

rooted in the soil

By Neva Hassanein

Recall that whatever lofty things you might accomplish today, you will do them only because you first ate something that grew out of dirt.

– Barbara Kingsolver





Missoula in 1909, K. Ross Toole Archives, University of Montana, Hughes Gardens (left)
Missoula in 2003, photo courtesy of Yogesh Simpson (right)

Diverse farms, such as the one pictured above, and an associated processing industry, met the needs of Missoula's population in the early 20th century. At the right, the same view today illustrates the loss of much of our local food production. Now, about 85-90% of our food comes from someplace else. We depend on a tremendous amount of fossil fuel, and a small number of food distributors, retailers, and food services to move food from field to plate. How secure is this food system?

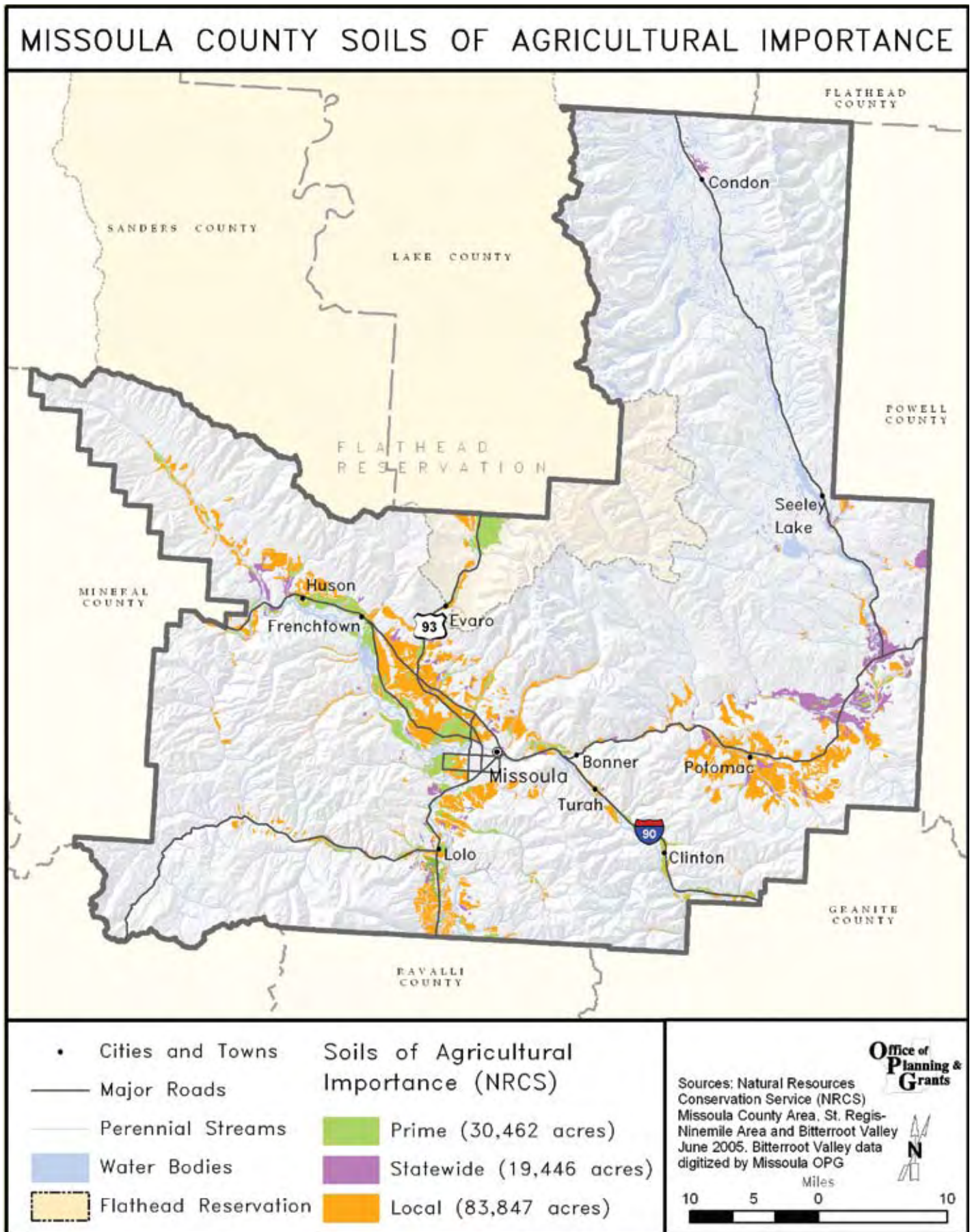
Over the last decade, a movement to build a vibrant local and regional food system has gained tremendous momentum in Western Montana. As someone involved in this effort, I smile when I step back and look at how many pieces of the localization puzzle have begun to fall into place. While there is much to celebrate, the challenges have become clearer too. In the face of rapid population growth and development, one of the biggest hurdles of all may be saving fertile soil—the medium in which our local food system must be rooted. Yet, opportunities for innovative and collaborative problem solving present themselves.

Advocates have done a good job of creating markets for local foods, and the examples are inspiring. Several towns in the region—from Noxon to Polson to Hamilton—host farmers' markets. In Missoula, two successful markets bustle with activity during the season, as over 100 vendors sell veggies, cheeses, fruits, meats, eggs and more. Area restaurants are increasingly buying local food and featuring it on their menus. Grocery stores have gotten in on the act too. So-called "farm-to-cafeteria" programs serve local food in dining halls at Salish Kootenai College, the University of Montana, and public schools in Missoula and Alberton. The Western Montana Growers Cooperative helps meet the needs of restaurants, schools and colleges by collectively marketing and distributing the produce of the co-op's members. This list of innovation could go on.

"Buy local" seems to be a powerful message in Montana where we tend to have a strong sense of place and a good dose of common sense. But the local food movement is about more than what consumers buy, although that is an important part of the equation. We are literally trying to build a local food economy that can serve and even expand these new markets in terms of production, processing and distribution. Moving toward a system of greater self-reliance when it comes to food—an essential need—increases our security, as factors like climate change, food safety, and rising oil prices raise serious questions about the sustainability of the global food system we have come to depend on. To meet these goals, though, we need to protect working landscapes now.

Soil and Sprawl

It's no secret that counties in Western Montana are growing. Fast. Between 1970 and 2004, Missoula County's population increased by 70 percent. By 2025, there may be as many as 132,000 people living here, up from just over 100,000 today. Rates of growth are similar or even higher in some neighboring counties. But it's not only the growth that raises thorny issues. The real culprit is sprawl: low-density development spreading the population out over a wide area, leap-frogging away from city and town centers, and often leading to an even greater reliance on cars to move people from their homes to shops and work.



Sprawl devours the countryside. In Missoula County, 15,660 acres were subdivided between 1990 and 2005. And most of that was outside the city limits of Missoula. Since 1970, the acreage of residential land per person has more than doubled in Missoula County (the average size for new lots is now 2.2 acres). It appears that far more land is being converted for housing developments than is necessary.

Several factors make farm and ranchlands the most sought-after for these new developments. For starters, agricultural land is flat and well-drained, and hence is cheaper and easier to build upon. Development can be constrained by land ownership; for example, about half of Missoula County is public land, making it unavailable. Another quarter or so of the land is owned by timber companies (mostly Plum Creek), and six percent is tribal land. The 19 percent remaining is non-corporate, non-tribal private land. These lands are generally located on the valley floors, often contain agricultural soils, and are in or near towns and cities. In short: ground zero when it comes to development pressure.

Complex social and economic factors are at play too. Right now, agricultural lands are usually more affordable to developers than to farmers and ranchers. With development pressures pushing up land prices, new or expanding agriculturalists find it hard, if not impossible, to buy land and pay for it through agriculture, especially when economic returns are low. This economic reality is complicated by the fact that the average age of agricultural producers in Missoula County is 56. That means many of them are rightfully thinking about retiring and getting the years of equity they have built up out of the land. Thankfully, interviews with farmers and ranchers in Missoula County show that many of them do not want to be the generation that “sells out.” As one area farmer said in an interview:

The biggest thing that weighs on my mind is that you have his grandfather, my grandfather, my dad, and now me. And I don't want to be the one that goes, 'Okay, let's just cash out, put the money in the bank' and you know, live high off the hog... I feel a sense of responsibility... If you think about all the blood, the sweat, the tears, the child death, cold winters, hot summers, the Depression, two world wars, all those things. That weighs heavily on me.

-Anonymous Farmer

So, on the one hand, growth makes farmland worth more and selling for development becomes tempting. It may even seem like the *only* way out. On the other hand, a way of life and a legacy handed down from generation to generation is hard to walk away from.

While farm and ranch families struggle with these difficult decisions, there is a growing recognition among policy makers, innovative developers and local food advocates that our agricultural soils are a finite and irreplaceable resource. Fertile soils take thousands of

SOILS OF AGRICULTURAL IMPORTANCE

Agricultural soils occupy only a small portion—about eight percent—of the total land area in Missoula County (see map). Our best soils are located on the valley floors and near population centers. The qualities that make these lands good for agriculture (e.g., level ground that is well-drained) also make them attractive for development. Some of the agricultural land shown on the map may have already been developed or put to a use other than agriculture.

The Natural Resources Conservation Service (NRCS) evaluates soils to assess their ability to support agriculture. The soils are classified into the three major categories shown on the map, and are defined below in descending order of their value for agriculture:

Prime Farmland

From a national perspective, these lands are of the highest quality because prime soils are the most suitable for producing food, forage, fiber and/or oilseed crops. In other words, these lands are critical for meeting the nation's agricultural needs in the short and long term. They tend to be flat (with slopes of zero to six percent), have few rocks, are permeable to air and water, have an adequate growing season and do not erode easily. Prime farmlands receive a good supply of moisture, which in our area must be provided through irrigation.

When managed well, prime farmland produces sustained crop yields with minimal use of energy and other resources, which in turn improves economic viability. Also, farming on these soils is likely to do the least damage to the environment. The loss of prime farmland puts pressure on lands that are less productive and more vulnerable.

Farmland of Statewide Importance

Appropriate state agencies define and identify these areas as being particularly important from a statewide perspective. Generally, these soils nearly meet the criteria for prime farmland, producing high crop yields when managed properly. When conditions are favorable, they can be as good as prime farmland.

Farmland of Local Importance

Although these lands do not have national or statewide importance, local agencies identify them as being significant for agricultural production at the local level. In Missoula County, these soils meet local importance criteria if they have at least half of the components used in assessing prime and statewide soils, and if they meet other minimal requirements for slope (less than 15 percent), drainage, and crop production (for spring wheat, hay, and pasture).

years to develop based on a combination of geology, climate, and biology. Each soil is unique, with its own character, history, and abilities to support plants and animals. The best agricultural soils are “loams”—a balanced mix of sand, silt, and clay particles; humus (organic matter); roots; and small organisms. Loams have what farmers refer to as “good tilth,” a mellow structure and quality that is prized. Loams also have a favorable porosity that stores moisture but drains excess water. Well-managed agricultural land not only has productive capacity; it also provides so-called ecosystem services, like flood control, groundwater recharge, and wildlife habitat.

Grantsdale loam. Alberton very fine sandy loam. Bigarm gravelly loam. These and other agricultural soils make up only eight percent of the land in Missoula County. That isn’t much to work with, and actually some of these lands have already been developed. No inventory evaluating the current status of agricultural lands exists yet, so we don’t really know what remains in good quality.

What we do know is that, so far, no one has been able to manufacture fertile soil. Ruined soils can sometimes be reclaimed, but it is very costly. Preventing destruction is the best strategy. But how?

Crafting Innovative Strategies

Members of the Community Food and Agriculture Coalition (CFAC) have been learning about tools that other localities are using to protect agricultural land and thinking about how they might be tailored to our local area. Here are four ideas:

A Mitigation Ordinance

This tool aims to discourage non-agricultural development of fertile soils and to ensure that farmland loss is mitigated by permanent farmland protection elsewhere nearby. Local governments require development proposals to moderate impacts to agricultural land (such as clustering homes on part of the land to keep other areas open) or compensate for that impact (such as paying for the preservation of comparable farmland off-site). For example, in Davis, California, two acres must be preserved for every acre converted to non-agricultural uses. Perhaps fees could also be assessed to assist farmers in acquiring or leasing land.

Transfer of Development Rights (TDR)

This market-driven technique relies on the voluntary, market-based exchange of development rights between rural landowners and urban developers. TDRs can minimize the conversion of rural lands by transferring the potential for development from areas where agricultural lands are to be preserved (sending areas) to areas where concentrated and high-density growth is desired (receiving areas). Developers compensate landowners for their rights according to market rates, usually resulting in the placement of perpetual easements on the preserved land. To be most effective, the sending and receiving areas should be *within* the same planning region. In Missoula County, TDRs may be difficult to implement because much of the county is not zoned.

Land Link Montana

A land link is a matching service that connects landowners who want to see their land remain in agriculture with producers seeking access to agricultural land. The two parties then create a business agreement, such as a lease or sale. Land links facilitate successful farm/ranch transfers by providing: technical assistance on lease agreements and loans; referral networks to agriculturally savvy lawyers, accountants, and lenders; apprenticeship opportunities for beginning farmers. Informed by extensive research on how best to set up the program, CFAC is launching Land Link Montana in 2008.

Incubator Farms

A healthy local food system not only requires farmland, but also a new generation of farmers, particularly those who want to grow for local markets. Incubator farms lease land to new farmers, provide technical and market development assistance, facilitate sharing of equipment (which reduces start-up costs) and create an opportunity for farmers to learn from their own and others’ experiences. Then, once their businesses are viable, they spin off of the incubator farm and find their own land. Although creating an incubator farm will require major donations and capital investment initially, over time the fees earned from the farmers can lead to financial sustainability for the operation of the program.

It’s Not Inevitable

Like it or not, our region is probably going to continue to grow and development pressures will remain high. But the loss of agricultural land is not an inevitable part of the process. Farmlands have social, economic, ecological, cultural and historic value for the community. Those values suggest opportunities for designing creative solutions so that we can maintain agricultural lands *and* provide housing in ways that enhance quality of life. Strategies that protect the land base can—indeed must—be combined with those that ensure producers can access land and also promote markets for local food as a way to improve farm viability.

We cannot predict the future—but we do know that people will have to eat and that food will be grown on soil. Our options are to protect our fertile soils here and now—with all of us, not just farmers, supporting the process—or to pay later when food shortages and oil prices increase the cost of food coming to us from far-flung anonymous sources. I, for one, prefer to promote preservation of good land now and ensure greater community self-reliance by meeting a larger part of our food needs locally. And I’m banking on the idea that there are others out there who agree. 🌱

Neva Hassanein is an associate professor of environmental studies at the University of Montana and a member of the Community Food and Agriculture Coalition of Missoula County. References for statistics cited in this article are available upon request at cfac@montana.com

HELP CREATE THE FUTURE YOU WANT TO LIVE IN

Urban Fringe Development Area (UFDA)

Based on a variety of data and maps, the UFDA project is trying to both identify where growth is most likely to occur within the Urban Fringe Area and implement growth management strategies. Office of Planning and Grants staff are presenting the project around the community.

The maps and more information are available at: www.co.missoula.mt.us/opgweb/UrbanInitiatives.htm#UFDA

Envision Missoula

Missoula County is likely to double its population to 200,000 residents. Envision Missoula asks citizens two questions that go hand-in-hand: How should we allocate this growth? What should our transportation infrastructure look like? How we answer these questions will have a tremendous impact on our agricultural lands. Find out more at: www.wilbursmith.com/missoula

City of Missoula's Zoning and Subdivision Regulations Update

Much of Missoula's zoning code dates back to 1932. Updating Missoula's regulatory framework for growth and development will clean up the antiquated rulebook and effect how well the city plans for a local food system—everything from community gardens and re-development within the urban core to residential sprawl and commercial strip-malls.

For more information: missoula.duncanchicago.com

Missoula County Open Lands

The Open Lands Citizens Advisory Committee (OLC) is made up of representatives from the County's nine planning districts. They advise the Board of County Commissioners on the protection of open space and rural lifestyles—including working farms and ranches. One of the OLC's main tasks is to recommend how bond monies could be used to preserve open space. Their monthly meetings are open to the public.


Learn more here:

www.co.missoula.mt.us/Rural/open_land_advisory_committee.htm

CFAC's Land Use and Agricultural Viability Committee

The Community Food and Agriculture Coalition (CFAC) is a multi-stakeholder coalition that addresses community needs related to food and agriculture in a comprehensive and creative way. The land use committee reviews subdivision proposals to identify potential impacts to agriculture and offers ideas to reduce impacts. The committee is also exploring policy options for discouraging conversion of agricultural lands to other uses and for promoting permanent farmland protection. In addition, a new "Land Link" matching service will soon be available to connect landowners who want to sell or lease their agricultural land with producers seeking access to agricultural land. For more information, see www.umt.edu/cfa or contact Paul Hubbard at 406-543-0542 or pflhubbard@gmail.com

The Community Food & Agriculture Coalition



Connecting Food, Farms and Community in Missoula.
See our website for information on how you can be involved:
www.umt.edu/cfa

artwork by Claire Emery



GARDEN CITY HARVEST MISSOULA-MONTANA

Artwork by Claire Emery

GARDEN CITY HARVEST, GROWING FOOD, HARVESTING HOPE