From:	Bart Catching
To:	Jude Wait
Cc:	Jeffrey Delapena; Lauren Henricksen; Sue Marshall; Diane Dempster; Dillon Haggerty; Mo McKenna; Ann Foster; Monica Zazueta; Gabriela Mendoza Ewing; Edward Hamilton Rosales; Madeline Brooks; Danielle Jochums; Jose Alvarez; Oliver Orjiako; Wil Fuentes; Matt Little; joezimm@live.com; justin@burgerfamilyfarm.com; O"Dea, JUSTIN; zoppenheimer@clarkcd.org; Holly Hansen; Hector Hinojosa
Subject:	RE: DATA issues Ag Plan & Advisory Commission public comments
Date:	Monday, September 22, 2025 9:36:05 AM

Jude,
We have received your comments and attachments.
They will be included in the record for the comp plan and linked to the upcoming Agricultural Advisory Commission meeting.
Thank you.

Bart Catching
Planner III
COMMUNITY PLANNING

564.397.4909

From: Jude Wait <wellsavellc@gmail.com>
Sent: Monday, September 22, 2025 8:00 AM
To: Bart Catching <Bart.Catching@clark.wa.gov>
Cc: Jeffrey Delapena <Jeffrey.Delapena@clark.wa.gov>; Lauren Henricksen <Lauren.Henricksen@clark.wa.gov>; Sue Marshall <Sue.Marshall@clark.wa.gov>; Diane Dempster <dianedempster36@gmail.com>; Dillon Haggerty <dilishfarm@gmail.com>; Mo McKenna <momoflowerfarm@gmail.com>; Ann Foster <annfoster5093@gmail.com>; Monica Zazueta <zazuetamonica0813@gmail.com>; Gabriela Mendoza Ewing <info@pasitosgigantes.org>; Edward Hamilton Rosales <ed.rosales@wiafs.com>; Madeline Brooks <mbrooks@triangleassociates.com>; Danielle Jochums <djochums@triangleassociates.com>; Jose Alvarez <Jose.Alvarez@clark.wa.gov>; Oliver Orjiako <Oliver.Orjiako@clark.wa.gov>; Wil Fuentes <Wil.Fuentes@clark.wa.gov>; Matt Little <Matt.Little@clark.wa.gov>; joezimm@live.com; justin@burgerfamilyfarm.com; O'Dea, JUSTIN <justin.odea@wsu.edu>; zoppenheimer@clarkcd.org; Holly Hansen <holly@secondmilemarketplace.com>; Hector Hinojosa <vanwametro.47026@gmail.com>
Subject: DATA issues Ag Plan & Advisory Commission public comments

Hi Bart and Jose, etal,

These additional "public" comments and attached data all, in various ways, pertain to the Ag Advisory Commission, the Ag Land Study, and the Comp Plan. Much of the information has been presented, circulated, and/or submitted before, and deserves to

inform the future--including further demonstrating the need for updates to present relevance. For the record:)

7 Attachments:
RE: AgLand DATA:

1. Attached" "WaitJ 2021-Chapt-4 CC Ag Profile" is a profile of Clark County Agriculture (Wait, 2021). Note the multiple sources of secondary data (USDA, ERS, WSDA, AFT)
2. An update to table 2 in Chapter 4: "Summary of AgLand Census 2012-2022 Data"
3. 2022 Clark County Census of Ag -- summary USDA Census data
4. "FSC 2013 Ag-Land Proposal to CC GMP" with a map of 80k acres prioritized for inclusion in ag land designations, produced by the multi stakeholder Clark County Food System Council (FSC).
5. 3-slides "CC Landuse Map Data slides 2019" from presentations-for a quick view

RE: Policies, Recommendations, report "data"

1. "FOCC 2017 WaitJ Protecting Farmland Strategies" goes into more detail on some policies. Including 'no net loss" of ag land.
2. "From Roots to Bounty LLC 2016" is a great summary of history, previous work, links to source documents, and **recommendations that echo the 2009 report and many other key documents produced by and for Clark County. A great read!

Key messages to justify submitting the attached data + further comments:

- Beware of taking "data" on farmland or agriculture at face value without further analysis (See #1 and #2 attached)
- Acknowledge that we do know the current status of farm production acres.
- The "significance" of agriculture is best related to actual and potential agricultural production.
- The importance of soil HEALTH cannot be underestimated, but soil survey classification is but one (and sorely contested) indicator among 6-10 indicators.
- Where people farm and produce food is a key consideration -- Indeed active farms now, recent, and future potential ...
- Viable (aka "significant to the local ag economy) farms -- often defy gravity and land use classification (productive farms atop ridges, eg).
- Compounding the Ag Land dilema-- much farmland is leased, so as discussed, actual Farm Operations defy parcel ownership.

Yes--it's great that the draft climate element information continues to be available on the CAG web page.

Let's embrace actual farming and actual agricultural potential wherever and whenever we can--for environmental, social, economic, agronomic, and political reasons--to approach improved agricultural resilience and community well-being.

Respectfully submitted,

Jude Wait

Jude Wait, Ph.D., MiM
/https://www.linkedin.com/in/judewait/
/ Farm and Food Justice Network / Western Institute for Agriculture and Food Security Foundation
/ Wellsave, LLC: R&D services in food system justice / social-environmental & natural resource sciences
/ wellsavellc@gmail.com
/ Founding Member, Agroecology Research-Action Collective (ARC)
/ Research Scholar, Food System CARE [Collaborative Action Research Evaluation / Education]
/ Urban Agrifood System Collaborative Action Research Education for BIPOC Community-led Equitable Food-Oriented Development in the Portland-Vancouver Metropolitan Region
/ Wait, J.A. (2021). Resilience of food farming in rapidly urbanizing regions
/ Notional Lab of Agroecology & Urban Ecosystems
/ Residing in the homelands of Chinookan and Taidnapam peoples and the Cowlitz Indian Tribe, (aka Vancouver, Washington)
/ cell: 707-223-0848
/ waitjude@gmail.com
pronouns: they/their

On Tue, Sep 2, 2025 at 10:51 AM Bart Catching <Bart.Catching@clark.wa.gov> wrote:

> Jude,
> Your comments and additional information will be added to the public record for the comprehensive plan and to the public comments for the August 27th Ag Commission meeting. I have forwarded your message to the Ag Lands Study consultant. The draft climate element information continues to be available on the CAG web page.
> Thank you.
>
> **Bart Catching**
> Planner III
> COMMUNITY PLANNING
>
> 564.397.4909

From: Jude Wait <wellsavellc@gmail.com>
Sent: Friday, August 29, 2025 5:42 PM
To: Bart Catching <Bart.Catching@clark.wa.gov>
Cc: Jeffrey Delapena <Jeffrey.Delapena@clark.wa.gov>; Lauren Henricksen <Lauren.Henricksen@clark.wa.gov>; Sue Marshall <Sue.Marshall@clark.wa.gov>; Diane Dempster <dianedempster36@gmail.com>; Dillon Haggerty <dilishfarm@gmail.com>; Mo McKenna <momoflowerfarm@gmail.com>; Ann Foster <annfoster5093@gmail.com>; Monica Zazueta <zazuetamonica0813@gmail.com>; Gabriela Mendoza Ewing <info@pasitosgigantes.org>; Edward Hamilton Rosales <ed.rosales@wiafs.com>; Madeline Brooks <mbrooks@triangleassociates.com>; Danielle Jochums <djochums@triangleassociates.com>; Jose Alvarez <Jose.Alvarez@clark.wa.gov>; Oliver Orjiako <Oliver.Orjiako@clark.wa.gov>; Wil Fuentes <Wil.Fuentes@clark.wa.gov>; Matt Little <Matt.Little@clark.wa.gov>; joezimm@live.com; justin@burgerfamilyfarm.com; O'Dea, JUSTIN <justin.odea@wsu.edu>; zoppenheimer@clarkcd.org; Holly Hansen <holly@secondmilemarketplace.com>
Subject: Re: TODAY Agricultural Advisory Commission public comments Aug. 27

Bart et al,

Here attached and linked is one of the documents I referenced in my comments at/for the Aug 27 Ag Advisory Commission meeting. There is probably a more current version (ask Jenna). Last I counted there are 27 draft policies involving food and/or agriculture.
NOTE: These recommendations are vetted by 15 EJC member groups and all CAG members who reached consensus on all but very few (4?) policies

Draft Climate Element Policies

Please incorporate these documents, with attention to applicable details, into the public record for

1. The Ag Assessment technical team and engagement team and
2. The Ag Advisory Commission.
3. Comp Plan update

Another item I referenced could also be delivered by Lauren Henrickson:

- The results of the survey conducted by Farm and Food Justice Network (co-representatives Jude/Wellsave and Trish/Dilish Farm

There is more to share--you are definitely not starting from scratch--and I think you would agree, let's benefit from a LOT of work, community engagement, applicable recommendations, and cumulative wisdom.

In summary, please consider Local-Regional Food Systems Resilience in the Ag

Assessment and as a goal for the Ag advisory Commission.

IN my view, the inclusion of the Farm and Food Justice Network on the EJC acknowledges that farmers, farms, farmworkers, agriculture, the local-regional food system, and our natural resources (soil, water) are vulnerable to climate hazards (weather) and on the "front lines" along with other disproportionately impacted sectors.

As American Farmland Trust says: No Farms No Food (see also AFT data the County should access for the Assessment !! I will share more on DATA later-soon.

That's all for this week!

Respectfully submitted,
Jude

On Wed, Aug 27, 2025 at 3:20 PM Bart Catching <Bart.Catching@clark.wa.gov> wrote:

> Jude,
> Thank you for your comments.
> They will be included with the public record for this meeting and provided to the commissioners.
> Respectfully,
>
> **Bart Catching**
> Planner III
> COMMUNITY PLANNING
>
> 564.397.4909
>
> ---
>
> **From:** Jude Wait <wellsavellc@gmail.com>
> **Sent:** Wednesday, August 27, 2025 3:15 PM
> **To:** Jeffrey Delapena <Jeffrey.Delapena@clark.wa.gov>
> **Cc:** Lauren Henricksen <Lauren.Henricksen@clark.wa.gov>; Bart Catching <Bart.Catching@clark.wa.gov>; Sue Marshall <Sue.Marshall@clark.wa.gov>; Diane Dempster <dianedempster36@gmail.com>; Dillon Haggerty <dilishfarm@gmail.com>; Mo McKenna <momoflowerfarm@gmail.com>; Ann Foster <annfoster5093@gmail.com>; Monica Zazueta <zazuetamonica0813@gmail.com>; Gabriela Mendoza Ewing <info@pasitosgigantes.org>;

Edward Hamilton Rosales <ed.rosales@wiafs.com>; Madeline Brooks <mbrooks@triangleassociates.com>; Danielle Jochums <djochums@triangleassociates.com>; Jose Alvarez <Jose.Alvarez@clark.wa.gov>; Oliver Orjiako <Oliver.Orjiako@clark.wa.gov>; Wil Fuentes <Wil.Fuentes@clark.wa.gov>; Matt Little <Matt.Little@clark.wa.gov>
Subject: TODAY Agricultural Advisory Commission public comments Aug. 27

Dear Agricultural Advisory Commission (select members' email), Select Councilors, County staff, consultants, and a few of the interested people in our community referenced in my attached comments (fellow EJC members or CAG members).

Attached please find a written version of public comments for TODAY. --Submitted for the record / comment "period"

I plan to be there one way or another, if all goes well.

Respectfully submitted,
Jude Wait

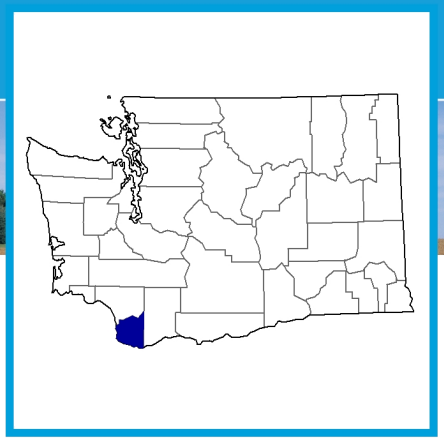
On Wed, Aug 13, 2025 at 12:10 PM Jeffrey Delapena <Jeffrey.Delapena@clark.wa.gov> wrote:

> News Release from **Clark Co. WA Communications**
> *Posted on FlashAlert: August 13th, 2025 10:27 AM*
> Vancouver, Wash. – The Clark County Agricultural Advisory Commission has scheduled their regular meetings for the fourth Wednesday of every month from 6-8 pm. The first regular meeting is scheduled for Aug. 27.
>
> The hybrid meeting will have both in-person and virtual attendance options. Participants can attend in person in the sixth-floor hearing room in the Public Service Center, 1300 Franklin St. or online using the Webex platform posted to the commission's website at https://clark.wa.gov/community-planning/agricultural-advisory-commission-meetings.
>
> Meeting agendas, minutes and links for joining the meetings virtually will be posted to the meetings tab of the commission's website:

https://clark.wa.gov/community-planning/agricultural-advisory-commission-meetings.

The Clark County Council in November 2024, approved an ordinance establishing the 13-member commission. The purpose of the Agricultural Advisory Commission is to provide reviews and recommendations to the County Manager, County Council, the Planning Commission and other appropriate boards and commissions on issues that affect agriculture in Clark County. The commission will also provide a forum for those in the agricultural community and others interested in enhancing and promoting the long-term sustainability of agriculture in Clark County.

2022 CENSUS OF AGRICULTURE *County Profile*



Clark County
Washington

Total and Per Farm Overview, 2022 and change since 2017

	2022	% change since 2017
Number of farms	1,927	-3
Land in farms (acres)	56,038	-38
Average size of farm (acres)	29	-37
Total	($)	
Market value of products sold	58,969,000	+24
Government payments	149,000	-29
Farm-related income	12,997,000	+93
Total farm production expenses	72,558,000	+13
Net cash farm income	-444,000	+95
Per farm average	($)	
Market value of products sold	30,601	+27
Government payments [a]	3,811	-40
Farm-related income [a]	42,472	+132
Total farm production expenses	37,654	+16
Net cash farm income	-230	+95

(Z) Percent of state agriculture sales

Share of Sales by Type (%)

Crops	60
Livestock, poultry, and products	40

Land in Farms by Use (acres)

Cropland	22,009
Pastureland	14,081
Woodland	14,431
Other	5,517

Acres irrigated: 4,506
8% of land in farms

Land Use Practices (% of farms)

No till	8
Reduced till	3
Intensive till	3
Cover crop	6

Farms by Value of Sales

	Number	Percent of Total [b]
Less than $2,500	977	51
$2,500 to $4,999	304	16
$5,000 to $9,999	251	13
$10,000 to $24,999	177	9
$25,000 to $49,999	102	5
$50,000 to $99,999	54	3
$100,000 or more	62	3

Farms by Size

	Number	Percent of Total [b]
1 to 9 acres	824	43
10 to 49 acres	844	44
50 to 179 acres	216	11
180 to 499 acres	37	2
500 to 999 acres	3	(Z)
1,000+ acres	3	(Z)

2022 CENSUS OF AGRICULTURE *County Profile*

Market Value of Agricultural Products Sold

	Sales ($1,000)	Rank in State [c]	Counties Producing Item	Rank in U.S. [c]	Counties Producing Item
Total	**58,969**	**25**	**39**	**1,823**	**3,078**
Crops	**35,343**	**24**	**39**	**1,503**	**3,074**
Grains, oilseeds, dry beans, dry peas	174	27	36	2,409	2,917
Tobacco	-	-	-	-	267
Cotton and cottonseed	-	-	-	-	647
Vegetables, melons, potatoes, sweet potatoes	1,990	21	38	642	2,831
Fruits, tree nuts, berries	7,710	17	39	198	2,711
Nursery, greenhouse, floriculture, sod	19,056	10	39	181	2,660
Cultivated Christmas trees, short rotation woody crops	3,118	2	29	20	1,274
Other crops and hay	3,295	21	39	992	3,035
Livestock, poultry, and products	**23,626**	**18**	**39**	**1,635**	**3,076**
Poultry and eggs	7,340	11	39	646	3,027
Cattle and calves	5,321	20	39	1,657	3,047
Milk from cows	6,984	13	26	527	1,770
Hogs and pigs	(D)	(D)	39	(D)	2,814
Sheep, goats, wool, mohair, milk	516	4	39	382	2,967
Horses, ponies, mules, burros, donkeys	2,542	1	39	100	2,907
Aquaculture	(D)	30	33	(D)	1,190
Other animals and animal products	431	11	39	442	2,909

Producers [d] 3,505

Sex
Male 1,874
Female 1,631

Age
<35 196
35 – 64 1,867
65 and older 1,442

Race
American Indian/Alaska Native 25
Asian 51
Black or African American 2
Native Hawaiian/Pacific Islander 14
White 3,387
More than one race 26

Other characteristics
Hispanic, Latino, Spanish origin 125
With military service 411
New and beginning farmers 1,329

Percent of farms that:

Have internet access **86**

Farm organically **1**

Sell directly to consumers **17**

Hire farm labor **19**

Are family farms **98**

Top Crops in Acres [e]

Forage (hay/haylage), all	13,474
Cultivated Christmas trees	911
Land in berries	855
Corn for silage/greenchop	(D)
Blueberries, all	284

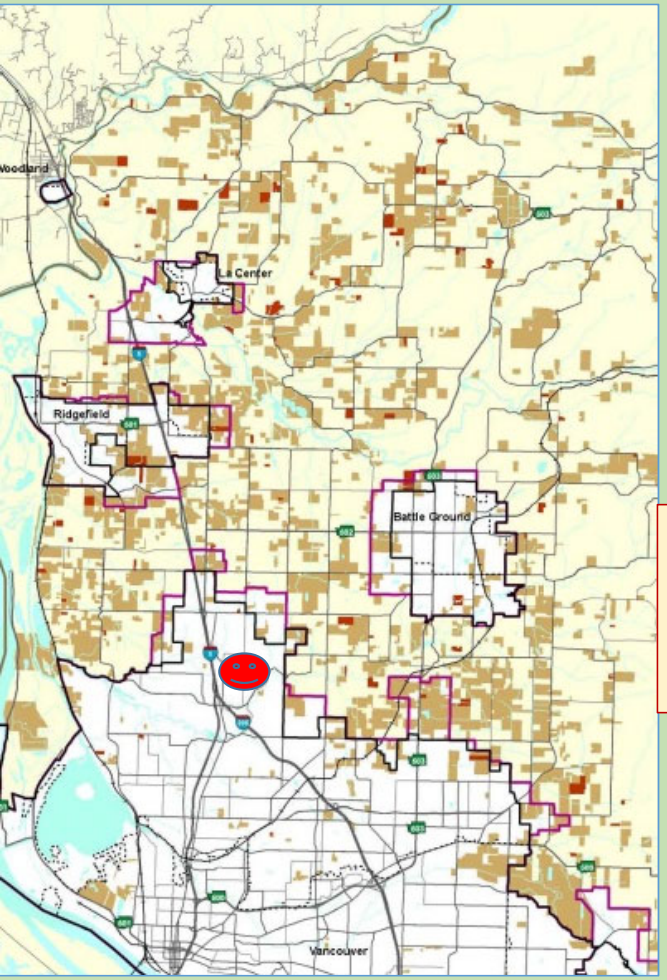
Livestock Inventory (Dec 31, 2022)

Broilers and other meat-type chickens	258,558
Cattle and calves	8,920
Goats	1,628
Hogs and pigs	304
Horses and ponies	2,566
Layers	12,683
Pullets	1,188
Sheep and lambs	2,397
Turkeys	259

[a] Average per farm receiving. [b] May not add to 100% due to rounding. [c] Among counties whose rank can be displayed. [d] Data collected for a maximum of four producers per farm. [e] Crop commodity names may be shortened; see full names at www.nass.usda.gov/go/cropnames.pdf. [f] Position below the line does not indicate rank. (D) Withheld to avoid disclosing data for individual operations. (NA) Not available. (Z) Less than half of the unit shown. (-) Represents zero.

Urban Growth Area (UGA) Maps to Advise Clark County's Planning

"Current Use" Farmland in Expanding Cities and UGAs (Globalwise, 2007)

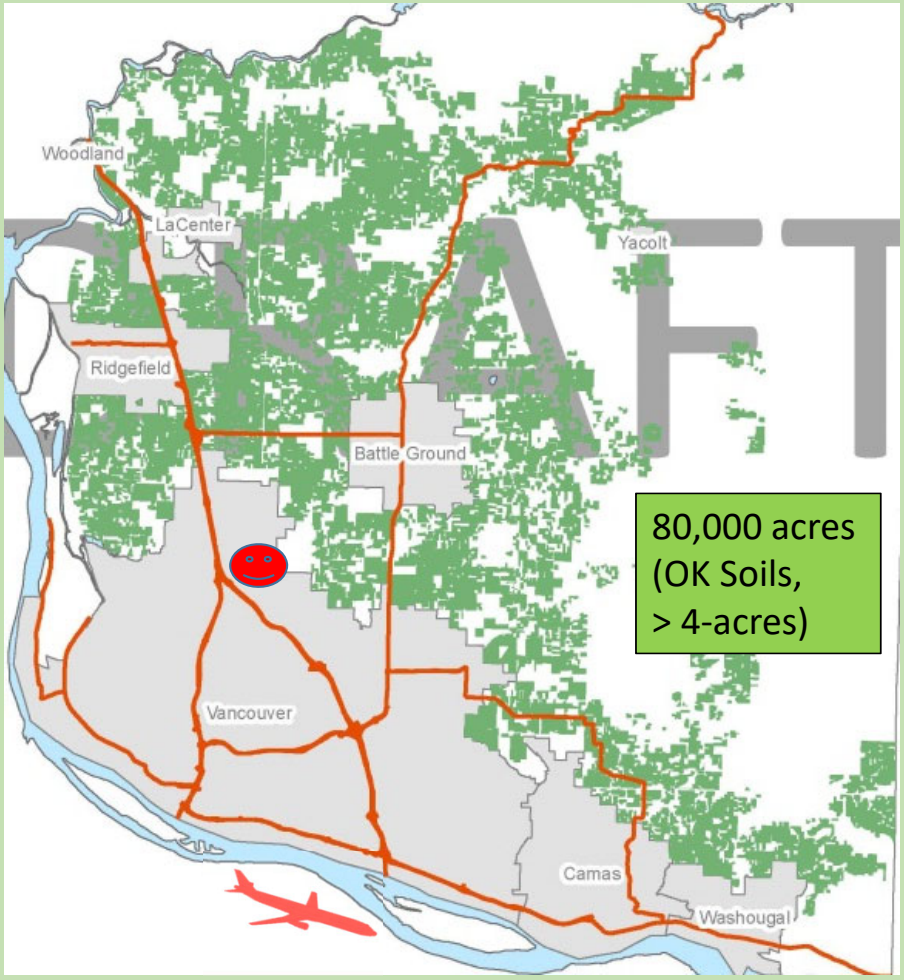


Farms and Farmland ?

23,270 acres
current use
and/or Ag-20 zone
[25% inside UGA]

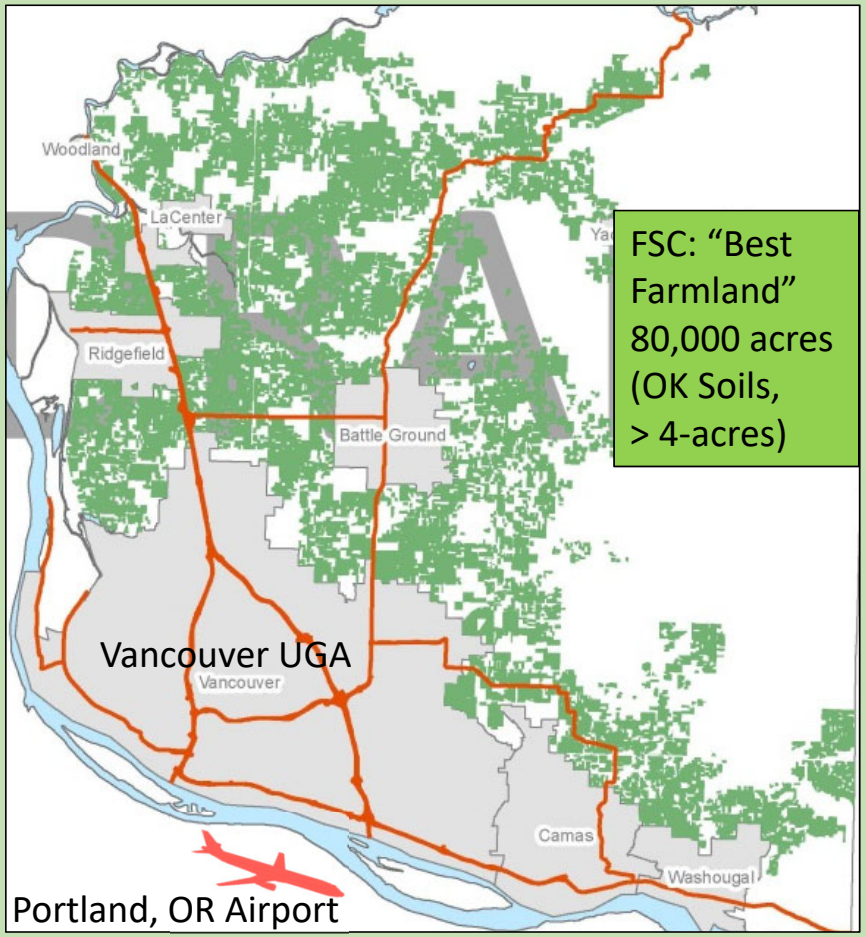
WSU Vancouver

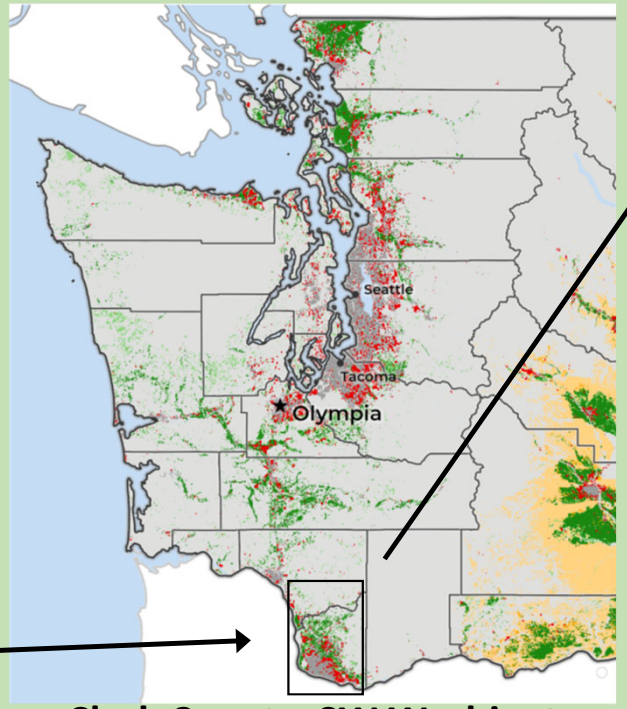
"Best Farmland" Outside Cities and UGAs
(Clark County Food System Council, 2013)



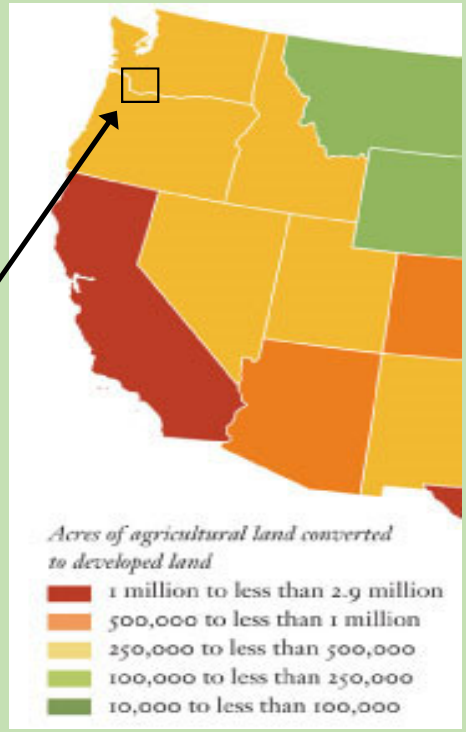
80,000 acres
(OK Soils,
> 4-acres)

Farmland "in the path of development"*





Clark County, SW Washington. Farmland conversion 2001-2016
(American Farmland Trust 2020)



Western States
Ag Land Conversion, 1982-2007,
(*AFT 2010)

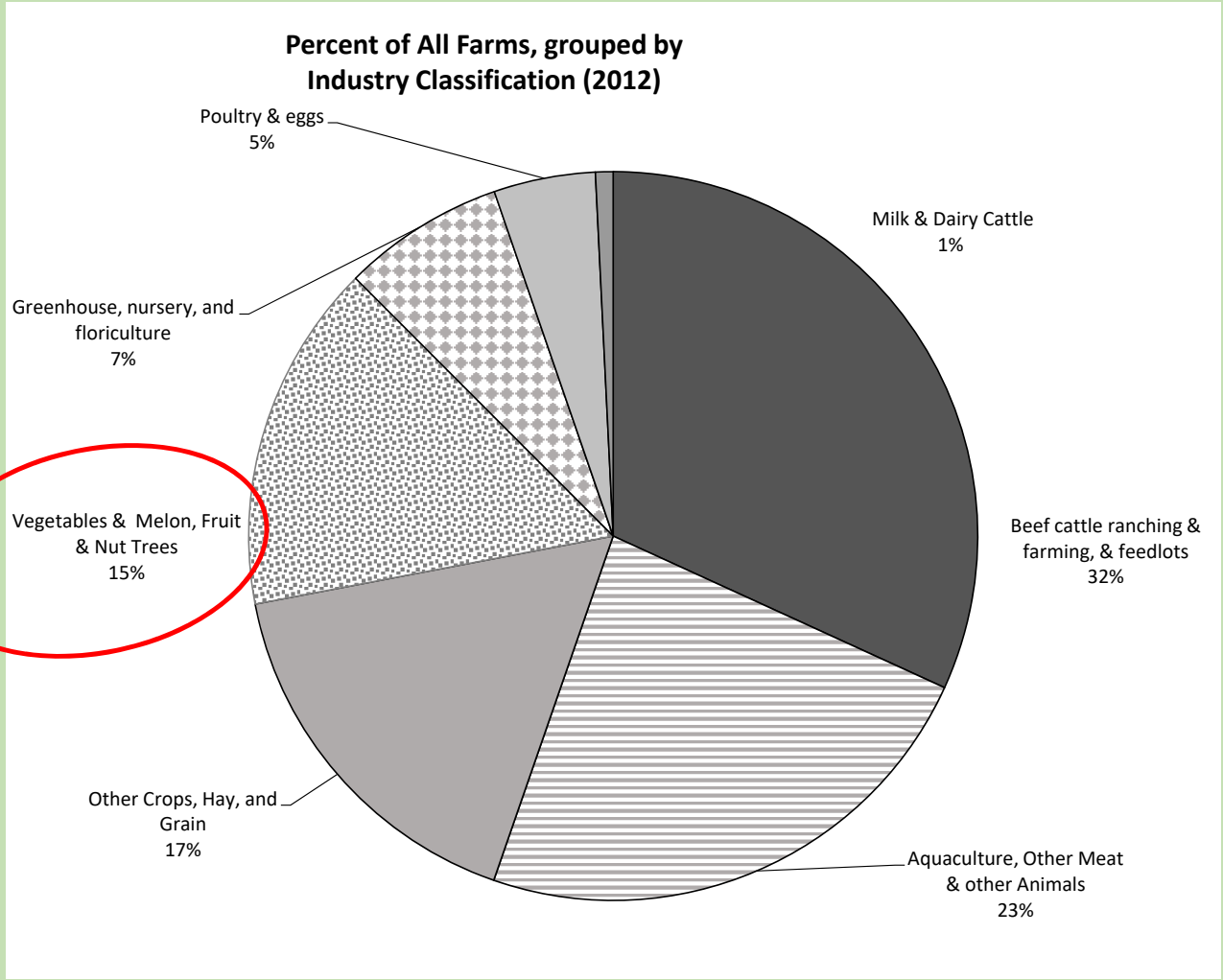
Clark County "Best Land" outside Urban Growth Areas (Gray UGAs)
(Food System Council, 2013)

25% farm/ag land inside UGA (2007)

Clark County Agriculture: Produce Crops Grow on 15% of Farms

Specialty Crops (vegetables, fruit, nuts) on 15% of Farms in Clark County (2012 US Census of Agriculture)

~ 5% of Cropland Acres: Data from Washington Dept. of Ag (WSDA, 2019)



Protecting Farmland:
Introductory Review of Selected Strategies

by Jude Wait [1]

for:

Friends of Clark County [2]

Policy Review Table of Contents

October 2017

Introduction

In pursuing their mission, Friends of Clark County (FOCC) seeks to evaluate and promote policies that retain agricultural land in Clark County, Washington. FOCC supports local farming for the multiple benefits to the local economy, the health of people and the land, and the quality of life.[2] Such sustainable food production supports food security, community resilience, and self-sufficiency (Caldwell, Hilts, & Wilton, 2017). This paper discusses a sample of policy tools used to prevent loss of farms and farmland**,** strategies prioritized by FOCC for this literature review.[1]

Farmland retention policies can serve to *protect* agricultural land or permanently *preserve* the land for agricultural use, and are best combined in a "package approach" (Wagner, 2017). **Numerous policies** in the U.S. can be used to retain land for farming ("at least 28" according to: Duke & Lynch, 2006). *Protections* such as zoning provisions (allowable uses, parcel size, etc.), land use policies (and districts), and establishing urban growth boundaries, may all serve to encourage agriculture and discourage development; whereas tax relief measures and right-to-farm laws aim to lessen the burden for farming; and development fees penalize the conversion to non-farming (Duke, 2008). In contrast to *protection*, farmland *preservation* strategies permanently remove development rights on a voluntary basis from willing landowners who are compensated through mechanisms such as transfer of development rights (TDR), purchase of development rights (PDR), or purchase of agricultural conservation easement (PACE) (Wagner, 2017).

Strategies currently utilized in Clark County include Growth Management Act planning (Urban Growth Area boundaries, etc.), zoning for resource and rural land uses, and Right-to-farm ordinance(s). Landowners may qualify for property tax discounts under Current Use for land designated as open space or actively managed for agriculture or forestry (Smee, 2015).

This paper briefly reviews a sample of available polices: (1) Right-to-farm; (2) agricultural production districts; (3) acquisition of development rights (PDR, TDR, etc.); and (4) mitigation policies for "no net loss" of farmland. In addition, economic and social considerations are introduced (5). Numerous resources and references are cited in order to describe the policy; provide selected examples; and highlight benefits and challenges. A sample of recommendations applicable to Clark County are drawn from the Agriculture Preservation Strategies Report (APAC, 2009).

FOCC recommends Clark County address key questions and pursue further consideration to implement available policy tools that help prevent further farm and farmland losses. An integrated *system* of protection that combines several policy tools with educational, environmental, technical, and economic programs is recommended for keeping existing farmland in farming (Hoopenboom, Sloane, & Canty, 2012).

1. *Right-to-Farm* Laws

Right-to-farm laws are intended to protect farmers' "reasonable" activities from being considered a "nuisance" by neighbors or local authorities when the activities are not harmful to the public (Green, 2005). Given the influx of residential neighbors into rural farming communities, conflicts arose, and laws were instituted to protect farmers from some of the burdens of complaints about their farming practices. As conflicts continue to increase with development pressures, Right-to-farm programs help with "sorting out the respective rights of farmers, their neighbors, and municipalities" (in New Jersey, for example: Green, 2005). **Right-to-farm laws are meant to** deter "nuisance [law]suits" whereby "farmers who prevail are allowed to recover attorney fees" (Barney & Worth Inc. and Globalwise Inc., 2016).

All 50 States have Right-to-farm enabling legislation.[3] Right-to-farm provisions are governed by State laws, applied at the County level, and are generally intended to favor agricultural practices. Nearly half of the States' laws further ensure local laws do not impose unreasonable restriction on agriculture.[4]

The goal of Right-to-farm, as a farmland *protection* tool, is to alleviate the tendency for farmers to sell their land, move away, or stop farming, due to troubles in the neighborhood. However intended to protect farms and prevent urban encroachment in farming areas, Right-to-farm laws usually "cover new uses on existing farms and substitution of new crops," but they do not typically provide protection for new farms outright (Barney & Worth Inc. and Globalwise Inc., 2016). Furthermore, the effectiveness for "protecting agricultural operations and reducing farm-urban edge conflicts" is questionable, especially compared to other regulatory tools which can be more rigorous, such as zoning, buffers, and subdivision review (American Farmland Trust, 1998). The review of Right-to-farm ordinances in 15 counties in California found "considerable variation in implementation" on the local level, lax disclosure provisions, and **largely public educational benefits** compared to actual protections against litigation (American Farmland Trust, 1998). California now requires real estate transactions include the disclosure of farmland within one mile of farms mapped on the California Important Farmland Finder.[5] Qualifications for inclusion on the map include: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land.[6]

Right-to-farm laws do not *preserve* farmland, are subject to lawsuits themselves, and do not directly address the threat of development pressures and increasing land values (Rajsic, Ramlal, & Fox, 2012). Given the wide range of agricultural operations, customized Right-to-farm laws are needed to address the different scales of agriculture and various intentions of the law-makers (Goeringer & Goodwin, 2013). Right-to-farm laws have been called upon to address the impacts of large-scale industrialized (concentrated) livestock operations in residential areas (Rumley, 2010). The growing urban agriculture sector, at the small-scale end of the spectrum, where

farming activities can be located in dense urban or suburban settings, further illustrates a problem for one-size-fits-all laws (Goeringer & Goodwin, 2013).

Washington's Right-to-Farm Act (RCW 7.48.300-.320) governs farms conducting operations alongside residential development such that: "farming practices may continue if: 1. They are consistent with good agricultural practices; 2. The agricultural practice precedes non-agricultural development; and 3. There's no substantial impact on public health and safety" (Barney & Worth Inc. and Globalwise Inc., 2016). Each of these three provisions of Right-to-farm laws, while common, vary by state, and receive specific definition, such as what constitutes good practices, agricultural activities, and impacts (Jordan, 2009).

Clark County has a Right-to-farm/Log policy "to protect and encourage good agricultural and forest activities which were established prior to the surrounding nonagricultural" activities (9.26.010), except for "changes in the nature of agricultural uses (e.g., from field crops to dairying) in urban areas" (9.26.030).[7]

Recommendations from Clark County's (former) Agricultural Preservation Advisory Committee (2009) include: "Draft revisions to the Right-to-farm/log code that clearly designates agriculture and forest production as preferred uses in rural zones, strengthens public disclosure requirements and consolidates Right-to-farm/log legislation into one comprehensive document."

The APAC report (2009) also recommended the County "institute a buffer zoning policy to minimize land use conflicts brought about by urban uses encroaching into areas of agricultural production" and suggests agricultural production districts, urban growth boundary margins, greenways, subdivision planning, and parks be considered for identifying buffer zones or activities more compatible with agriculture than residential development.

2. Designating Districts for Agricultural Production

Designating areas that are prioritized for agricultural production can build upon protection measures, target preservation strategies, and facilitate more coordinated support initiatives.

Agricultural district programs [ADP] are established in 16 States (including California and New York; excluding Oregon and Washington), but ADPs are not the same as agricultural districts defined by zoning (American Farmland Trust, 2016). Oregon's Farmland Protection Program covers planning and zoning regulations.[8] Both Oregon and Washington have multiple strategy options for farmland protection and preservation, including agricultural zoning, tax incentives, Right-to-farm laws, transfer of development rights (TDR), purchase of development rights (PDR), land trusts, and integrated programs (Beesley, 1999).

Agricultural district programs [ADP] are implemented at the local level under legislation of the 16 States,[9] with intention of supporting commercial farm and ranch landowners through various provisions to protect agricultural resources, increase viability, and create a secure climate for agriculture (American Farmland Trust, 2016). Participation is voluntary; various requirements are instituted for joining a district (such as acreage); and the protections offered to farmers vary. ADP provisions can include planning, regulatory, zoning, and conservation strategies. For example, the comprehensive agricultural district law of New York (1971) includes special protections, farmland viability programs, and differential tax assessment (American Farmland Trust, 2016). The first agricultural district program was California's Land Conservation Act ("Williamson Act" of 1965), which reduced property taxes for farmers through renewable 10-to-20 year contracts with Counties. Two states (DE, PA) with ADPs enable participation in State conservation easement programs; two states (NJ and MA) claim a "right of first refusal" in ADP agreements to ensure land stays available for agriculture through any change in ownership (American Farmland Trust, 2016).

Agricultural district programs benefit everyone, according to New York State—due to the environmental benefits (groundwater recharge, open space, etc.), benefits to the local economy (farm jobs and agricultural businesses), and cost savings from reduced public services costs.[10]

Agricultural Production Districts (APD) tend to be zoning-based and/or geographic areas, whereby multiple strategies in support of agriculture fall under the "district" designation**.**

In King County's Comprehensive Plan, five APDs are designated "where the principal land use should be agriculture…" and lands "should remain in parcels large enough for commercial agriculture."[11] King County integrates a suite of support programs nested within the overall Agricultural Program, including a Farmland Preservation Program to purchase development rights on high quality farmland across the County, and an Agriculture Commission (the majority of whom are commercial commodity producers).[12]

Other Counties in Washington have special geographically designated districts: Thurston has one, Snohomish has three, and Clallum applies Agricultural Resource Land (ARL) zone

designation to one part of the County (Eisemann, 2016). Kittitas County sending sites for the TDR program are commercial farms located on their APD map.[13]

For designating Agricultural Resource Land (ARL) zoning in Washington, "counties must approach the effort as a county-wide or area-wide process" (WAC 365-190-050), and develop regulations that conserve ARLs (WAC 365-196-815).[14] Counties under Washington's Growth Management Act must designate ARLs that "have long-term significance for commercial production of food or other agricultural products" (Eisemann, 2016).

Zoning strategies are common and widespread, but the effectiveness in preventing sprawling suburbs in agricultural regions depends on other measures (Propst, Harper, & Mantell, 1990; 2012 eBook). Minimum parcel size requirements for agricultural zones can sometimes actually exacerbate the problem of parcels being "too small to plow and too big to mow" (Propst et al., 1990; 2012 eBook). Such "large lot" zoning may be intended to limit parcel size reductions and discourage subdivision development, but it may actually result in urban sprawl, and parcel sizes and zoning provisions are subject to rezoning and variances that can undermine farmland preservation objectives (Propst et al., 1990; 2012 eBook). Designating large "blocks" of agricultural zoning is a good tool that has "significant loopholes" in Western Washington State counties, and farms are often located on land where zoning allows non-farm uses (Canty, Martinsons, & Kumar, 2012).

"Rural" farm lands are not uniformly zoned for agriculture, in contrast to ARL zoning. Since rural zoning does not protect existing agricultural uses per se (Canty et al., 2012), some Counties consider additional measures to retain farming.

King County explicitly acknowledges, in their 2009 FARMS report, that the 20,000 acres used for agriculture outside designated APDs do not have the same limitations as within the ADPs, but that most of the Agricultural Commission recommendations apply to these areas as well.[15]

Pierce County considered a proposal to more than double the ARL acreage, which turned out to be controversial and triggered efforts to gather more information.[16] As such, Pierce County is "taking a fresh look" at the criteria established for assigning ARL zoning (Eisemann, 2016).

The Skagit County Farmland Preservation Strategy calls for re-zoning Rural Resource parcels (which tend to be smaller) to Agriculture zoning, since both Rural and Agriculture zone lands have importance for maintaining agricultural viability (Skagitonians to Preserve Farmland & Western Washington Agricultural Association, 2014). Skagit County also documented strategies to support the sustainability of their agricultural *cluster*.[17];[18]

Recommendations from the former Agricultural Preservation Advisory Committee (APAC Report, 2009, Appendix D) included: "maintaining or aggregating contiguous blocks of land 100-150 acres in area" whereby an "Agricultural Production District may encompass one or more larger blocks, and there could be one or more producers within each area." APAC (2009) emphasized that it is "critical to support all scales of agriculture in Clark County."

In their consideration of the applicability of various programs to agricultural district designation—Conservation Areas Acquisition Plan, GMA Resource Designations, Current Use, and Washington Wildlife and Recreation Program (WWRP)—the APAC (2009) report noted that:

> **"**…application of various local, state and federal programs should not be to the exclusion of smaller scale producers that may not be located within a district, or that, while proximate to one another, are not immediately contiguous. The current use and GMA resource lands designations identify property groupings that qualify for and have been enrolled in the farm current use taxation program or that meet state guidelines for farm resource land designations. While these groupings help focus limited resources on farm preservation areas, the farm committee like the conservation areas acquisition plan task force, did not want to limit farm preservation programs solely to these areas. Moreover, the farm plan committee discussed the difficulty in setting criteria for prioritizing farm preservation projects when there are so many exceptions that work, especially with smaller farms. Identifying lands on a map wouldn't accurately reflect that farming can occur anywhere in Clark County. The committee agreed that such criteria should not serve as the only factor in decision making." (APAC, 2009, Appendix D)

While the APAC noted that the Conservation Areas Acquisition Plan[19] committee's Farm Work Group had "divided the county's designated farm resource lands into 42 project areas," they recommended that **"existing farm operations be inventoried and mapped to help identify agricultural production districts"** (Ag Preservation Advisory Committee, 2009, emphasis added). Such an inventory could involve an actual on-the-ground census of all current farms and farmland, as recommended for agricultural economy research,[20] and build upon data from WSDA's crop surveys conducted by Clark Conservation District and other mapping.

Engaging stakeholders, conducting credible research, and evaluating policy initiatives can be interlinked and mutually beneficial. For example, a foodshed study may facilitate an evaluation of the effects of policy tools on farmland protection because the availability of farmland, production capacity, and consumer demand are among factors used to address the question of how much a community can feed itself from local (or regional) foodshed production (Horst & Gaolach, 2015). In the multi-county Western Washington foodshed, more farmland and more food production are needed to balance supply and demand, along with the opportunity to convert non-food agriculture and under-utilized land into food production (Born & Martin, 2011).

The economic implications of policies given the current and historic conditions are worthy of further research, as well. Indeed, land use issues and economics are highly complex, under-researched, and existing empirical research is relatively inaccessible to land managers (Johnston & Swallow, 2006).

3. Farmland Preservation Easements

Agricultural land *preservation*, permanent and voluntary, is accomplished through mechanisms such as transfer of development rights (TDR), purchase of development rights (PDR), or purchase of agricultural conservation easement (PACE) (Wagner, 2017). In general, these programs compensate willing landowners for not developing their land while they retain ownership and the ability to sell the land with the deed restrictions prohibiting non-farm development (Miller & Krieger, 2004).

The TDR Handbook (Nelson et al., 2012) refers to TDRs as a "simple concept" and then explains how TDRs work, compares TDRs to other preservation tools, details all the steps necessary for planning and implementation, highlights legal issues, and presents several case studies. Basically, farmers can sell (*send*) the development rights of their property, in much the same way any easement works. Payment to farmers for the development rights is *received* from developers who are paying for the right to increase the density of their development project beyond what was otherwise already allowable. The farm is thereafter valued as agricultural land instead of its developable market value.

TDR programs support other land use regulations aimed at preserving farmland and open space by compensating the people who are losing land value, such as with zoning changes (Nelson et al., 2012). **King County's successful TDR program** allows a range of benefits in addition to agriculture—values such as wildlife, forestry, open space, and trails—and then can allow density increases to accommodate growth using inter-jurisdictional agreements with major Cities (Nelson et al., 2012).

Washington's Growth Management Act requires PDR or TDR programs for "designated agricultural land of long-term significance located in the urban growth area."[21] **Snohomish County, Washington,** for example, approved its PDR program (2006) in order to permanently preserve "rural farms" in a key valley by placing conservation easements on eligible farmland that prohibit non-agricultural activities, and by compensating landowners for the development rights using limited public funds in a competitive process that uses property value and risk of conversion as criteria.[22] **Pierce County**, working with land trusts and leveraging State and Federal funding, launched a PDR program in 2011, and may find TDRs more feasible with a positive real estate market (Barney & Worth Inc. and Globalwise Inc., 2016). A TDR program market study encompassing Pierce and King County sending sites, for a regional approach with multiple types of TDR sending and receiving sites, was led by the City of Tacoma (2012).[23] The first TDR in Pierce County preserved 20 acres of prime farmland and allowed 21 additional apartments in Tacoma (2016).[24]

For PDR, sources of funding for purchasing easements can be diverse and transactions complex. In contrast to TDRs where payment is from the developer, PDRs can be paid for in several ways, and usually funding involves several partners and leverages public funding

including taxes collected at the state or county level. Easement funding partners may include the federal-level ACEP, the Farmland Preservation Program of the Washington State Conservation Commission, private Land Trust-administered easement programs, and Mitigation Banks, etc..

In Washington State, Conservation Districts (CD) can participate in the Farmland Preservation Program (FPP) and are eligible for funding through the Washington Wildlife and Recreation Program (WWRP) for conservation easements.[25] Furthermore, CDs have taxing authority in Washington to raise funds for their programs (which can serve as non-federal match for federal grants). