POTATOES, FROGS, AND WATER:
R.D. Offutt Co. and Northwestern Minnesota's Future

Winona LaDuke
with Geo. Ann Baker, Kevin Gasco and Anne Bailey
White Earth Land Recovery Project is a grassroots Native environmental, educational, and advocacy organization based at the White Earth reservation in northern Minnesota. The mission of the White Earth Land Recovery Project is to facilitate recovery of the original landbase of the White Earth Indian Reservation, to preserve and restore traditional practices of sound land stewardship, to support community development and language fluency, and to strengthen our spiritual and cultural heritage. The White Earth Land Recovery Project was founded in 1989.
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As I drive across the Ponsford Prairie, I have watched for two decades the transformation of agriculture in the region. As a witness to rising cancer rates among the members of our community, I continue to hear complaints from residents about their health. Among those concerned about their health are the residents of Pine Point, an Ojibwe village located on the Ponsford Prairie.

The rapid rise of irrigated potato farming, and attendant increases in aerial spraying and fertilizer use, have caused widespread concern among Native and farming communities of northwestern Minnesota. R.D. Offutt Company, a regionally based corporation that is now the largest independent potato producer in the world, dominates the ecology and, in some cases, the economy of our region as a large employer, taxpayer, and user of the land.

In this report we begin to document the history of R.D. Offutt Co.'s tremendous growth as an agricultural corporation and, more importantly, we identify the ecological changes linked to this expansion. In addition, we consider related economic and social consequences. We admit that causal relationships between agricultural practices and ecological effects are difficult to prove, but questions must be asked and, in the end, public and environmental health must be protected.

Here is a quick overview of our findings:

- Many of the pesticides used on potatoes have adverse health effects. Out of 41 pesticides commonly used in potato production, 14 are considered carcinogens.

- Thirty-three of these 41 pesticides have been linked to biological changes in endocrine systems, reproductive systems, and male fertility. A small dose of an endocrine-disrupting chemical at a critical point in an organism's growth may contribute to the development of abnormalities in sexual organs, birth defects, behavioral changes, and cancers.

- Thirty-one percent of wells tested in Otter Tail County and 14 percent of the wells tested in Hubbard County's Todd Township had nitrate levels higher than the drinking water standard set by the U.S. Environmental Protection Agency. Fifty-three percent of the wells tested in Otter Tail County had detectable levels of nitrates, and 31 percent had detectable levels of triazine herbicides.

- In 1998, Offutt and smaller potato farmers applied more than 100,000 pounds of nitrogen to the land that overlies
the city of Perham's wells, accounting for 60 percent of all fertilizer used on that land.

- U.S. standards for nitrates in safe drinking water may be set too low. The acceptable level for nitrate contamination in the United States is at 10 parts per million, but in most other developed countries it is half that.

- At least two chemicals Offutt applies to crops have been proven to cause deformities, abnormalities, or mortality in frogs.

- The aquifer from which a number of lakes and rivers in the area draw their water has been tapped aggressively by Offutt and other farmers. From 1974 to 1996, the number of irrigation systems used in the area increased from five to 257. Offutt-related enterprises hold one-third of the irrigation withdrawal permits.

In addition, each year the Lamb-Weston/RDO Plant in Park Rapids, Minnesota, draws 556 million gallons of water from a lower aquifer. While the impact of exponentially increasing withdrawals on area aquifer systems is not yet known, one simulation model conservatively projects a six-foot decline in the water table by the next decade.

- While there are those who contend that Offutt's partnership with Lamb-Weston and its parent, ConAgra, allows our region to benefit from participation in the global market, we must recognize that ConAgra has been cited for numerous labor and environmental violations, price fixing, and health and consumer recalls.

- On June 27, 2001, a chemical fire destroyed an R.D. Offutt Co. storage building south of Park Rapids, releasing potentially toxic fumes and chemical residue into the air and possibly into adjoining soil. Although no assessment has yet been made of the extent of health problems related to the fumes released by the fire, this incident raises questions of public safety with regard to Offutt's facilities, especially those that contain massive stockpiles of potentially toxic chemicals.

- Recently developed best-management practices for potato production are currently in place in Minnesota. But with little or no knowledge of the long-term cumulative effects of chemicals and increased use of ground water, best-management practices may be, at best, a paradigm of guesswork. Moreover, the Minnesota Department of Agriculture's ability to monitor producers' compliance with these standards is limited.

This report, compiled by gleaning information from many sources, delineates potential problems related to Offutt's dominance of the regional agricultural economy. Again, our findings provide an extremely conservative assessment of actual and potential problems because access to information about corporate landholdings, use, and practices is difficult to acquire. For instance, information recorded here reflects holdings held under the names of R.D. Offutt, R.D. Offutt Co., Profutt, and Offutt's affiliate, Monico.

Finally, our report illustrates the complexity of these problems and, while it is focused on one segment of industrialized agriculture in Minnesota, it is, we believe, indicative of a much larger set of challenges for the state.
Potatol is the original word from which our present-day potato comes. The word potatol

was borrowed, as were the original words for tomato, avocado, and chocolate, from the Nahuatl language, a Native language still spoken in northern Mexico.

Potatoes have been cultivated for at least 4,000 years, beginning with the Inca, Ayamara, Quechua, and other Indigenous peoples of the Andean region of South America. By the time the Spaniards rode into that region, more than 3,000 varieties of potatoes had been carefully nurtured to grow in diverse weather conditions, soil types, and growing seasons with a range of ripening schedules.

Potatoes were, and are, a miracle crop, particularly from an historical perspective. In fact, many scholars argue that the potato provided the basis for much of world population growth by improving nutrition and thereby averting millions of deaths. Combined with other foods, many of which also originated in the so-called New World, potatoes, as historian Jack Weatherford notes, "brought about the miracle that centuries of prayer, work, and medicine had been unable to do: they cured Europe of the episodic famines that had been one of the major restraints on the population for millennia." [Weatherford, p.70]

Two major assets of the potato — its resilience in growth and superior nutritional makeup — secured its status over other crops. Consider that in pre-potato times, the so-called Old World depended primarily on grain crops cultivated from domesticated grasses — wheat, rye, barley, and oats in Europe, rice in the far East, and millet and sorghum in Africa.

All of these plants, although bountiful at times, faced challenges in their growing cycles, and the high stalks above ground fell prey to wind, hail, heavy rains, snows, birds, insects, and animals. In contrast, the poisonous leaves and underground fruit of the potato protected the plant from predators and adverse weather conditions, bolstering its resiliency and biological viability.

Now consider the nutritional advantage of growing potatoes instead of grains. Acre for acre, potatoes produce nearly twice the caloric energy as wheat: potatoes produce 3.04 million calories per acre, while wheat produces 1.7 million calories per acre.
Historically, cultivation of the potato required less energy than did grains, and the potato by and large needed only a few months to grow, compared to almost double that for most grains. Finally, potatoes are “an eat as you pick crop,” unlike grains, which require additional processing. In sum, all of these factors made inevitable the movement of the potato to Europe.

But, while the potato itself went to Europe, some of the teachings about its cultivation did not get on the boat. The most basic recipe for success in potato growing is diversity. The Quechua and other Indigenous people practiced this basic principle to ensure horticultural success and their own survival — they grew numerous varieties of potatoes to insure greater productivity and viability in many types of conditions. The Irish potato famine is an example of the price Europe paid for ignoring this crucial lesson.

The potato arrived in Ireland around 1600. By the end of the century, potatoes had replaced grains as the staple food of the country, supporting a population growth from 3.2 million in the mid-1700s to 8.2 million by 1845. The tides turned in 1845 with the onset of the Irish potato famine. [Weatherford, pp. 62-67]

The great Irish potato famine of 1845 to 1849 was caused by successive potato crop failures. In 1845 much of the crop rotted in the fields, followed by even more devastating failures in the next four years. The crop failures were caused by late blight disease (the causative agent a fungus known by the scientific term Phytophthora infestans) which destroys both the leaves and the edible roots of the potato.

The crop failure was disastrous because the Irish peasants had come to depend almost exclusively on the potato for their diet and, more significantly, on one or two varieties, greatly reducing the genetic variations that ordinarily prevent the decimation of an entire crop by disease.

