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The Landscape of Food Production

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The Landscape of Food Production

by Nathan McClintock, Jeremy Young, Jacinto Santos, Taren Evans,
and Mike Simpson

The celebration of the 40th anniversary of Senate Bill 100 provides us with an excellent opportunity to reflect on metropolitan Portland's agricultural landscape. The landmark legislation passed in 1973 has helped to protect countless acres of the region's precious agricultural soils—some of the richest known in the world—from development. Perhaps most importantly, however, the legislation has helped to preserve the important bond between the region's urban areas and their hinterland, and to secure the region's local food system. A renewed interest in growing food in one's own backyard, however, has shown in recent years that urban dwellers need not rely only on the surrounding countryside for locally grown produce. As this edition of the Periodic Atlas will show, food production today occurs not only outside the urban growth boundary, as it has for the last few decades, but within it as well—and in some cases, in the very heart of the city. Through this series of maps, we attempt to paint a picture of food production in Portland and the surrounding region in broad brushstrokes. The maps are by no means exhaustive, but rather hint at the variety of food production taking place.

Maps of the region's food producing farmland illustrate the effectiveness of Oregon's efforts to control urban sprawl over the last four decades and to maintain a productive agricultural landscape

in the urban periphery. According to the USDA, there are 963,843 acres, or roughly 1,500 square miles, of agricultural land in Clackamas, Clark, Columbia, Marion, Multnomah, Washington, and Yamhill counties. This amounts to about a quarter of the total land area. About 64% of it is cropland, while about 12% of it is pastureland (not including fallow cropland or woodland). Almost half of the region's agricultural land is irrigated. Certified organic agricultural land and land transitioning to organic amount to about 1% of the region's agricultural land. Median farm size across the region ranges from 15 acres in Clackamas, Multnomah, and Clark Counties, to 23 acres in Columbia County.

According to the last USDA Agriculture Census, over 14,000 farms in the seven counties pulled in more than \$1.7 billion in agricultural sales. Not all of this can be attributed to food production, however. More than half of the revenue came from nursery, greenhouse, floriculture, and sod production alone. Indeed, this is the highest earning commodity group in Clackamas, Marion, Multnomah, and Yamhill Counties. Grass seed production also dominates the agricultural landscape in the region.

Since the focus of this series of maps is food production, we have excluded non-edible crops such as Christmas trees, ornamentals, and grass seed, even though

Data source: RLIS, US Census Bureau,
USDA National Agricultural Statistics Service

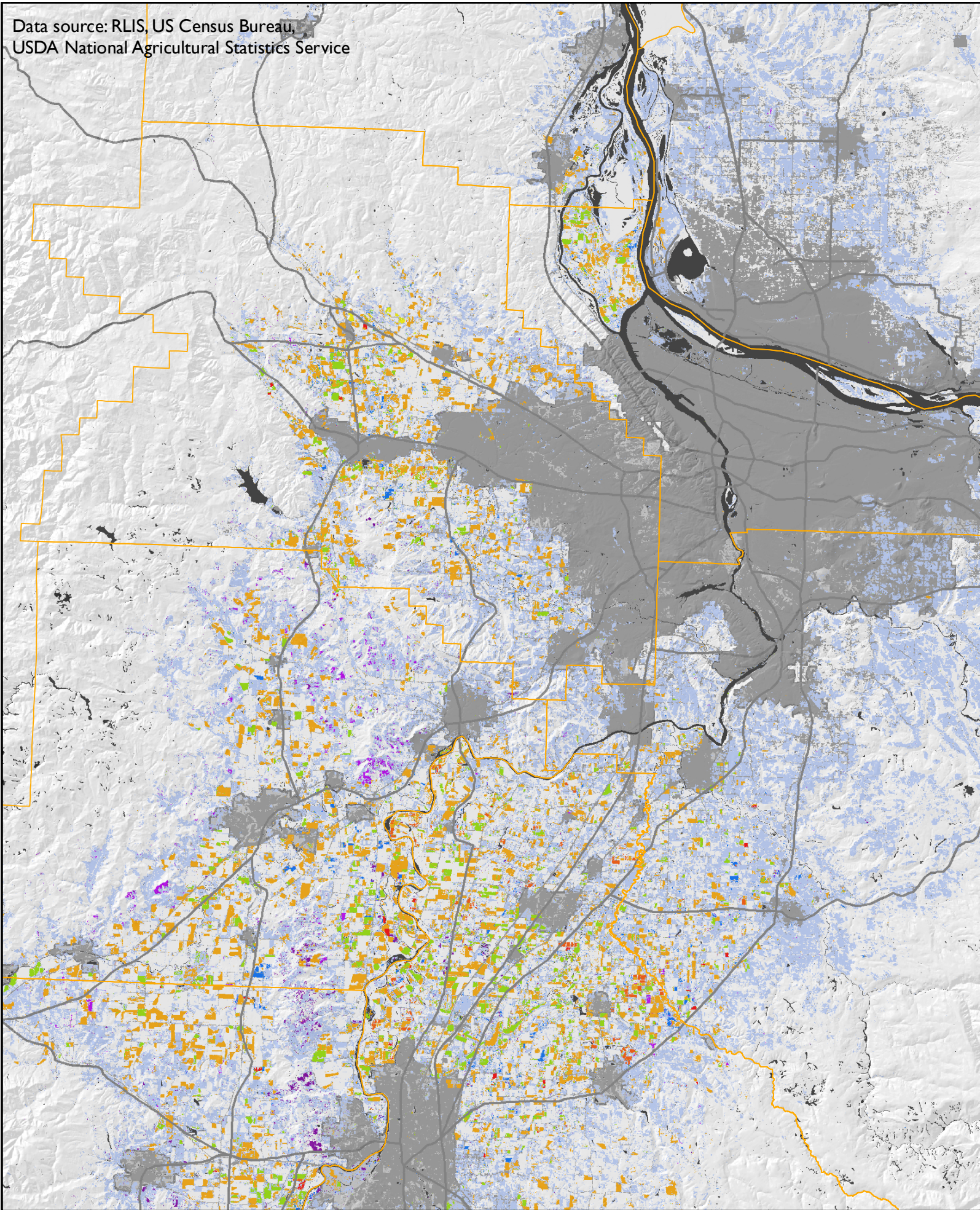


Figure 1

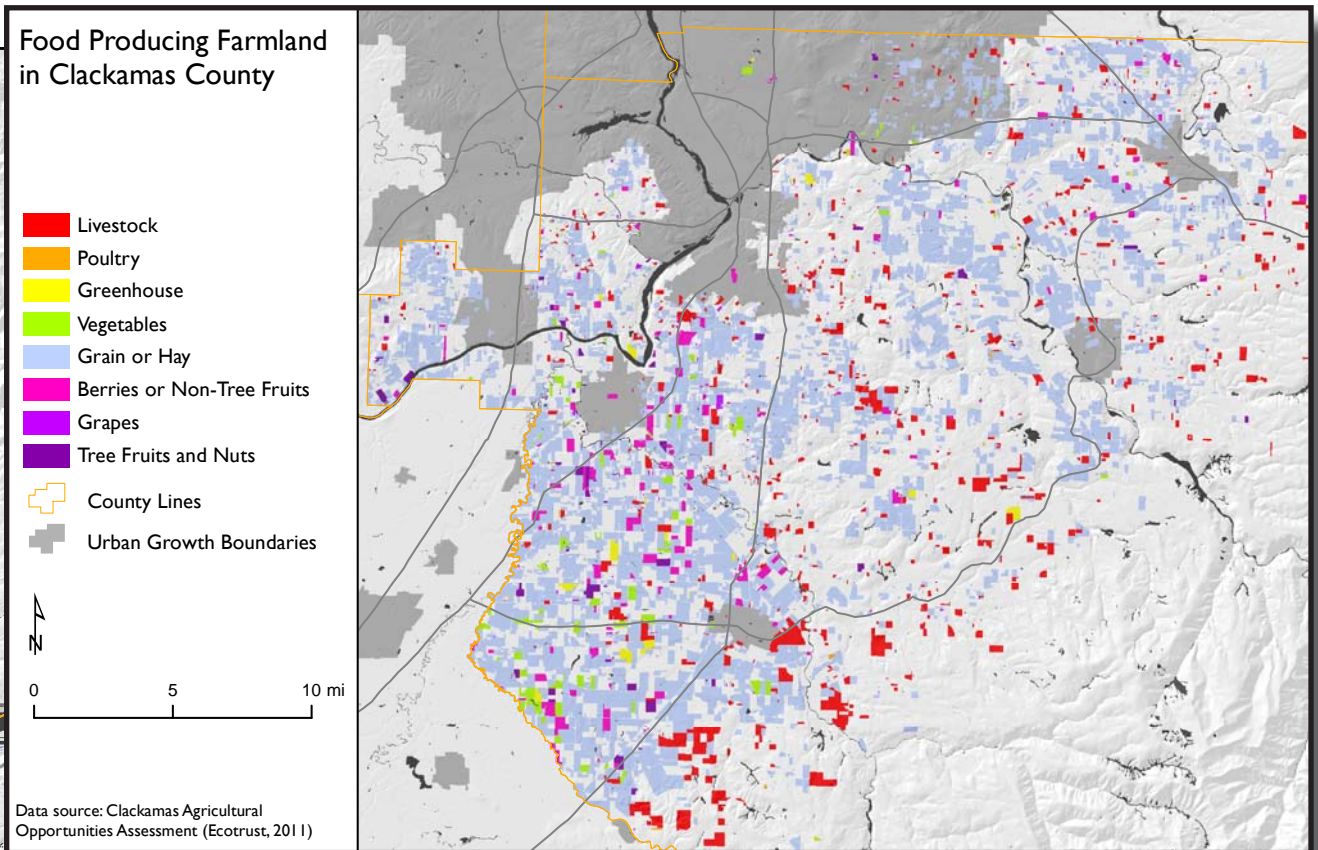
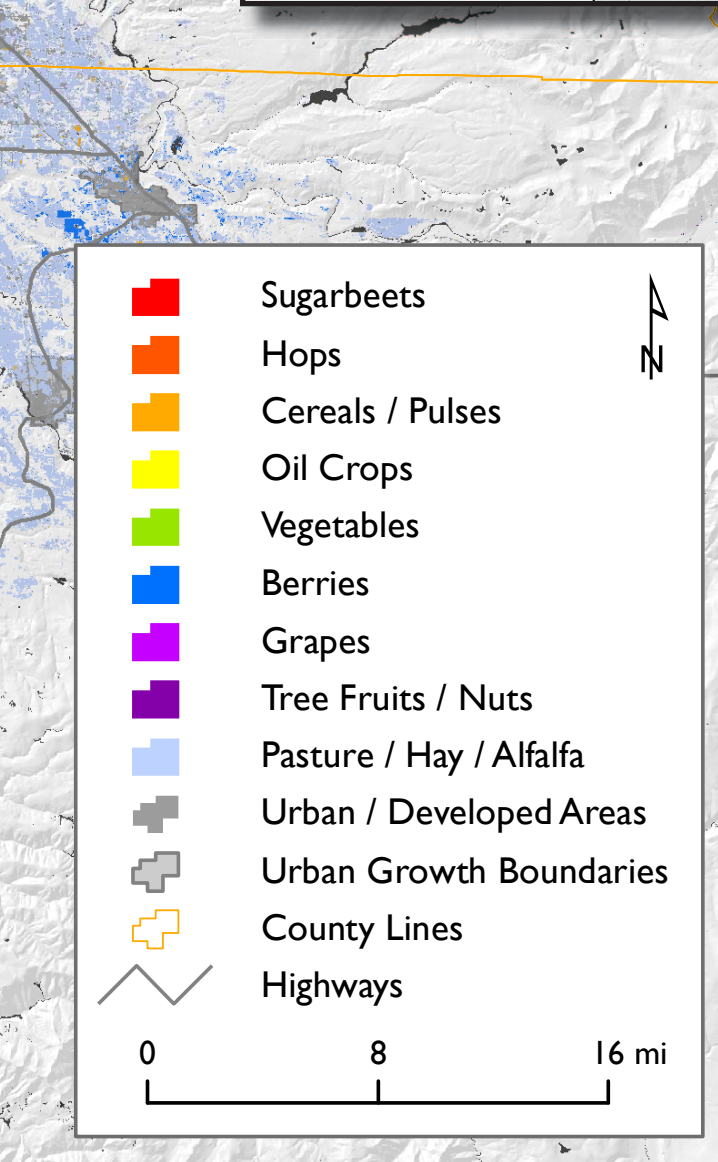


Figure 2

they are the predominant feature of the region's agricultural landscape, focusing instead on food and oilseed crops (figure 1). We have also included pasture, hay, alfalfa, as these are central to livestock production. In Clackamas County (figure 2), for example, nearly 25,000 acres are devoted to forage production (hay and silage). Indeed, animal agriculture plays an important role in the region. Roughly 6,000 operations sold more than \$260 million in animals and animal products. In Clark County, milk and dairy products, poultry and eggs are the biggest earner, while in Columbia County, cattle and calves top the list.

Vegetable production sales amounted to only \$90 million at the time of the last census, or about 6% of the region's total crop sales. Only about 4% of the region's agricultural land is dedicated to vegetable production.

In addition to selling directly to consumers at farmers markets, a growing number of vegetable farmers rely on a community-supported agriculture (CSA) model. Under this arrangement, consumers purchase a share or subscription at the beginning of the season in return for a weekly box of



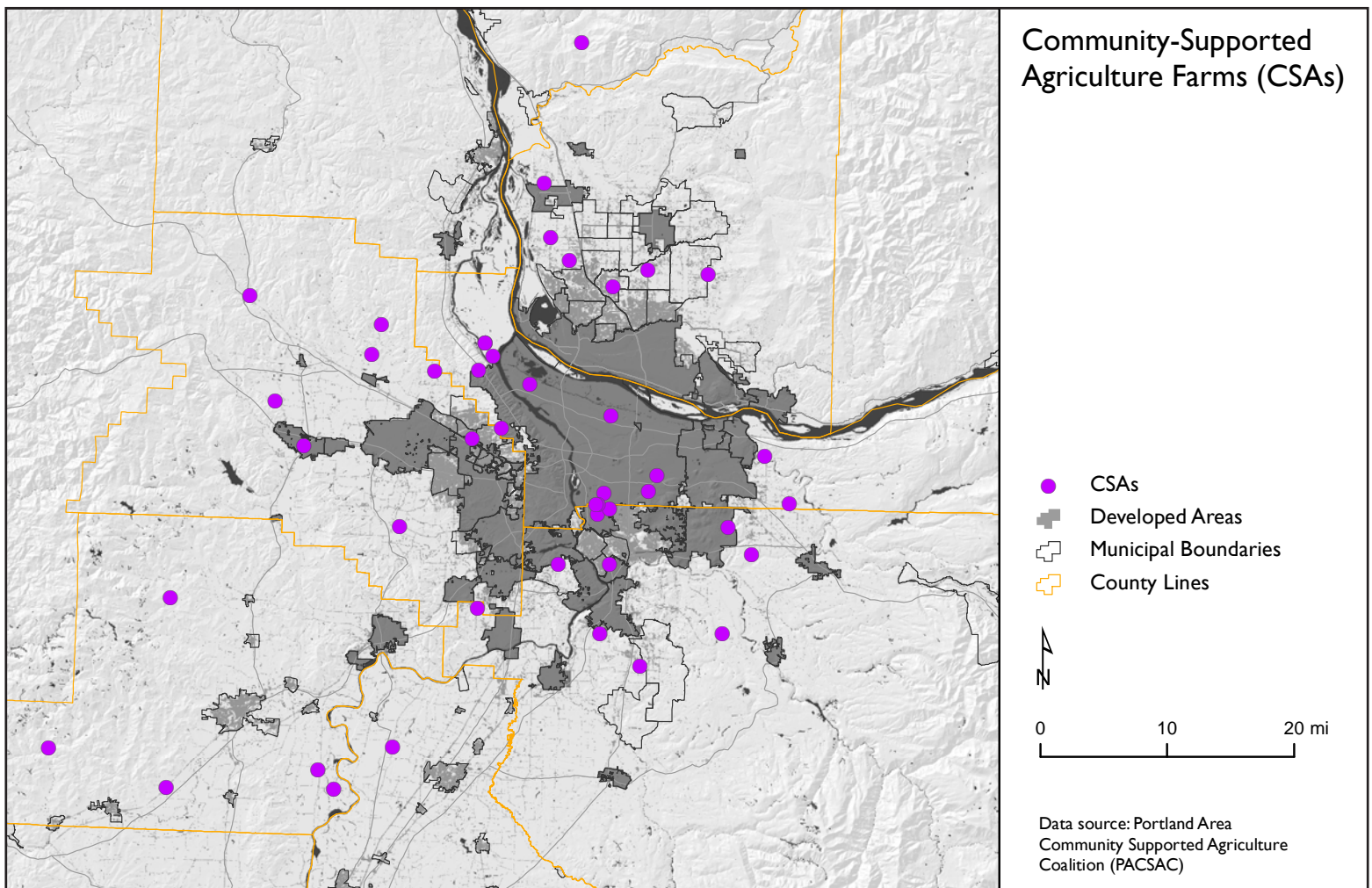


Figure 3

produce during the growing season. According to the Portland Area CSA Coalition, at least 45 CSAs provide Portland residents with shares (figure 3). A Portland Bureau of Planning and Sustainability survey of 40 of these CSAs sold more than 4,300 shares in 2011, grossing just over \$2 million.

The region’s agricultural production isn’t just limited to its farmland, however. A range of agricultural activities occurs within the boundaries of the region’s municipalities. Urban agriculture takes a variety of forms. Community gardens also dot the metropolitan landscape. Portland Parks and Recreation manages 47 community gardens within the city limits (figure 4). Surrounding municipalities such as Vancouver, Beaverton, Hillsboro, and Gresham, each operate a small handful of

gardens. Most community gardens outside of Portland are operated by non-profit and religious organizations, notably churches. Within the Portland city limits, we identified at least 39 non-profit organizations and churches engaged in urban agriculture, in the form of community gardens where individuals tend their own allotments, collective gardens where groups are responsible for garden management and harvest, as well as a number of educational and demonstration gardens.

Commercial agriculture is not limited to farms outside the urban growth boundary. Within the City of Portland alone, we were able to identify 7 CSAs, market farms or gardens, and commercial greenhouses or nurseries. Several of the city’s non-profit organizations also engage in market and CSA sales.

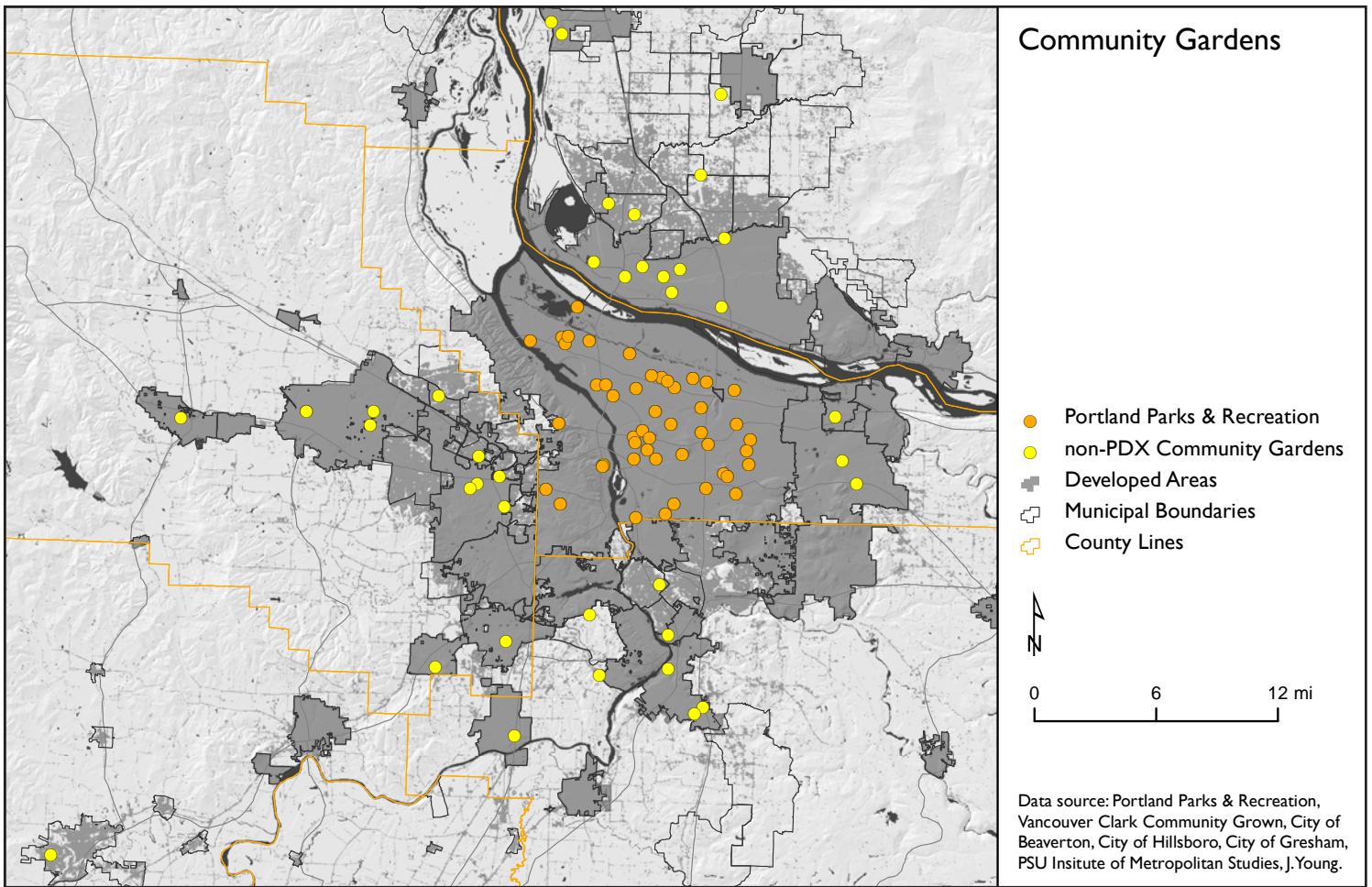


Figure 4

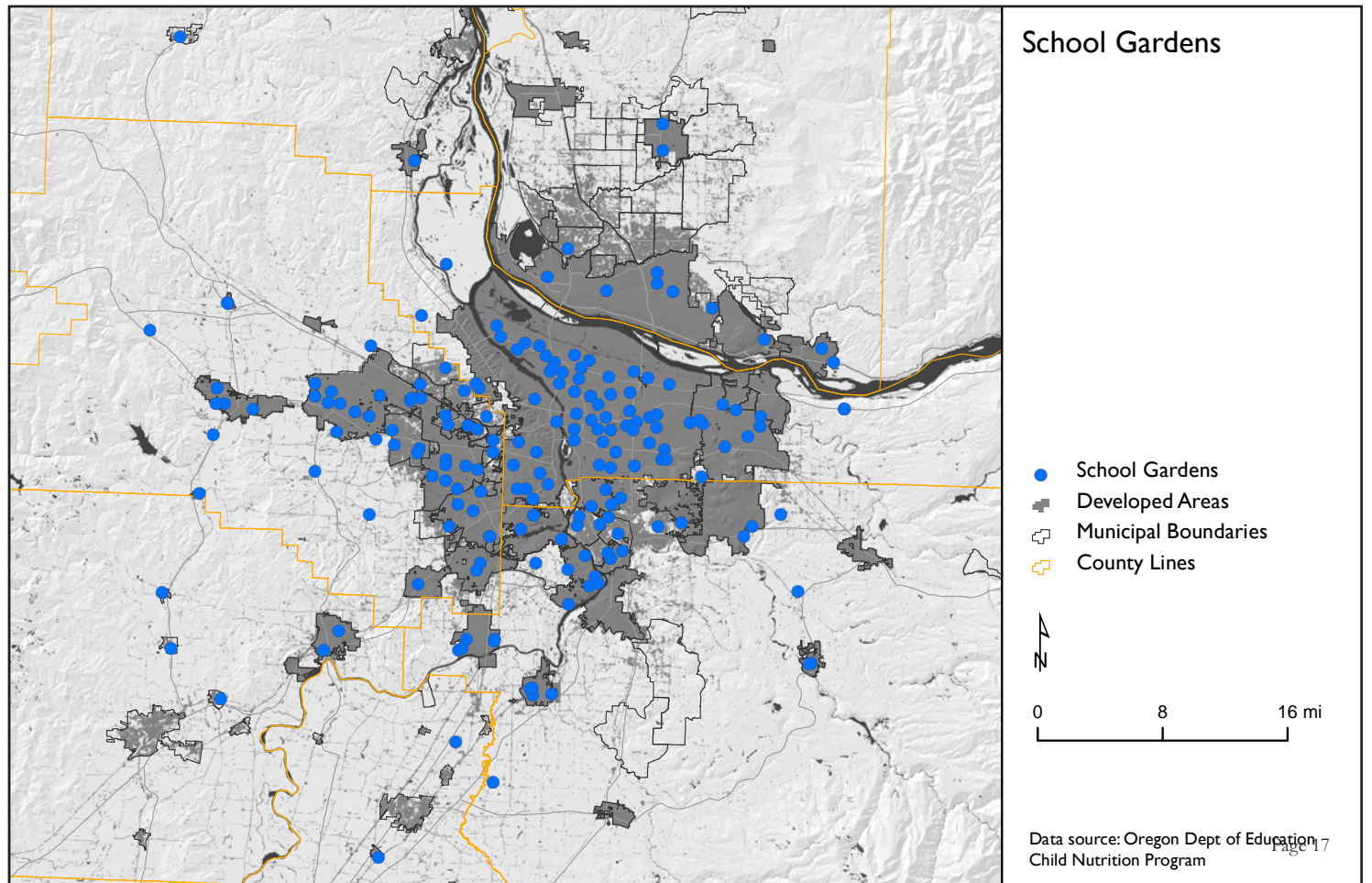


Figure 5

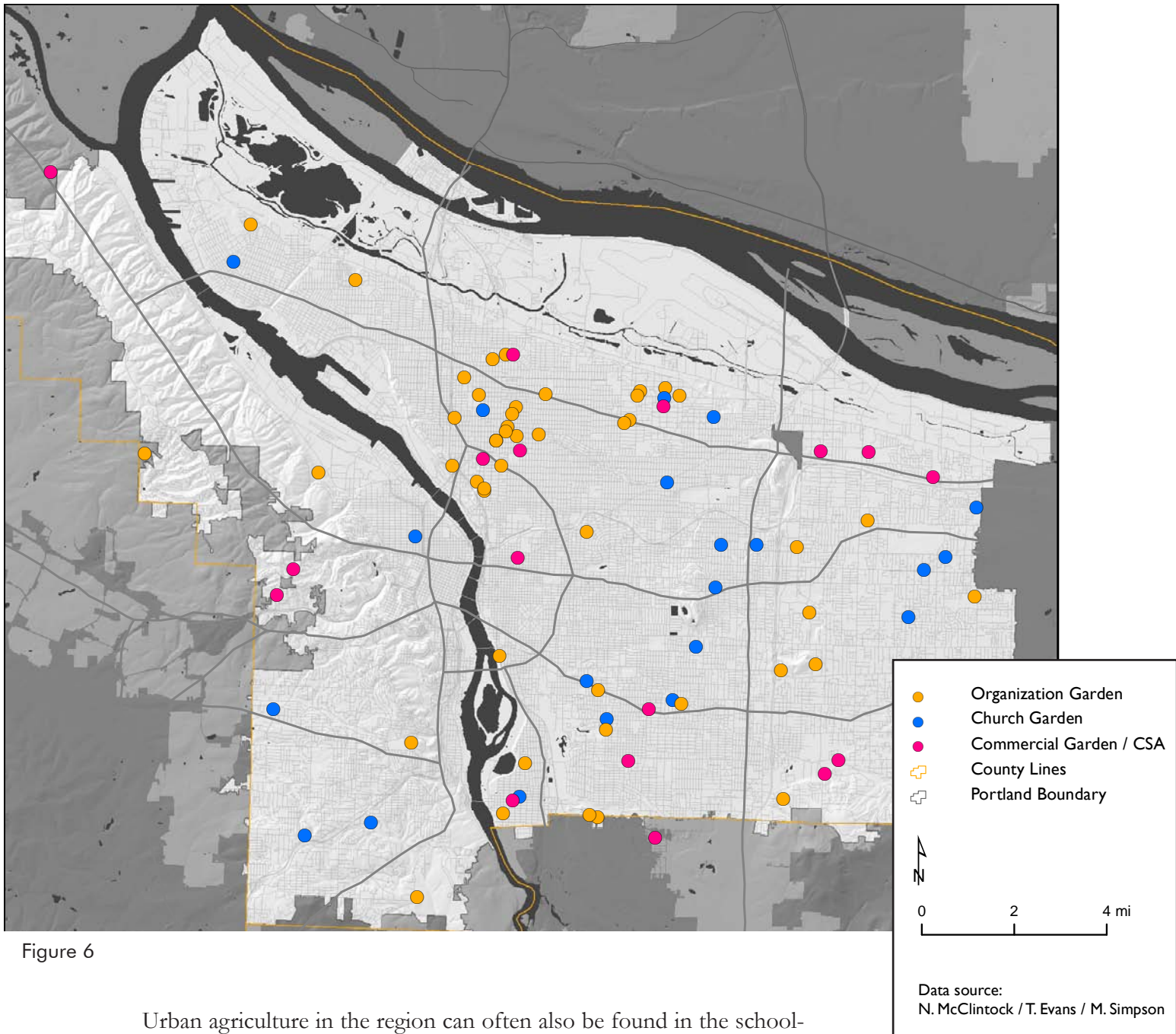


Figure 6

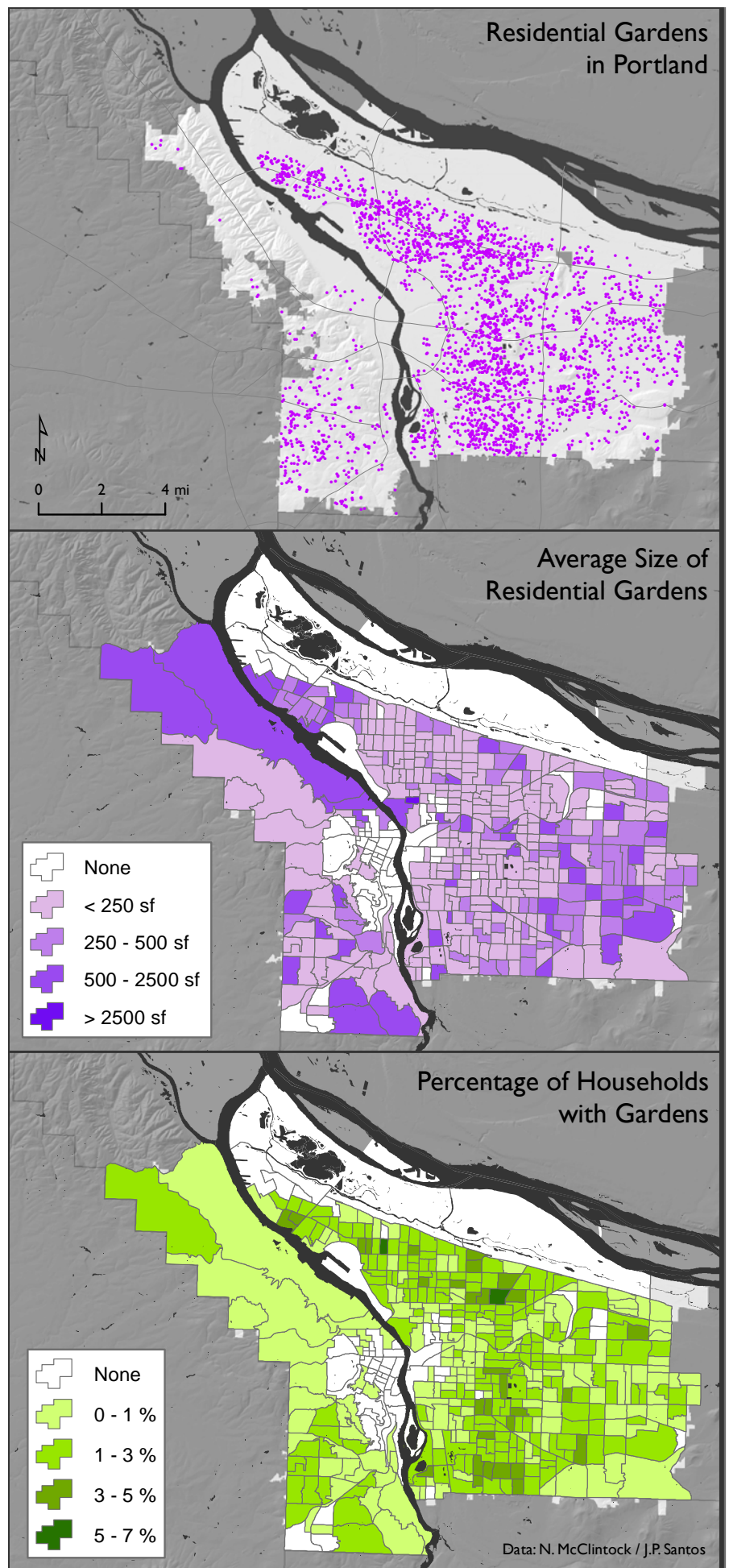
Urban agriculture in the region can often also be found in the schoolyard. According to the Oregon Department of Education Child Nutrition Program and Vancouver Clark Community Grown, there are at least 208 gardens in the region’s elementary, middle, and high schools. There are at least 61 gardens in Portland schools alone, the majority of which (85%) are located at elementary schools (figures 5 and 6).

Residential yards are also home to a considerable amount of food production in the metro region (figure 7). Over the last several months, we have attempted to identify residential gardens in Portland using Google Earth. Overall, we were able to identify more than 3,000 gardens in the city, totaling nearly 20 acres. We should note, however, that this is likely an undercount. While most people do not plant gardens in the shade, canopy nevertheless obscures some gardens. Nevertheless, clear spatial patterns

appear at the city-scale. Average garden size is larger in census block groups in East Portland than in those west of Interstate 205, where lot sizes are larger on average. Interestingly, however, the percentage of households with gardens is higher west of 205, notably in inner Southeast and Northeast, and North. We are currently developing a mail survey to validate our mapping efforts and to help us determine a margin of error. The survey will also provide us insights into the demographics and motivations of individual gardeners, as well as how much food they produce and how much of it they give away, barter, or sell.

There are several other forms of food production and provisioning that we have not mapped here but that merit further analysis. What is the scale and distribution of livestock ownership, beekeeping and honey production in the greater Portland metropolitan region? What is the contribution of urban foraging, game hunting, and fishing to the region's food system? What is the extent of greenhouse production of fruits and vegetables? What about rooftop gardens and aquaponic operations? And who is engaged in this work? As the 2012 Agriculture Census data becomes available over the next year or two, we hope to be able to answer some of these questions. But as these maps show, much of the food produced in the region falls outside of the purview of the census. **M**

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Data: N. McClintock / J.P. Santos

Figure 7