The Economic and Production Potential of Metro Farmland: Lessons from Surrey, British Columbia


Brief written by Tracy Lerman

**The issue**

Surrey, British Columbia, is Canada’s twelfth largest and fastest growing city, and has seen significant farmland loss due to population growth and suburbanization. In the early 1970s the provincial government created the Agricultural Land Reserve (ALR) to protect the province’s farmland from nonfarm uses. However, Surrey’s agriculture lands remain under threat, and the authors concluded that non-agricultural land use within the ALR is the greatest contributor to “effective farmland loss.” In this study they document the current status of ALR land underutilized for agriculture and estimate the economic and food-supply impacts if these lands were converted to small-scale farms.

**Study context and objectives**

Surrey is in a region with a rich agricultural history, lying amid two river valleys that provided fertile land for the pioneer families who settled and farmed the area in the late 1800s. Increasing suburbanization in Surrey, spurred by new highways connecting the city to the Vancouver metropolitan area in the 1940s, led to subdivision of substantial amounts of farmland into small, residential parcels. This development continued until 1973, when the provincial government passed the Agricultural Land Commission Act. This law protected threatened farmland across British Columbia by creating the “ALR,” a provincial zone in which agriculture is recognized as the priority use, farming is encouraged, and non-agricultural uses are controlled. In Surrey 21,713 acres of prime agricultural land were designated as ALR, composing about 25% of the city’s total land base.

Today, Surrey is strongly committed to preserving farmland and supporting the local agriculture economy. Prior to the ALR’s creation, much of Surrey’s farmland had already been subdivided into relatively small (5–20 acre) parcels. Even after the ALR’s creation, continued population and suburban growth pressure and speculative land investment resulted in the real estate value of ALR land being much higher than its agricultural use value, particularly at the rural-urban interface. The ALR’s establishment has not curtailed speculative land holding or non-agricultural use. Thus the ALR in Surrey contains a proliferation of rural residences and other non-agricultural land uses, and the number of farms in the municipality has declined by 30% over the past 20 years. In 2004 the municipal government passed a law requiring two units of comparable land be returned to the ALR for every one removed. This greatly curtailed land withdrawal, but a significant quantity remains underutilized for agricultural purposes. The municipal government wants to understand which lands are underutilized and why, and their potential for food production. This study’s objectives were to identify historic trends and patterns of Surrey ALR land loss; ascertain quantity and quality of Surrey’s underutilized ALR lands; and estimate food production, income-generation, and job-creation potential if these lands were used for small-scale agriculture.

**How the study was conducted**

To assess historic loss of land from Surrey’s ALR, the authors reviewed ALR exclusion applications and compared Surrey’s historical and contemporary zoning maps. To assess quality and quantity of Surrey’s underutilized ALR lands, they did an inventory of underutilized parcels, collecting data on structures, current primary use, land available for farming, type
of agriculture use the land could support, and remediation necessary to ready the parcel for agriculture. To calculate economic and job creation potential, they analyzed yields, prices, and costs in 12 scenarios, using three land apportionments (1 acre; 279 acres, which is all underutilized ALR land owned by the City of Surrey; and 3,339 acres, which is all underutilized ALR land in Surrey) and four crop mix schemes (highly diversified, labor intensive, highly profitable, and extensively consumed crops). To calculate food production and consumption satisfaction capacity on ALR land, they used data for per capita consumption, crop yield, population, and available land.

Results and discussion

- **ALR land loss assessment**
  ALR records predating 2006 only included land exclusion applications, not those for nonfarm use, so the authors could only assess historical trends in ALR land exclusion and not in nonfarm use. They reviewed available records and found that since the creation of the ALR, only 1% of Surrey’s ALR land base had been lost through exclusion. Most loss occurred before enactment of the policy requiring two acres of land be returned for every acre removed. They did note all exclusion applications were made on the urban-rural interface, suggesting this part of the ALR is most at risk for nonfarm use and speculative valuation.

- **Currently underutilized ALR lands**
  The authors observed a high incidence of non-agricultural ALR land use, finding 27% (6,043 acres) of Surrey’s ALR is underutilized for agriculture. Of that, 90% is privately owned, small parcels. Most of the remaining 10% is public park land. Certain buildings and structures, golf courses, and ecosystem and infrastructure services make some of that land unsuitable for agriculture and were subtracted from the 27%, leaving 3,339 acres of underutilized ALR available for farming. Reclamation of some kind would be needed on 1,237 acres.

- **Income generation and job creation potential**
  The authors concluded that farming a one-acre parcel could create, on average, up to 1.29 jobs, and CA$31,000–CA$54,000 in gross revenue or CA$14,000–CA$37,000 in return to owner-operator. Crop choice at this scale greatly affects profitability, with the higher value crop scenario bringing in more than double the return of the highly diversified crop scenario. Utilizing all the publicly owned, underutilized ALR land (279 acres) for small-scale production could create 100–136 full-time-equivalent jobs and potentially generate up to CA$15 million in gross revenue to Surrey’s economy. Converting all the underutilized land in the ALR to agriculture could create 1,188–1,623 jobs and generate up to CA$183 million in gross receipts.

- **Potential for food production and consumption satisfaction**
  Because Surrey has limited processing and storage infrastructure, the authors based their calculations on food supply for six months of the year, the length of Surrey’s growing season. Their analysis showed that the underutilized ALR lands could produce 100% of the city’s consumption of 27 crops and animal products for half the year.

Conclusion

The authors’ initial goals were to assess agricultural land loss in Surrey’s ALR in order to assist land use planners and policy-makers in British Columbia and other North American cities in protecting and enhancing agriculture. They assumed exclusion was the primary mechanism for farmland loss in the ALR. They learned, however, that simply protecting farmland does not ensure it will be farmed. They also discovered that the ALR has immense potential to produce food for its residents and contribute to the local economy.

Given current systemic barriers, governments must support efforts to cultivate local and regional food systems. In Surrey’s case, transitioning land to agriculture remains a significant challenge policy-makers must address. The authors offer several recommendations, including converting city-owned, underutilized ALR lands to agriculture; regulating against non-agricultural use on protected farmland; and supporting farmer training and education. The authors suggest that their study provides a model for similar studies in municipalities across North America.

The Journal of Agriculture, Food Systems, and Community Development is published by the Food Systems Development Project of the Center for Transformative Action, an affiliate of Cornell University. See the JAFSCD website at www.AgDevJournal.com.

JAFSCD is sponsored by:

- Johns Hopkins University
- KPU
- UC Rural Development
- The University of Vermont

Contents copyright © 2014 by New Leaf Associates, Inc.