French Touzelle Wheat Field Trial
King Louis XI Restorative at Tours, 1482**

**WSU/Mt. Vernon
August 2013**



Yellow Sonora Wheat

*North America's Oldest Variety
(15th century New Spain to PNW)*

**Finley Ranch
Inchelium, Washington
August 2013**



Approaches to promote sustainable utilization of grain landraces

1. Raise public awareness of landrace current and future value.
2. Facilitate exchange of indigenous knowledge and history of landraces.
3. Feature grower efforts to perpetuate landrace and heirloom varieties.
4. Promote recipes and niche markets for landrace products.

Source: A. A. Jaradat, *Wheat Landraces: Genetic Resources for Sustenance and Sustainability* (USDA-ARS), 2011



Leopold Lesigne, *Porte de Mars* [Mars Gate], Rheims, France

Lithograph on laid paper, 11 ½ x 12 inches

La Revue de l'Art ancien et modern, XI, 1902

A 3rd century agricultural Pax Romana and tribute to technology



3rd Century Threats to the Empire: Barbarian Invasion, Dependence on Slave Labor, Political Corruption

21st Century “Planetary High Risks”:* Biodiversity Collapse, Global Warming, Biochemical Changes to Land and Water

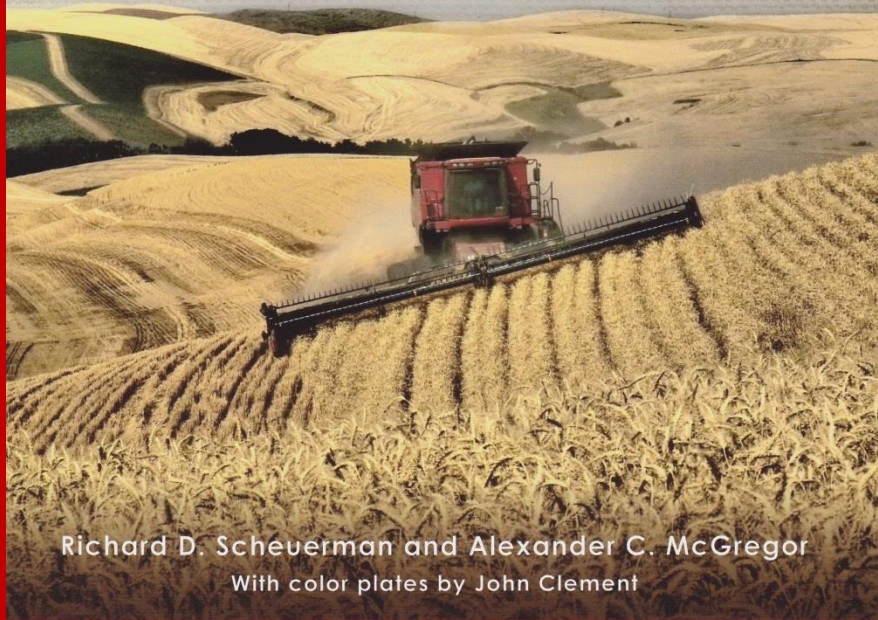
**9 PHR’s in total; see Stockholm Resilience Center Report in Science Advance IX:37 (2023).*



Progressive change to promote wellbeing of the land and future generations can be unwisely limited by amnesia as well as nostalgia. Amnesia is to forget about cultural legacies bequeathed by ancestors and society, and nostalgic appeals to life in some halcyon past often overlook the challenges of such times. But memory is a critical discipline. We remember places, mark Scriptures, and appreciate art for synergy and solidarity today to foster human flourishing and stewardship of resources for tomorrow.

Harvest ★ Heritage

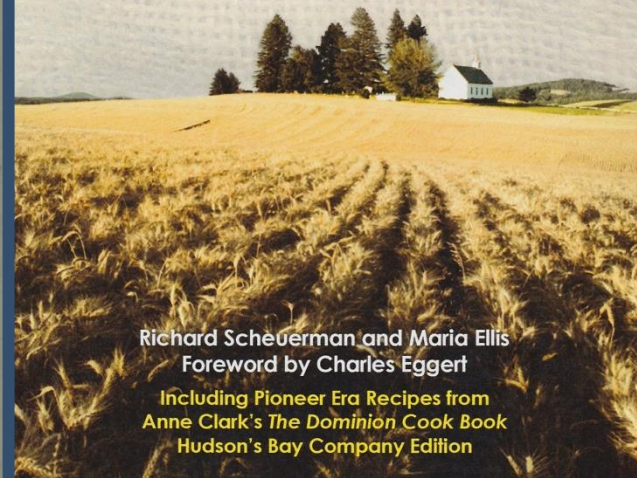
Agricultural Origins and Heirloom Crops
of the Pacific Northwest



Richard D. Scheuerman and Alexander C. McGregor
With color plates by John Clement

Harvest ★ Home

A Cookbook of Seasonal Grain Recipes
with Old and New World Culinary Lore
Soups and Stews • Breads and Beverages



Richard Scheuerman and Maria Ellis
Foreword by Charles Egger

Including Pioneer Era Recipes from
Anne Clark's *The Dominion Cook Book*
Hudson's Bay Company Edition

Pacific Northwest Agricultural Heritage Resources

Regional History, Recipes & Culinary
Lore, more to come....