An estimated one million people died from starvation and diseases associated with the potato famine. At the same time, almost 1.5 million Irish people emigrated to North America and Britain to escape the dire conditions of their homeland, leading to Ireland’s further impoverishment. The Irish potato famine remains a chilling historical example of the devastating consequences of a loss of biological diversity within a community’s food source.

Unfortunately, this is perhaps a lesson not well learned. In 1999, the Offutt farming operations in this region experienced a major crop failure. The loss was due to late blight.

Social Darwinism and Farming

Survival of the Fittest?

In general, contemporary discussions about the rise of industrialized agriculture point to the demise of the small family farm. Oftentimes, discussions profile this demise as a type of social Darwinism in which the fittest and strongest survive as a result of natural processes. We believe that such explanations are in fact fables used to justify both greed and destruction.

Social Darwinism is a myth developed by American scholars and others engaged in the discussion about the transformation of land tenure and social institutions worldwide. Their attempts to explain the demise of the family farm focus on the rise of corporate agriculture in the world. This trend is reflected in northwestern Minnesota, which has experienced a 10 percent decline in the number of family farms in operation over at least the past half decade. Paralleling this decline is the widespread expansion of corporate farming activities, including the expansion of the potato industry in northwestern Minnesota and the rise of factory farming of poultry and livestock.

Indigenous Presence

Anishinaabeg of Northern Minnesota

The Anishinaabeg, who inhabited northern Minnesota before the European farmers arrived, now live on seven reservations. At least two, the White Earth and Mille Lacs reservations, lie within the region currently affected by potato farming. Like the Indigenous nations in Latin and South America who originally cultivated the potato, the Anishinaabeg have developed a diverse garden of crops for agricultural production and have devised best-management practices for harvesting wild rice and maple syrup.

The Anishinaabeg have lived in this area for generations. The economy of maple sugaring, gardening, hunting, trapping, trading, fishing, and harvesting from the rich ecosystem of northwestern Minnesota is sustainable and adaptable, involving a host of diverse food and economic sources which originate from the land and which continue to sustain the people living here.
Now, however, this economy and way of life is adversely affected by industrial agriculture through degradation of the environment, particularly through monocropping and the use of herbicides which harm medicinal plants, natural foodstuffs, and the basketmaking materials harvested from the land.

Historically — and to the present day — public policies enacted by the U.S. federal government, and subsequently by the state of Minnesota, have worked to the detriment of the Anishinaabeg and other Native people, facilitating the transfer of land ownership from Native to non-Native control. The land was lost first to timber barons, second to small farmers, and now, finally, to corporate farming.

White Earth reservation was created in 1867 under a treaty that guaranteed 36 townships of land to the Anishinaabeg and their children. A rich ecological area well suited for future generations, the Native people came to refer to the land as the “Medicine Chest of the Ojibwe.”

“... [Our] wealth has become the source of our poverty,” Latin American scholar Eduardo Galeano would write. “In the colonial to neocolonial alchemy, gold changes to scrap metal and food to poison. ... [We have] become painfully aware of the mortality of wealth which nature bestows and imperialism appropriates.” [Galeano, pp. 12-13]

Unfortunately, Galeano’s words speak to the experience of the Anishinaabeg of White Earth. Originally two-thirds of the reservation was covered with trees, mostly white pines. Covetous eyes from the south set their sights on White Earth and orchestrated an elaborate plot involving paper laws and head-measuring doctors to steal the land and the trees. For the most part, they succeeded.

By the mid-1880s national legislation was pending to disrupt traditional land tenure patterns of Indigenous peoples, patterns of collective ownership and family usufruct, or use, rights. The intention of the federal government and other seemingly benevolent forces of colonialism was to civilize the Indians and mold them into brown-skinned white people. The General Allotment Act of 1887, also known as the Dawes Act, was outside of the law, but was passed by Congress.

By 1889, Minnesota ranked second in the country in logging, with the northwestern portion of the state leading production. White Earth reservation, an area well within Offutt’s interests, was subject to its own special law, a version of the General Allotment Act. That law, known as the Nelson Act (1889), opened up the reservation to allotment and annexed four townships — those townships with the most white pine for the state of Minnesota. Not surprisingly, this began a feeding frenzy on the trees which was to last for several decades.

During the 1889-90 timber harvest, 11 million board feet of timber were taken from the White Earth reservation. In the next year, 15 million board feet were cut, followed by 18 million in the 1891-92 season. In 1897, 50 permits had been issued for the harvest of 70 million board feet of timber

Now, out there in the hills they call the Buckboard Hills, it was chuck full of timber out there — white pine, Norway pine. But those guys come in here ... they had the land allotted. They got the biggest part of the land themselves ... I was in the World War. There was quite a forest when I left before the war started, and when I came back on furlough, there was just a desert. There was no timber left.

—Bill Gagnon, White Earth Tribal Elder
from the reservation, and by 1898, in excess of 76 million board feet were cut annually.

Content not only to take the great pines, the lumber companies and land speculating interests set their eyes upon the land itself. Mechanisms were set in place to pry ownership of land from children at boarding schools, blind women, veterans, and those who could neither read nor write English. Sixty years later the court would rule that the tax forfeitures, minor sales, full-blood sales, forced-fee patents, non-consent sales, and a host of other "legal maneuverings" were, in fact, illegal — even under the White man's law. But the theft occurred just the same.

By 1904, 99.5 percent of the remaining reservation lands were allotted; 10 years later, only 14 percent of it was still in Indian hands. That was not to last. The passage of the 1906 Clapp Act, secured by Representative Moses Clapp, removed all restrictions governing the sale, encumbrance or taxation of land held within the reservation by adults of mixed blood. The first to go were the timber lands. "Participants and observers testified that fraud and corruption had characterized every stage of the management and sale of Anishinaabeg land and timber," wrote historian Melissa Myer. "The emergence of local lumber companies like the Steenerson Lumber Company and the Nichols-Chisolm Lumber Company went hand in hand with land alienation. By 1934, only 7,890 acres of the reservation was still in tribal trust."

This was a bonanza to the border towns and to the timber industry. Land companies emerged overnight, fly-by-night mortgage outfits held deeds for thousands of acres of land, and timber companies closed in on leases to clear-cut almost a third of the reservation. In 1907 the Minneapolis Tribune reported that "fleeing the Indian" was a common saying in nearby Detroit Lakes.

Over time the alienation of the land changed the complexion of the reservation, the structure of resource management, and the economy's flow of wealth. The alienation of land caused both the emigration of the White Earth people and their poverty. At the outset, people simply crowded together in houses, as one family was pushed off the land into another family's house. Overcrowding made the traumatized refugees more susceptible to health problems, and during the 1910s and 1920s, epidemics of trachoma and tuberculosis swept through the villages. Every family was affected and some families disappeared altogether. This began a spiral of trauma and grief from which the community still struggles to recover.

"When the land and the forest were taken away," explains Bob Shimek of White Earth, "it was like being placed in a cultural Sahara. One generation it's there; the next generation, it's a sea of stumps. That is devastation."

In a few years, the federal government came to view the social experiment of White Earth as a failure and sought, instead, to relocate the people to urban areas. This was to be the final assimilation and the end of a long road for the White Earth people. By 1930, of the total enrolled population of 8,584 persons, only 4,628 remained on the reservation, slightly more than half.

PONSFORD PRAIRIE

Assault from Agriculture

I t was this climate of devastation and colonialism that brought the first wave of settlers to the Ponsford Prairie region: the lumber companies and land speculators. They were followed by those who purchased land from the logging companies when they were done — the farmers. These farming families stayed on the Ponsford Prairie, the northern part of what is now Offutt's potato empire. Many are still there. But, with the combined effects of agricultural initiatives such as the Dairy Termination Program, the demise of family farming, the rise of global agriculture, and the fall of local land prices, the Ponsford Prairie region became a prime target for expansion of Offutt's large-scale agricultural enterprises.

Historically, the ecological impact of these changes is immense. Since Minnesota's birth as a state in 1858, half of the wetlands within the reservation boundaries have been lost, primarily to agriculture. Between 1955 and 1975, the loss of wetlands in this area accelerated, prompting public recognition of wetlands' important role in northern Minnesota's ecosystem. One attempt to revert this trend was a federal initiative called the Conservation Reserve Program (CRP) which took lands out of agricultural production for a certain number of years, setting them aside for potential wetland restoration. It was many of these lands that Offutt purchased when their CRP terms expired.

These changes are reflected in land ownership maps of the Ponsford Prairie, located in the southeastern corner of the White Earth reservation. (See map on page 8.)
Changes in Land Ownership —1910-1999
Pine Point Township in White Earth Reservation

Ron D. Offutt
Potato Entrepreneur

Nicknamed the “Sultan of Spuds” and the “Lord of the Fries,” Ron Offutt has been described as a shy potato farmer from Moorhead. In 1964, after graduating from Concordia College in Moorhead, Minnesota, he joined his father in the potato business and launched the growth of R.D. Offutt enterprises. Today Offutt is the largest independent potato grower in the world, and some estimate that he personally controls a $300-million fortune.

When Ron Offutt began farming with his father, they sought, whenever possible, to lease rather than buy farm equipment. The John Deere implement dealer in Casselton, North Dakota, was among the few regional dealers who were willing to lease equipment. In 1968 Ron and his father had about $70,000 worth of tractors and equipment under lease, and when the John Deere dealership became available for purchase, the Offuts bought it, thus starting RDO Equipment. In the years to follow, RDO Equipment expanded to include 47 stores in the western United States, five automobile franchises, and two auto body shops. RDO Equipment has become the largest John Deere distributor in the nation, and Ron Offutt holds 57 percent of the public company’s stocks. [Forbes, 19 May, 1997]

Potato expansions came later. In 1970 Offutt ventured out of the Red River Valley and bought sandy farmland near St. Cloud, Minnesota, in the Big Lake area. This land was just being released from the federal government land conservation program.

“These ‘sand lands’ allowed us to . . . produce the kind of potatoes that make the best french fries,” Offutt explained.

He also noted the rapid expansion of potato production at that time: “We went out the winter of ‘74 and almost tripled our production.” [Forbes, 19 May, 1997]

Following a trend increasingly common in the food-processing industry, Offutt looked into vertical integration. In 1978 he purchased a processing plant in Atlanta, and in 1980 he built a new potato plant in Park Rapids, Minnesota. The Park Rapids plant is a joint venture with Lamb-Weston, a processing subsidiary of ConAgra, a corporation considered by many as the agribusiness giant and the largest potato processor in the country. In 1989, Offutt acquired a potato dehydration plant in Grand Forks, North Dakota, making R.D. Offutt the most diversified potato processor in the United States. In 1987 he formed Ag Capital to provide financing for all the Offutt companies as well as other agricultural producers. (Ag Capital went public in January, 1997.) In 1994, he purchased American Specialty Foods in Fargo, North Dakota, now known as RDO Specialty Foods. The Park Rapids plant, which R.D. Offutt Co. owns with Lamb-Weston, was expanded in 1995, doubling production of french fries to 280 million pounds a year. Today, Ron Offutt is the most diversified potato processor in the United States.

Ron Offutt is also the largest independent potato producer in the world. When MacDonald’s franchises were popping up on every street corner, that meant more french fries, and someone was paying attention. Ron Offutt and a partner paid $600 dollars an acre (half the price of land in the Red River Valley) for land in the area of Perham, Minnesota, and harvested their first big crop of potatoes.

Fertilizer, pesticides, and fancy irrigation equipment used on the sandy soil produced yields at twice the region’s average. Spurred by the success of turning sand into potatoes, Offutt continued his expansions. By 1997, he produced potatoes on some 55,000 acres of land. Two years later, by 1999, the R.D. Offutt Co. Agricultural Unit (which is split into 26 area
farms) owned, leased, and operated farms on over 100,000 acres of land in the United States. Of this, approximately 15,500 acres of crop land is cultivated by the Park Rapids Area Farm, which spreads from the Ponsford and Two Inlets area south to Wadena.

Scanning a land ownership map in any of the Offutt regions (see map below), one finds an interesting and diverse pattern of land ownership.

- The diversity of landholding entities enables Offutt to keep within the corporate farming laws of Minnesota — or so it seems. Minnesota has strict laws regarding corporate land ownership, but land used in Offutt’s potato production is held by a multitude of entities, and his farm division is not incorporated.

- These landholdings include lands held by R.D. Ofutt; Profutt; Larry Monico, Manager of the Park Rapids operation, and leased holdings. Those include some 27,926 acres in 12 counties of Minnesota with special concentrations in Otter Tail County (8,547 acres) and Becker County (5,665 acres).

- The amount of acreage Offutt owns is not, in itself, alarming. Rather, it is the concentration of potato farming in some regions that makes the nature of Offutt’s enterprises a matter of concern.

**Offutt Landholdings in West-Central Minnesota**

![Map of Offutt Landholdings in West-Central Minnesota](image)

**Total Acreage of Landholdings by County, 1999**

<table>
<thead>
<tr>
<th>County</th>
<th>RD Ofutt</th>
<th>Profutt</th>
<th>Leased</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becker</td>
<td>2755.80</td>
<td>2281.70</td>
<td>616.00</td>
<td>5665.50</td>
</tr>
<tr>
<td>Cass</td>
<td>0</td>
<td>433.50</td>
<td>64.00</td>
<td>497.50</td>
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<tr>
<td>Clay</td>
<td>1978.00</td>
<td>0</td>
<td>0</td>
<td>1978.00</td>
</tr>
<tr>
<td>Hubbard</td>
<td>813.55</td>
<td>439.15</td>
<td>160.00</td>
<td>2021.25*</td>
</tr>
<tr>
<td>Otter Tail</td>
<td>6864.87</td>
<td>1682.30</td>
<td>0</td>
<td>8547.17</td>
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<tr>
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<td>1959.16</td>
<td>110.86</td>
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<tr>
<td>Swift</td>
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<td>0</td>
<td>0</td>
<td>1794.00</td>
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<tr>
<td>Todd</td>
<td>2427.00</td>
<td>0</td>
<td>0</td>
<td>2427.00</td>
</tr>
<tr>
<td>Wadena</td>
<td>1178.10</td>
<td>671.30</td>
<td>337.90</td>
<td>2287.30*</td>
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<tr>
<td>Wright</td>
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<td>0</td>
<td>0</td>
<td>n.a.</td>
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<tr>
<td>TOTALS</td>
<td>20356.37</td>
<td>3885.65</td>
<td>2973.06</td>
<td>27215.03</td>
</tr>
</tbody>
</table>

* Includes Monico holdings in Hubbard (608.55) and Wadena (102.40).

**TOWNSHIPS (white numbers)**

1. Amor, Otter Tail Co.
2. Arago, Hubbard Co.
5. Becker, Sherburne Co.
7. Big Lake, Sherburne Co.
8. Blueberry, Wadena Co.
12. Casroville, Becker Co.
13. Clontarf, Swift Co.
15. Crow Lake, Stearns Co.
17. Everts, Otter Tail Co.
18. Flowing, Clay Co.
19. Girard, Otter Tail Co.
21. Gorman, Otter Tail Co.
22. Green Valley, Becker Co.
23. Hartford, Todd Co.
24. Henrietta, Hubbard Co.
25. Hubbard, Hubbard Co.
26. Leaf Lake, Otter Tail Co.
27. Meland, Clay Co.
29. Niobrara, Otter Tail Co.
30. Oakport, Clay Co.
31. Osage, Becker Co.
32. Otter Tail, Otter Tail Co.
33. Otto, Otter Tail Co.
34. Perham, Otter Tail Co.
35. Pine Lake, Otter Tail Co.
36. Pine Point, Becker Co.
37. Riverton, Clay Co.
38. Rush Lake, Otter Tail Co.
39. Shell River, Wadena Co.
40. Silver Creek, Wright Co.
41. Spring Prairie, Clay Co.
42. Stowe Prairie, Todd Co.
43. Straight River, Hubbard Co.
44. Thomaston, Wadena Co.
45. Todd, Hubbard Co.
46. Two Inlets, Becker Co.
47. Ward, Todd Co.
48. White Oak, Hubbard Co.

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French Fry Consumption

on the Rise

The United States market for french fries is estimated to be worth $12 billion a year, with fast growth in international markets, overshadowed only by the United States hamburger market, which was at $42 billion in 1999.

A Baton Rouge Louisiana State University study shows that nearly one-third of the vegetable servings eaten by youngsters aged 13 to 18 years are in the form of potato chips and french fries. Children ages 7 to 12 years had slightly lower consumption rates of 28.9 percent.

—Financial Times, April 17, 1999

Growing Potatoes

for the Perfect French Fry

Growing potatoes for McDonald’s french fries is, in the end, a special art. Big is best, saving all those edges and insuring a long fry. Super spuds mean, by and large, the use of a lot of chemicals to keep away bugs and weeds and to pump up potato bulk. Nitrogen fertilizer is used heavily to promote the growth of big potatoes. Typical usage of nitrogen fertilizer for three major crops — potatoes, corn, and grain — varies significantly:

<table>
<thead>
<tr>
<th>Crop</th>
<th>Nitrogen Use (pounds/acre)</th>
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<tbody>
<tr>
<td>Potatoes</td>
<td>241 lbs/acre</td>
</tr>
<tr>
<td>Corn</td>
<td>96 lbs/acre</td>
</tr>
<tr>
<td>Small Grains</td>
<td>60 lbs/acre</td>
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</table>

Use of Potato Pesticides

Nationally, potatoes rank fifth overall in pesticide use, behind corn, soybeans, cotton, and grapes. In all, as of 1995, 71 million pounds of pesticides (not including sprout inhibitors used in storage) were used on potatoes in the 11 major potato producing states.

Many of the chemicals commonly used on potatoes can cause adverse health effects. Unfortunately, these chemicals appear in the water and in food products made from potatoes.

In 1997 the Northwest Coalition for Alternatives to Pesticides (NCAP) compiled information known about the active ingredients used in pesticide formulation. Here is a summary of their findings as reported in the Journal of Pesticide Reform [Winter, 1997]:

• Out of 41 pesticides studied by the U.S. Environmental Protection Agency (EPA), 14 are considered carcinogens. Some of these 14 are the most widely used chemicals in potato production, including the fungicides chlorothalonil, mancozeb, and iprodione, as well as the fumigants dichloropropene and metan-sodium. Of the 13 fungicides studied, five are considered carcinogens.

• Thirty-three of the 41 pesticides have been linked to impacts on the endocrine system, reproductive system, and male fertility. The endocrine system is a collection of glands and hormones (chemical messengers) that regulate growth, development, behavior and sexuality. Certain chemicals, including widely used potato pesticides, can disrupt the functioning of the endocrine system. A small dose of an endocrine-disrupting chemical at a critical point in development may create lifelong effects. The kinds of impacts that are being attributed to endocrine disruption include abnormal sexual organs, behavioral abnormalities, birth defects, and cancers.

• Over half of the potato pesticides studied have been found on food. The U.S. Department of Agriculture’s pesticide-monitoring program found pesticides on 32 percent of the potatoes sampled. When post-harvest treatments (the sprout inhibitors chlorpropham and thiaendazole) were included, the level of detections increased to 83 percent. Up to 18 different pesticides were found on potatoes.

• Many of the pesticides used in potato production have not been adequately reviewed by the EPA. Of the 39 older pesticides named by the NCAP (see the chart on the opposite page), only 10 have been thoroughly tested according to current standards for health and safety. This means that we do not have a clear picture about the health effects of many of these chemicals.
Pesticides Used on Potatoes in the Pacific Northwest

<table>
<thead>
<tr>
<th>HERBICIDES</th>
<th>Idaho</th>
<th>Washington</th>
<th>Oregon</th>
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<td>197,000</td>
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<td>Sulfuric Acid</td>
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<td>TOTAL</td>
<td>31,593,000</td>
<td>18,869,000</td>
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Map of Straight River Watershed with Location of DNR Water Appropriation Permits

"The problem is," explains Bill Merritt, a water hydrologist for the Minnesota Department of Natural Resources, "the soils here have infiltration rates which are extremely rapid. The root zone is only a few inches deep, and the water percolates through rapidly."

Merritt continues: "Back in the 1980s, they [Offutt] were putting on a tremendous amount of fertilizer in the spring. The company was also doing a lot of aerial spraying. All of that caused some concern, and has had perhaps some residual impacts on the quality of groundwater."

There were documented losses of total poundage of fertilizers used in the area, but Merritt and other hydrologists perceive that "vast improvements since that time" have been made. [Merritt, 25 January, 2000]

Unfortunately, those residual practices most likely left their mark on the groundwater. The fact remains that what is put into the soil to feed the potatoes or to squelch the growth of predatory plants and insects does get into the groundwater.

Groundwater and Soil in the Potato Growing Region: The Straight River

Giv en the underlying need to use a significant amount of fertilizers and chemicals in commercial potato production, R.D. Offutt Co. representatives have worked diligently to undertake "best-management practices" for potato production. These changes were an acknowledgment by the company of the problem and a direct result of community pressure.
The Minnesota Department of Agriculture was given two options for monitoring the rapid rise of industrialized agriculture in Minnesota: regulation or the institution of best-management practices. The first involves state standards; the second, voluntary compliance. The Department of Agriculture sought to work with the industry and to seek their voluntary participation.

“The operative best-management practices are voluntary, with no verification of compliance and readily abandoned,” wrote Ron Moir of the West Battle Lake Association in his 1998 testimony to the Minnesota state legislature.

Concern about nitrate contamination of groundwater mounted in the late 1980s and the early 1990s. Consequently, R.D. Offutt Company cooperated with various state agencies in developing best-management plans for their acreage. In fact, many of Minnesota’s best-management plans for potatoes were developed in Offutt’s fields, a joint effort between Offutt agronomists and University of Minnesota scientists. Methods investigated included measuring soil percolation rates and nitrogen uptake by potato plants and setting realistic yield goals, which together improved the efficiency of nitrogen applications, optimally reducing costs for the grower and hopefufully minimizing leaching of nitrogen into the groundwater.

Warren Warmbold, Farm Manager for the Park Rapids area farm, explains the use of “chemigation” as a method of applying the fertilizer in a way “which is only what the crop wants, like spoon feeding.” By developing a system of smaller but more frequent applications, R.D. Offutt Co. is able to “use smaller amounts, giving the crop time to utilize it.” [Warmbold, 15 January, 2000]

A second system utilized by Offutt is the pulse system. This is in addition to aerial spraying, which has caused significant controversy in many areas.

“In sensitive areas, you don’t want to put aircraft in,” explains Warmbold. This includes near houses, lakes, and other areas. In recent years RDO Enterprises established buffer zones: “We try to keep a buffer between the edge of crops, at the edge of the field, woods, etc.”

These practices represent a growing trend in R. D. Offutt Co.’s and other corporations’ efforts to improve practices. These practices did not come about without expressed concern from the local community.

Nor do many community members in areas affected by Offutt feel confident. “We have to live next to it. We don’t have a choice when it comes to living with pesticides and nitrates. You don’t have to walk near the fields after spraying, or drink the water. We do,” said Charles Brust, a resident of Clitherall Lake, one community in which Offutt has a number of fields.

The Clitherall, Battle Lake, and Perham communities of northwestern Minnesota have been quite vocal about their concerns about the expansion of the potato empire in their area. And with due cause.

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**Otter Tail County & the Straight River**

**Water Contamination**

“My brother Bob was hitchhiking to Minneapolis. It was really hot out, like in July. So he went under one of those sprinkler systems, and stood under there to cool off. When he got out of there, his skin started stinking. It stunk really bad, and then it started burning and then after it dried, it started peeling.”

—Florence Goodman, Resident of Pine Point

The second phase of the Pineland Clean Water Project study of the Straight River Watershed was completed by a host of government agencies in 1995. They found that the watershed itself is “geologically sensitive with a potential for groundwater contamination from the leaching of nutrients and pesticides below the crop rooting zone.”

Referred to as a diagnostic study in 1992-94, a multitude of government agencies undertook research to determine the concentrations of and/or the presence of nitrate, nitrogen, and pesticides in the superficial aquifer of the Straight River watershed. The study was undertaken as a result of complaints from local residents of the Ponsford, Shell Prairie, and Osage areas, who were increasingly concerned about the purity of their well water, the viability of the surface waters, and the use of aerial spraying on the thousands of acres of cropland in the area under potato cultivation.

According to the Pineland Clean Water study, nitrates were present in many shallow wells with “25 percent of the nitrate tests indicating over 10 mg/l. Elevated levels generally coincided with cultivated cropland areas. Lowest concentrations were generally found in the forested areas.”

In addition, some pesticides were also found in local wells. Four of eight groundwater samples taken in August 1993 held trace amounts of metolachlor and alachlor, which were also found in one well. Atrazine levels were well below the maximum contamination level of 3 mg/l established by the U.S. Environmental Protection Agency. However, many of these pesticides did appear in rainfall tested in the 1993 study. Some 21 separate pesticides appeared in rainfall samples in the Straight River Watershed area, of which eight were used locally, indicating a “strong, local, influence on pesticide contamination of rainfall.”
The tests found that the most commonly detected pesticides in rainfall were methyl parathion, inetriubzin, and simazine, which were detected more than 50 percent of the time. Of these 21, four were used locally and three were identified as commonly used on sugar beets and/or commercial wild rice production, indicating a long-range transport of 60 to 100 miles. The agencies that undertook the Straight River Watershed study did acknowledge that “The environmental effects of pesticides deposited in rain to surface water and the land are relatively unknown. Their potential harm to the ecosystem depends on their herbicidal properties and the concentration level.” [Pineland Clean Water Project, Executive Summary]

One of these chemicals, atrazine, may be banned by the U.S. Environmental Protection Agency sometime in the future, but in the interim, it is classified as a dangerous chemical with properties that alter the hormone estrogen. In the same category as DDT and PCBs, atrazine is considered a cancer risk and has a “profound effect and greatly increases the production of a bad form of estrogen. Our data show that a wide variety of pesticides and related compounds clearly have effects on estrogen metabolism that would act in the direction of increasing breast cancer and endometrial cancer risks,” reports H. Leon Bradlow at the Strang Cornell Cancer Research Laboratory. [Colburn et al, 1996, p.183]

Aerial Chemical Spraying

Communities Voice Concern

In 1992 a couple went to the Mantrap Township Board of Hubbard County to ask for help. They lived between two of Offutt’s potato fields and were concerned about the drift of aerial spraying across their land. The Mantrap township board passed a local ordinance to restrict the aerial spraying of pesticides. In turn, Offutt and the state’s commercial pesticide applicators sued the township. The township lost. The township appealed and lost again.

Judy Olson of the Mantrap Township Board said that the residents of the township finally gave up: “People just basically backed off because they knew they didn’t have the money that the farms did, and that they wouldn’t have a chance anyway.”

In September of 1999, Mary Losure of Minnesota Public Radio reported that “The Minnesota Department of Agriculture is the state agency charged with regulating pesticides. When Offutt sued the township, the Agriculture Department joined in on the side of Offutt and the commercial-pesticide applicators.” [Minnesota Public Radio, 28 September, 1999]

Residents of the town of Perham, Minnesota, also expressed concerns about nitrate contamination which they associated with Offutt’s crops and fertilizer storage tanks. As Losure reported in Minnesota Public Radio’s feature story about Offutt: “Perham has four city wells. The one near the elementary school is tainted with nitrates above the safe-drinking-water standard. Now the city is drilling a new well to replace it. Private wells are also contaminated. John Altstadt is head of a committee set up by the mayor to protect the city’s water. The committee has been testing wells around the area. He drives through a small subdivision on the edges of town. He points out the houses where the wells are reading above the safe drinking-water standard of 10 parts per million.

“Altstadt explains: ‘That brown one is over 10. This one, here, is the one that had 79 parts. They put in another new well and now that one is reading 49 parts per million.’

“Last year, Offutt and other, smaller potato farmers applied well over 100,000 pounds of nitrogen to the land that overlies Perham wells — 60 percent of all fertilizer used on that land.” [Minnesota Public Radio, 27 September, 1999]

In the last analysis, 31 percent of the wells in Otter Tail County had nitrate levels higher than the drinking standard set by the U.S. Environmental Protection Agency, and 53 percent of the wells had detectable levels of nitrates (including the above figures). Thirty-one percent of the wells had detectable levels of triazine herbicides, none of which had exceeded EPA drinking water standards. [Enterprise Bulletin, 31 July 1997]

One complication of nitrate and other fertilizer contamination is that tracing chemicals back to a specific source is impossible. In fact, a state-wide quandary exists in that it appears that the state of Minnesota is in sort of a technological catch-up with regards to monitoring environmental impacts on groundwater. There has been no historic nonpoint pollution monitoring program in the state of Minnesota.

It seems as well that the Minnesota Department of Agriculture, which is responsible for monitoring water pollution caused by agriculture, has only limited enforcement and staffing capacity. For instance, Mike Fick is the Department of Agriculture’s chemigation and fertigation permit specialist in northern Minnesota. He grants permits to Offutt and other enterprises in the region and reviews permit applications. Actual monitoring is up to the company itself, sort of the “honor system,” like the irrigation withdrawals. Fick rarely checks the permits, he says, unless there is a complaint. [Fick, 26 January, 1999]

Citizens nationwide have questioned if the standards set by the U.S. Environmental Protection Agency adequately protect human health or environmental health. While the cumulative impact of drinking, swimming, or living in a
veritable chemical soup is totally unknown, we continue to live within this set of circumstances. In the case of nitrates, a number of other countries have actually been much more cautious. While the acceptable level for nitrate contamination of drinking water in the United States is at 10 parts per million (ppm), in the European common market countries, it is 5.6 ppm, and in South Africa and Germany, it is at only 4.4 ppm. The lower levels of acceptance in this case “involve more extensive epidemiological research overseas,” says Dale Sparling, Clitherall Lake Association. [Clitherall Lake Report of Investigations, April 1998] "We used to just try and do our own thing and do everything according to the law. But with the added public opinion that has come on projects like this, we feel we need to do something to educate the people and work with them...” –Larry Monico, R.D. Offutt Co. Farm Manager [Daily Journal, 14 June, 1997]

There is perhaps, on Offutt’s part, an assumption that these environmental issues in the long term should be construed less as environmental or management problems, and more as an education shortfall.

**At Risk**

**Public Health and the Environment**

One of the tragedies of modern existence is the collective escalation of cancer levels and overt health concerns which we have now become somewhat accustomed to in our society. Precautionary phrases such as “Is it a known carcinogen?” or the sad nod of the head in acknowledgment of the most recent cancer victim are increasingly common in our society.

While scientists relentlessly search for genetic causes of these ailments, we must turn the mirror back to ourselves and our decisions to recognize the societal choices that affect not only cancer rates, but our overall health and the health of coming generations. If we cannot protect the most precious, most defenseless in our families, whom can we protect?

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**Omakakiwag Aakoziwaad** *(As the Frogs are Sick)*

There is a web of life. According to teachings of the Anishinaabeg and other Indigenous peoples, sometimes the most humble of creatures within the web of life become our greatest teachers. It is no secret that Minnesota has a problem with frog deformities. At least two chemicals Offutt has aggressively applied, either through chemigation or aerial spraying, have been proven to cause birth defects, mortality and abnormalities in frogs. Maneb and endosulfan (used by Offutt under the brandnames Maneb and Thiodane) have been documented in independent studies to cause malformations and a high death rate among frogs.

A Canadian study at Trent University in Peterborough, Ontario, simulated conditions that frogs might face while breeding in drainage ditches, ponds and other areas near farms. Because of endosulfan's documented toxicity to fish, regulations discourage farmers from using the chemical near open water. However, according to the Canadian study, aerial drifting of the pesticide can leave concentrations of 0.4 milligrams per litre or more at three meters beyond the edge of the sprayed field. The tests used low concentrations of endosulfan (0.03 to 0.4 milligrams per litre) and found the following results:

- Tadpoles exposed to the pesticide after hatching experienced high death rates. Timing of the exposure made a surprising difference. Up to 30 percent of those dosed immediately after hatching died, while groups exposed as two-week-old tadpoles sometimes suffered 100 percent mortality.

- Tadpoles also incurred significant sub-lethal toxicity even in the lowest exposure groups exhibiting hyperactivity characterized by “whiplike convulsions,” followed by temporary paralysis. The survivors of the highest exposures also grew unusually slowly.

The Canadian scientists concluded “that the hazard it [endosulfan] represents to frogs and toads is sufficiently great to warrant its replacement by less toxic alternatives wherever possible.” [Science News Online, 5 September 1998]

In another scientific study, toxicology researchers from the Stover Group in Stillwater, Oklahoma, collected water samples from lakes in Minnesota and Vermont. They conducted a series of experiments using a species of African frog which is roughly equated with labora:ory rats.

In this study, toxicologists reported that many of the lakes were “chemical soups of contaminants.” Only their recipes differed. For instance, lead researcher Douglas Fort reported that some lakes “contained chemicals that we did not find in our background sites, such as the pesticides manebo, perethrin, and propylthiurea. Although individually many lake pollutants can induce some deformities, the team found that limb deformities and bent spines were triggered only by manebo or propylthiurea.” [Science News Online, 5 September, 1998]

Findings reported by the Stover Group in 1999 reinforced
similar results reported by Martin Ouellet of McGill University in Montreal: “Our epidemiological data clearly show amphibian deformities occur only in sites subjected to pesticides, often a soup of 10-20 such agents.” [Science News Online, 2 October 1999]

Finally, research by the Minnesota Pollution Control Agency (MPCA) has begun to indicate that the “cause for Minnesota’s frog malformations is most likely one or more chemical contaminants in the water.” The MPCA, and other agencies, had been more keen, seemingly, to tap natural causes such as the parasitic flatworm called a “trematode,” or increases in ultraviolet radiation, for the malformations and deaths. However, studies increasingly show evidence that it is the chemicals, including those used by R.D. Offutt Co., which have caused the malformations. [Legislative Update 1999, Minnesota Pollution Control Agency, 5 May 1999]

**Minnesota’s Frogs**

**Scientists Puzzled by Deformities**

Scientists have speculated that the deformities in frogs may be caused by pesticides or other chemicals, ultraviolet radiation, parasites, or other factors, working alone or in combination.

Robert McKinnell of the University of Minnesota and his assistants performed necropsies on 513 deformed frogs collected last year from 24 sites in Minnesota. The results showed internal problems in three categories, he said.

A high percentage of the frogs from 75 percent of the sites had swollen stomachs and bloated intestines. “They were so distended and thin that they were virtually transparent,” McKinnell said. The frogs’ guts were crammed from one end to the other with insect parts and other food, none of which appeared to be digested. “Insects are normally digested and pass easily, but these materials are building up until it just becomes gross,” he said.

A smaller number of frogs, from four sites, had undigested food in their bladders, which normally contain only urine. “The insect parts build up and have nowhere to go,” McKinnell said, “so there has been a retrograde movement of these materials into the bladder.” He said relatively few of the frogs they studied had the bladder problems and theorized that frogs with abnormal bladders tend to die young. Male frogs from half the sites showed “greatly diminished testes.” Normal frog testes are sausage-shaped, opaque and generally yellow, but testes from the deformed frogs were either translucent or transparent and greatly thinned. “I
strongly suspect that those frogs are sterile," McKinnell said.

The frog limb deformities came to the attention of scientists [in the summer of 1995]. Helgen said deformed tadpoles and frogs have been found in several parts of Minnesota again this year. The external problems include the usual range of extra, missing, or shortened legs and stumps, excess skin and webbing, and various eye deformities.

Judy Helgen, biologist with the Minnesota Pollution Control Agency, said that if 1997 follows the pattern of the past couple of years, reports of deformed frogs in Minnesota will increase through the late summer as young frogs from this year's hatch leave their breeding ponds.

—Star Tribune, 31 July, 1997

Water Withdrawals

Draw Down and Aquifers

The vastness of underground aquifer systems is something like space — an immense unknown. What we do know, however, is that there is the same amount of water today as there was 5,000 years ago, that all the earth's drinkable water could fit into a cube-shaped tank measuring only 95 miles, and that 1.2 billion people lack access to clean water. In other words, water is best not squandered.

Yet, as worldwide potable water sources diminish and water contamination becomes increasingly prevalent, we are tapping into underground aquifers and pumping our irrigation and well water from them. The rate of annual drawdown of aquifers worldwide is nine feet per year. There are no comprehensive studies of the underground aquifer systems of northwestern Minnesota. The Department of Natural Resources is presently undertaking a follow-up and expanded study from previous research undertaken by the U.S. Geological Survey.

At present, we do know that a superficial aquifer underlies the Straight River region, beginning in what is known as the Ponsford Prairie and continuing into the Straight River Watershed, and including areas as far west as the Otter Tail and Clitherdal region of northwestern Minnesota. That aquifer is a primary source of water for the Straight River, and any changes in water quantity are shown to affect the Straight River. That aquifer is covered by a rather sandy and porous set of soils on which much of the recent potato production has expanded. This aquifer is underlain by another, much deeper aquifer, which is used for some wells and which is the source of the 556 million gallons of water used each year by RDO/Lamb-Weston Enterprises at its potato plant in Park Rapids.

There has been a rapid expansion of irrigation withdrawal from the upper aquifer. An initial and rather conservative
study completed in 1994 discussed some of these withdrawals but was based on limited background data.

This information was cited in the Pineland Clean Water Project study of the Straight River watershed, wherein computer simulation of water withdrawals and water table decline indicates some change:

“A 10-year simulation shows no significant regional water table declines. . . . A 20-year simulation shows water table declines of up to six feet. Declines of several feet could significantly affect yields in shallow wells or yields in places where the original saturated thickness is substantially reduced.” [Pineland Clean Water Project, 1995]

According to hydrologist Bill Merritt of the Minnesota Department of Natural Resources, the actual impact of these declines and the recharge and depth of this aquifer are unknown. There is, however, a likely immediate impact on water quality.

The Straight River, a regionally significant brown trout stream, receives approximately 50 percent of its flow from groundwater. Trout need cool water to survive in the summer, and the 55 degree Fahrenheit groundwater cools the river and ensures the viability of the Straight River for trout. The initial studies by the U.S. Geological Survey, however, found that the groundwater withdrawals associated with irrigation systems had occurred in significant enough quantities to affect flows into the river.

Since 1974 land use in the watershed has been transformed from dry land farming to irrigated farming. The seeming bounty of groundwater and sandy loam soils drew Offutt and others to the area. In 1974, there were five irrigation systems in the watershed. In 1988 there were 48 irrigation systems, and by 1994, there were 72 irrigation systems within, and immediately adjacent to, the watershed. About 3.5 billion gallons of groundwater were projected to be withdrawn each year from the drift aquifers for irrigation, according to the Pineland Clean Water Project study. The number of permits and amount of withdrawal has increased in the past few years, although a moratorium has been in place since 1996 on allocation of new groundwater permits. The entire region includes 257 agricultural groundwater withdrawal permits, of which 83 were held by various Offutt enterprises and relatives in 1999.

The exact amount of water withdrawn per permit cannot be verified, and thus remains unknown, because permit holders such as Offutt, other companies, and farmers report their water usage on an honor system.

“We don’t have the people to monitor it,” said Merritt. The price of water in the north country remains, however, relatively cheap: $50 per permit for withdrawal of up to 50 million gallons a year, with increased amounts available at higher prices.

The 556 million gallons that RDO/Lamb-Weston withdraws each year for its Park Rapids operation is removed from a lower aquifer. There is no definitive knowledge, according to Merritt, about possible adverse effects to the lower aquifer. “That’s the problem,” he said. “There’s an awful number of unknown factors, although it is assumed that a hundred feet of clay, or so, separates the two aquifers.” The aquifers themselves, however, may be connected in various places through outcroppings and fingers.

In the end, major concerns remain regarding how the water quality in northern Minnesota is affected by large-scale industrialized potato production. Again, accurate knowledge of the aquifer system’s makeup and the long-term effects of water withdrawals from it remain unknown. In order to better assess the situation, the Minnesota Department of Natural Resources had placed a three-year moratorium on issuance of new water withdrawal permits from the region. That moratorium lapsed at the onset of 2000. Five new Offutt permits were pending in the region at the beginning of the year. [Merritt interview, 25 January 2000]

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**Citizens Demand**

**Limits to Water Withdrawals**

Offutt’s rapid rise to dominance has not gone unnoticed nor without raising concern among local residents. Opposition to the expansion of Offutt’s potato enterprise has been growing in the north woods. Shortly after it was founded in 1990, the Osage Environmental Society, in cooperation with people who live near Offutt’s landholdings, circulated a petition calling for certain restrictions on irrigation: a limit on the number of wells and a 1,000 foot clearance around all lakes. It was thrown out.

In 1994, the Osage Environmental Society again took action, joining with Trout Unlimited, Inc., a national organization, in a lawsuit against the Minnesota Department of Agriculture. At issue in the suit was an irrigation permit applied for by an Offutt operating entity, Triple J Farms, whose property adjoined Dead Horse Creek, a designated trout stream. The objective of the suit was to protect Dead Horse Creek from irrigation runoff into the stream.

The primary issues addressed in the lawsuit were risks to the surface water in Dead Horse Creek and the possibility that the effects on the stream might not be mitigable. A specific concern was that, if the lower clay layer allowed
leakage, pumping for irrigation in late summer might reduce flows in Dead Horse Creek, with disastrous effects on the trout.

Many officials from Minnesota’s Department of Natural Resources and Pollution Control Agency expressed concern about the Triple J proposal and suggested that an Environmental Impact Statement be prepared. But the Minnesota Department of Agriculture instead worked with Triple J Farms to modify its proposal, and the MDA accepted a few changes to protect the stream. Decision-makers within the MDA determined that the project did not warrant an EIS in spite of dozens of statements to the contrary by other officials.

Although Offutt, in the end, does not farm on this site, granting the permit was a signal for other irrigation projects in the area to proceed.

In 1995 another suit was filed by Trout Unlimited, Inc., the Minnesota Center for Environmental Advocacy, and the Mississippi Headwaters Audubon Society regarding a water permit R.D. Offutt Co. had requested in order to provide water for its expanded potato processing plant. Annual water needs were projected at 556 million gallons. The plaintiffs claimed that water levels in the Straight River would be lowered when Offutt pumped water from the aquifer for the plant. A settlement was reached the day before the new plant started producing french fries for McDonald’s. Company officials agreed to drill a much deeper well, into the lowest aquifer, and to submit to monitoring by the DNR. In addition, Offutt agreed to provide $115,000 to the environmental groups: $15,000 went for legal fees and the remaining $100,000 was contributed to the Pineland Clean Water Project study.

have driven many small farmers out of farming.

ConAgra is one of the top dogs in the business of corporate farming and the marketing of food. It is the second largest food manufacturing company in the United States behind Phillip Morris, and an estimated six cents of every dollar Americans spend for food goes to ConAgra. ConAgra’s empire ranges from full menu availability for a Thanksgiving dinner to its position as the second largest beef packer, third largest cattle feedlot operator, and largest turkey and sheep grower and butcher in the country. ConAgra exemplifies the concentration in agriculture underway in America, much of which has had significant adverse effects on small farmers.

ConAgra’s dominance in United States and world markets has led as well to tangles with the law on issues of price fixing, labor violations, pollution fines, and other “not so nice neighbor” practices. Not surprisingly, it has had some legal problems.

Environmental Problems

ConAgra and DuPont agreed to pay a total of $1 million to settle Environmental Protection Agency allegations that they wrongfully distribute a contaminated crop production product, Benlate, a weed killer known as atrazine. [Wall Street Journal, 6 October 1994]

ConAgra was one of four companies that agreed in 1990 to pay a total of $69.5 million to clean up contaminated groundwater near a former Beatrice facility in Woburn, Massachusetts. [see movie: A Civil Action]

Consumer Recall

ConAgra recalled 228,000 packages of Healthy Choice cheese loaf because of potential health risks. [Wall Street Journal, 24 November 1992]

Labor Violations

About 100 undocumented workers were arrested in a raid at ConAgra subsidiary Montfort’s Grand Island, Nebraska, plant and were deported. In all, 307 illegal immigrants, mostly from Mexico, were arrested. [USA Today, 4 September 1992]

ConAgra agreed to pay $100,000 in fines and make $50,000 in improvements to settle charges of safety problems at the Swift-Ekrich turkey plant in Detroit Lakes, Minnesota. That plant was closed almost within a year of those fines, causing
the layoff of an estimated 500 workers. [Kinder, Lydenberg, Domini and Co., October 1992]

ConAgra was fined $30,000 for "willful" violations of federal overtime standards at its St. Joseph, Missouri, pork plant and its Des Moines, Iowa, beef plant. OSHA investigators found that 14 percent of the plant's 550 production force alone had a cumulative trauma disorder in 1988. During 1987 and 1988, they said 162 cumulative trauma disorders resulted in 38 surgeries. [Des Moines Register, 1 October 1989]

Farm Practices

A federal court jury in Alabama awarded some 300 southern Alabama and northern Florida poultry growers nearly $12 million after being cheated by ConAgra on the weight of their birds. The company's poultry-processing plant at Enterprise, Alabama, had deliberately made trucks seem heavier before they left the plant and then tinkered with the scales when they returned loaded to make the trucks appear lighter. Growers were paid on the basis of the weight difference. [Wall Street Journal, 9 October 1992]

Two years later, in 1995, ConAgra abruptly canceled poultry producing contracts with over 178 independent contract growers in the southern United States. [Enterprise Ledger, 16 November 1995]

Price Fixing

In 1993, ConAgra and Hormel Foods agreed to pay more than $21 million to settle their roles in a nationwide price-fixing case involving catfish. Evidence in the case included testimony of secret hotel meetings with lookouts and the use of cash for expenses to avoid creating a paper trail. [Wall Street Journal, 29 December 1995]

Lamb Weston/RDO Frozen

Expansion Timetable

August 21, 1980: Potato plant groundbreaking.

August 1981: Plant start up.

Fall 1981: Chef-Reddy in full operation, employing 139.


September 1988: Federal state inspection is opened.

1981-89: Third largest employer in Hubbard County with 243 employees. Production of 130 million pounds of potatoes.

May 1995: Plant doubles production capacity with second production line, 430 employees.


January 1998: Expansions begin. By end of year 510 people are employed at Lamb-Weston/RDO Frozen.

December 1999: Payroll exceeds $12 million.

The french fries produced each day at the Lamb-Weston/RDO Frozen processing plant in Park Rapids, if laid end to end, would reach all the way to Minneapolis.

Processing more than 800 million pounds of potatoes annually into french fries, tater tots, and hashbrowns, Lamb-Weston/RDO is the largest employer in Park Rapids. The plant is supplied by 68 truckloads a day of potatoes grown primarily within a 60-mile radius of Park Rapids. It is also the largest taxpayer.

With annual combined profits of billions of dollars produced by RDO Frozen and Lamb-Weston Enterprises and a personal wealth of over $300 million, Ron Offutt and associates are proud to announce their immense generosity to the local community.

"The company gives frequent donations to local non-profit organizations, including an annual $500 contribution to the Park Rapids scholarship fund...[and] the plant holds semi-annual french fry sales and donates the proceeds to the Park Rapids school district. In the event's six-year run, the plant has raised more than $60,000 for the school district." [Park Rapids Enterprise, Millennium Summary, 1999]

Monitoring Agricultural Activities

Conflict of Interest?

"We used to just try and do our own thing, and do everything according to the law. But with the added public opinion that has come on projects like this, we feel we need to do something to educate the people and work with them. Any time you get farming and agriculture together in a tourist area, you have the potential for clashes," said Larry Monico, R.D. Offutt Co. General Farm Manager, in an attempt to alleviate concerns about the potential effects of Offutt's practices. [Daily Journal, 14 June 1997]

"You have a clash between emotion and science and emotion wins out, at least in the short term. ... Chemicals are getting safer all the time. There are chemicals now you can drink and there are no side effects. On the other hand,
when they're $600 a gallon, you're not inclined to do so because it costs too much," said Minnesota Agricultural Commissioner Gene Hugoson in a 1998 interview with Minnesota Public Radio's Dan Gunderson. [Minnesota Public Radio, 12 May 1998]

There is a certain arrogance exhibited by both R.D. Offutt Co. representatives and the Minnesota Agricultural Commissioner in discussing the issues of contamination, the environment, and human health. There is, seemingly, a presumption that the public and those whose groundwater has been contaminated or whose land may be contaminated can somehow be taught that their perceptions are inaccurate, and that, in fact, both Offutt and the Department of Agriculture are actually the voice of reason and security.

This "of one mind" presentation of both the Department of Agriculture and the major agribusiness industries in the state is troubling, in particular when one considers that the Department of Agriculture is responsible for regulating and monitoring the industry.

Recently deceased State Representative Willard Munger expressed concerns about the relationship between the Department of Agriculture and industries. He said that the Department of Agriculture demanded oversight of aggregated chemical use with passage of the state Groundwater Protection Act. "They're responsible for monitoring because they demanded it be turned over to them. Stop and think a bit. Why did they insist we take that monitoring and regulation away from pollution control and give it to agriculture? You don't have to think very hard to realize why they wanted that done. It's a conflict of interest," said Munger in a September 27, 1999 interview with Dan Gunderson of Minnesota Public Radio.

That possible conflict of interest was quite obvious to the residents of Hubbard County's Mantrap Township. In 1992 the township board passed a local ordinance to restrict the aerial spraying of pesticides. When Offutt sued the township board, the Department of Agriculture intervened on Offutt's side.

In Otter Tail County similar concerns have been voiced. Donna Peterson, president of the Minnesota Lakes Association, points out that many counties do not have zoning ordinances that might prohibit conflicts in land and water use, such as those apparent in Perham, Glitterdal, Hubbard, Ponsford Prairie, and other regions. Increasingly, however, Congress has curtailed rights of local entities to regulate these issues [see "Land Use Legislation Clears Senate Panel," Star Tribune, 27 February 1998], while international trade agreements like the General Agreement on Tariffs and Trade and the formation of the World Trade Organization further curtail local control.

Researching Offutt enterprises is somewhat like tracking a quickly metastasizing cancer — it moves quickly, changing form and rendering its own trail obscure. Interviews with state officials responsible for regulating R.D. Offutt's enterprises often admitted to frustration in identifying and tallying landholdings used for Offutt-related production activities. Similar frustration was obvious in interviews with those who had attempted research into the potato conglomerate's interests. Again, it is like playing hide and seek with a set of sextuplets — you can never be sure what you are seeing.

As a consequence, in this report we can only offer a conservative description of Offutt's economic influence and the environmental impact of the conglomerate's potato production because of the difficulty in obtaining information from a myriad of federal, state, and county agencies. Undoubtedly, more information about Offutt holdings and activities remains undisclosed at this time. Herein lies a critical dilemma: the legal naming of corporate entities, subsidiaries, affiliates, and partnerships creates opportunities for corporate powers to mask their activities, and in this particular case, to challenge public enforcement of laws regulating corporate farming in Minnesota.

The Corporate Farming Law of Minnesota is intended to support family farmers, and, in its own way, discourage corporate agribusiness. While one of the most progressive laws in the country in this area, the law's loopholes seem to gut the intent of the law. The preamble to the law states, "Purpose: The legislature finds that it is in the interests of the state to encourage and protect the family farm as a basic economic unit, to insure it as the most socially desirable mode of agriculture production, and to enhance and promote the stability and well being of rural society and the nuclear family."

The law's purpose is clear: Any incorporated business which is not family owned is barred from owning farmland or farming in the state — except if they run a poultry operation or set up as an authorized farm corporation. However, the problem is obvious: huge "family-owned businesses" like Tyson's or Offutt are exempt, and while they are technically "family farms," they operate, clearly, as corporate farms. The present interpretation of the law means that Ronald Offutt's "family farm" could include all holdings listed under his name, or perhaps those of his close friends, and wholly owned subsidiaries. Ronald Offutt's enterprises are held in a variety of structures which carefully dance within the Corporate Farming Laws of Minnesota and elsewhere. Lee Egerstrom, a reporter for
the St. Paul Pioneer Press writes, "Strung together with vertical, horizontal and line extension business expansion, Offutt uses all major forms of ownership structures. The parent company remains privately held to keep title to land, complying with anti-corporate farming laws in several states; RDO Equipment is publicly traded, potato processing plants are co-owned with joint ventures and Ag Capital is a cooperative business structure. 'We don't do anything other people don't do,' Offutt said. 'We just do more of these things.'" [St. Paul Pioneer Press, 30 Nov. 1997]

The reality is, explains Mark Schultz of the Land Stewardship Project, that "Any operation, like Offutt, that consolidates so much land into one ownership entity, that is virtually unaccountable to the community, and that operates almost entirely on hired labor, should not be considered a family farm. Since such industrial operations, like Offutt, soak up available credit, dominate markets, to the extent of excluding family farm products and the control of regional land transactions, they are deadly to family farms." [Schultz, 16 November, 2000]

Conclusion

"Over the past 40 years, crop losses have remained constant despite greatly increased pesticide use, in large part because of changes in agricultural practices and standards and because of pests' remarkable adaptability. Armed with a chemical arsenal, farmers abandoned common-sense agricultural practices that had been used for millennia to discourage pests, including crop rotation, carefully timed planting, crop diversity, and field sanitation. During this period, farm operations have moved into areas where pest problems had previously made farming infeasible.

"Consumers, food processors, wholesale, and supermarkets increasingly demand picture-perfect produce that is free of cosmetic blemishes caused by insects, fungus or disease. Such flaws are not harmful, nor do they make a fruit or vegetable less nutritious, but expectations for picture-perfect produce greatly increases pesticide use. In oranges, for example, 60 percent to 80 percent of the pesticide use takes place to improve the cosmetic appearance of the skin. It can't be argued, in this or any similar case, that pesticide use is necessary to achieve more or better food." [Colburn et al, 1996, pp. 228-229]

When Offutt suffered a major potato crop failure from late blight in the fall of 1999, one could not help noticing the historical irony of these circumstances. One hundred and fifty years after the great Irish potato famine, the largest potato producer in the world faces the same blight.

To avoid the excessive use of chemical additives and the continuing Catch 22 of new pests, pest tolerance, and new chemicals, Offutt should learn from Indigenous peoples and select a mix of plant varieties most tolerant to disease and insect effects, even if there is a net ton loss. Avoidance of monocultures will enhance Offutt's ability to grow potatoes sustainably.

If Offutt chooses to mitigate these problems through the use of genetically engineered crops, they should be so labeled. And local residents and consumers should be provided with some analysis of the potential impact.

The state of Minnesota and the EPA must carefully evaluate the combined impact of the chemicals used by Offutt and other similar enterprises in the region. There should be a ban on the use of any new chemicals without careful combined testing, and the present chemicals metolachlor, alachlor, atrazine, maneb, and thiodan should be considered for speedy removal from use, based on the present levels of ecological contamination and visible effects to frog populations.

In January 1998 a group of scientists, policymakers, lawyers, and environmentalists met at Wingspread in Racine, Wisconsin, in response to their growing concerns about contamination. They developed and endorsed the Wingspread Statement of the Precautionary Principle:

The release and use of toxic substances, the exploitation of resources, and physical alterations of the environment have had substantial unintended consequences affecting human health and the environment. Some of these concerns are high rates of learning deficiencies, asthma, cancer, birth defects and species extinction; along with global climate change, stratospheric ozone depletion and worldwide contamination with toxic substances and nuclear materials.

We believe existing environmental regulations and other decisions, particularly those based on risk assessment, have failed to protect adequately human health and the environment.

Therefore, it is necessary to implement the Precautionary Principle: When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof.

The process of applying the Precautionary Principle must be open, informed, democratic, and must include potentially affected parties. It must also involve an examina-
Guided by the Precautionary Principle, we offer the following recommendations:

- To protect our aquifers, the moratorium on new withdrawal permits should be extended for at least five years. Considering that worldwide drawdown rates of aquifers far surpass recharge rates and that little knowledge is available about northern Minnesota's aquifers, we suggest that a danger lies in presuming that continued high levels of withdrawal from the superficial and deep aquifer will cause little if any harm to critical water supplies. We also suggest raising the price of water withdrawal permits and monitoring actual withdrawals, instead of presuming an "honor system."

- The Minnesota Department of Agriculture has an inherent conflict of interest in both promotion of present production methods and enforcement of use. In addition, without significant background data, as in the case of aquifer movement, the agency has only limited information with which to work. The enforcement of pesticide use and/or misuse and contamination issues should be moved to the Minnesota Department of Environmental Quality.

- The U.S. Environmental Protection Agency ought to review standards which limit nitrate and chemical contamination and, as a preliminary step, bring those standards into alignment with European standards. The EPA ought to weigh in on the side of safety. While each individual standard may be within a presumed precautionary level, untested combinations of chemicals, as evidenced by the frog studies, are likely to pose additional risks. The combination of these chemicals must be tested to gain more accurate assessment of threats to public and environmental health.

- The Minnesota Corporate Farming Law does not adequately address the landholding patterns and corresponding dominance of a corporation like R.D. Offutt Co., whose individual private holdings, combined with leased holdings and other various related holdings, make Offutt enterprises a dominant force in transforming the economy and ecology of regions in which the corporation operates.
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