

Prairie Fire

By Dan Armstrong, iUniverse, Lincoln, Nebraska, 2007, Paperback, \$25.95, 483 pages, ISBN 0-595-43398-7.

Can novels be used in courses on production agriculture? In general, our first challenge is to engage students with sometimes complex material, for them to learn the principles, and then to apply information to real-world situations. Yet equally or more important is to encourage critical thinking skills and an ability to evaluate the relevance and applicability of in-class topics and learning to contemporary challenges in agriculture and the food system. *Prairie Fire* is in fact a novel that may help achieve the goals of achieving relevance and promoting responsible action. The book is more than a totally engaging story that captivates the reader as if it were a Dan Brown suspense adventure. It reflects careful research and analysis of a modern-day systemic problem in the global food system, and provides a strong political statement that questions the organization of our most important industry as well as our basic values. What could be more useful for a university course?

Author Dan Armstrong is editor and owner of Mud City Press in Eugene, Oregon and has written extensively on political and environmental issues. In *Prairie Fire*, he weaves a complicated story of the plight of modern day farmers who are dependent on monoculture systems and expensive production inputs such as seed, fertilizer, and chemical pesticides. In the U.S. Midwest they are locked into a marketing system for grain crops that is dominated by a handful of large, multinational corporations whose power and control were described in *Merchants of Grain* by Dan Morgan in 1979. *Prairie Fire* begins with a protest directed toward this power and economic domination, when several farmers burn their crops just before harvest in order to deprive the corporations of windfall profits from a wildly fluctuating international wheat market. A Missouri farmer and leader of the National Grange sees this as an opportunity to mobilize farmers across the country in a coordinated strike that would not only bring attention to their fragile economic position but also to the exorbitant profits reaped by a few companies capable of manipulating world supply and prices.

Farmers going on strike in 2016? As hard as this is to believe, through the internet it has become possible to organize a widely dispersed group of farmers with common concerns. A meeting of farmers in Kansas creates a movement that quickly captures the interest and support of wheat growers across the country. With multiple sub-plots that

include a coalition with Montana-based militia, a decorated war hero from Afghanistan turned wheat farmer in Kansas, a socially-concerned reporter in Washington, and various caricatures of leaders in government, military, and the business establishment, the novel unfolds across the Midwest but jumps to the oil fields of Central Asia and the financial hub of Singapore. More than a device to build suspense, these forays abroad illustrate the total connectedness of world financial and grain markets and the consequences of a globalization of economics that transcends any single government. What unfolds is an intriguing and even believable saga of the potential consequences of financial and political power run amok, and the populist reaction that sounds plausible even in the conservative farming culture of the U.S. heartland.

From the agricultural angle, *Prairie Fire* is exceptionally well researched, with timely and appropriate information about how wheat is grown and the complicated interactions among crop, soil, and weather and how current systems are highly dependent on purchased inputs from outside the farm and the region. Information about soil fertility and fertilizers, crop dependence on timely rainfall, and protection from insects and pathogens is provided in a credible form. From the grassroots level of the farm to the intricacies of the complicated international grain trade, the details are laid out well. Traders who have perhaps never seen a wheat drill planter or a combine for harvest expose us to the potentials of manipulation. To combat this power, the farmers arrive at a solution that is against their very principles, and their commitment to produce food for a hungry world. Although the suspense of the narrative keeps the reader engrossed, the ending is less than conclusive, leaving us to speculate on what could happen if any of a number of scenarios were followed. This is the beauty of a well-told story.

To the informed reader, the book brings up memories of the battle between wheat farmers and the Pacific and Southwest Railroad described in *The Octopus*, by Frank Norris, published in 1901. Its hard-hitting expose of corporate greed reminds us of the meat packing industry and *The Jungle*, from 1906, by Upton Sinclair. And the level of power and influence of the grain companies even today could be considered parallel to that described in *The History of the Standard Oil Company*, in 1904, by Ida Tarbell. The plight of farmers that was characterized by the Joad Family in *The Grapes of Wrath*, in 1939, by Pulitzer and Nobel Prize winner John Steinbeck rings true for wheat farmers today in the Midwest.

This list of literary triumphs is formidable, but *Prairie Fire* has the potential to raise awareness and

lead to social change in ways similar to each of the above. For this reason, the book could be considered as an essential reading in courses in Agroecology, Agricultural Economics, Policy and Political Science, and Rural Sociology. One should be warned that there is explicit sexual content and violence in the book, perhaps used by the author to sell more books. Providing alternatives for concerned students could be an option. When the sexual content is mentioned during the introduction of class assignments, of course, it could be an incentive for people to read a book that they would otherwise skim through quickly. Undoubtedly, this can broaden the perspective of how the wheat industry functions in a compelling way that few textbooks could achieve. It is sure to catalyze valuable discussion about corporate agriculture, moral and ethical issues, and the long-term future of agriculture and the global marketing system. What more could we hope for in our classes and seminars?

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Harnessing America's Wasted Talent: A New Ecology of Learning

By Peter Smith, Jossey-Bass, A Wiley Imprint, San Francisco, California, hardcover, 179 pages, \$40.00, ISBN 978-0-470-53807-4

Peter Smith's book offers interesting concepts of perceived transformations that may well be necessary for implementation by institutions of higher education; especially for those who have a high degree of competency but their career promotions are hampered by not having a college degree. Smith presents thought provoking new teaching methods for learning and teaching because of today's school failings and their consequences. The book focuses on three ways that traditional universities hinder students' academic growth that leads to wasting their respective talents. Smith then introduces a new paradigm that uses technology to exploits personalizing education for every learner that meets their specific career needs.

Chapter 1 builds a case for the value of learning outside of College. Smith describes the "Law of Thirds." He claims that roughly one-third of ninth-graders in American schools do not graduate from high school; one-third have graduated from high school but have no college education; and one-third go on to college but only 20% had at least an Associate's Degree within ten years. He makes the claim that an academic marketplace that emphasizes credentials over competence dominates the system at the workplace.

Chapter 2 addresses issues as to why our system of higher education is not a system at all because it is a collection of highly autonomous, independent institutions, vigorously resistant to any overarching or outside controls. Despite the diversity of mission,

orientation, and governance, the operating structure and assumptions behind how colleges operate have changed less over the last three hundred years than any other western institution.

Chapter 3 describes the characteristics of how people learn personally. One trait of learning is that it's always purposeful, Learning happens because the learner wants it to happen. People learn in whatever ways they learn best.

Chapter 4 speaks to why so many older adult learners simply drift with the tides of life, choosing not to engage with enrolling in college courses. Smith makes the claim that colleges historically see the rejection and failure of students as a necessary part of their business. He further claims that colleges can justify rates of failure because part of their accepted societal role has been to winnow out "less capable" students, leaving the value of higher education to those who could achieve from it.

Chapter 5 explains an interesting premise that colleges place high barriers between the learning done outside of the school and academic progress toward a degree inside school. The denial of experiential learning done outside of college is grounded in the concept that learning of value can only happen in academic settings. He goes on to say that learners are trapped academically by their unrecognized on the job learning.

Chapter 6 describes anecdotes to show how institutions of higher learning protect academic standards as an academic dodge to avoid engaging change. He cites examples that persons who want to change programs in a different institution in a different state need to repeat courses because the institution use the "not completed here" stamp to discount successful and legitimate learning completed elsewhere. He makes the claim that this academic smugness has become a current-day seething scandal.

Chapter 7 shows how our system of higher education is based on and organized around the principle of scarcity and that the resources needed to provide an education must be collected in one place – a campus- because there is an insufficient supply of those resources in the general community. Colleges are built around the curriculum. They organize facilities, faculty, libraries, and laboratories to house, support, and entertain the students who come to learn. In this chapter Smith introduces a historic foundation for teaching and learning. He talks about the availability of high-quality curricular content to previously un-served learners with online opportunities for teaching and learning that have not existed before.

Chapter 8 Smith expresses his views on exportation of curriculum content and assessment of learning from the classroom to the Web. In this model the responsibility for presenting the material and evaluating learning is no longer the private and individual professional responsibility of each faculty member in a classroom; it is now the responsibility

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shared between the individual faculty member and instructional designers.

Even though there is some redundancy in the book, I recommend that NACTA colleagues read it because Peter Smith makes the reader think about our system of higher education as it relates to meeting the educational needs of future generations. There are places where the reader will strongly agree and disagree with the innovative points Smith brings forward for others to contemplate. A change in higher education is never easy.

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Crop Rotations in Organic Farming: A Planning Manual

**By Charles Mohler and Sue Ellen Johnson,
Editors. *Natural Resource, Agriculture, and
Engineering Service, NRAES-177,
Cooperative Extension, Ithaca, New York.*
July 2009, paperback, 156 pages, \$24.00,
ISBN 978-1-933395-21-0.**

While there are numerous books that include research results and recommendations on crop rotations for organic farming and horticultural crop production, few are completely dedicated to the practical details of rotation design. In *Crop Rotations in Organic Farming*, editors Charles Mohler at Cornell and Sue Ellen Johnson from the New England Small Farm Institute bring university research and farmer experience together into a practical volume that will prove useful to students and farmers alike.

Based on a three-day intensive retreat with 12 experienced organic farmers, two of the chapters describe how rotations contribute to soil health, pest management, soil tilth, and robust diversity in the soil microbial community. These enhancements through rotation can lead to reduced production costs, diversity in the field environment as well as the product mix, and both biological and economic resilience. The farmers also provided details on their specific rotations with four- and five-year sequences of vegetable crops. There are two examples of three- and five-year rotations of field crops. All of these are proven models that have given good results in the field.

One useful component of the book that emerged from the retreat was a series of figures and charts that describe the sequence of decision making on the farm, starting with the goals of the farmer and family and moving through logical steps of assessing available labor and facilities, plus exploring markets, toward the sequencing of crops and decisions on how to bring the pieces together. The farmers emphasize

the importance of scouting out markets for organic vegetables and grains before planning the field implementation steps, since it is essential to have a good handle on the marketing and economic dimensions before making needed investments in organic rotations.

In a key chapter on the important processes in crop rotation, several researchers explore the details and mechanisms of how and why rotations work well in the field. These include the restorative power of grass and legume sod crops and the all-valuable cover crops that can be planted between cash crops. Ways that rotations of non-similar species interrupt weed, insect, and pathogen reproductive cycles are described, along with emphasis on sequences of legumes with cereals, summer with winter crops, and perennials with annuals. Although there is a science foundation to the chapter in each section, the language is accessible and explanations clear for those with minimal science background.

A number of specific examples of rotations and how to plan them for the long term provide practical guidance to a person with limited experience in organic farming and horticulture. Examples of work tables for planning what species to include, what areas of each to plant, planting and harvest dates make this a useful “cookbook” with several “menus” for how to proceed with the all-important preparations for a profitable and environmentally sound organic system.

Special attention is given to the conversion process, a three-year period in the U.S. to move from conventional to organic production. New to many readers will be the chapter on different types of intercropping, where two or more species can overlap in their growth cycles or be planted together in the same field. The combinations of crops that are most compatible are listed in a table. Of particular value to farmers and students of agriculture in the Northeast U.S. are the appendix tables of crop characteristics, problems that can occur with some crop sequences as well as rotations that promote success, sources of inoculums for common pathogens, crop pathogens that are most frequently found, characteristics of common weeds in this region, and a useful list of references.

For researchers seeking a technical treatment of any of these characteristics and mechanisms of rotations, there is much greater depth in the primary literature. For the student or farmer who wants a single source of practical information on how and why rotations should be developed, this is an ideal resource to have on the shelf. The book is practical, easily understood, and based on solid research as well as farmer experience. It can be highly recommended for an introductory course in agronomy, and especially for the study of organic farming.

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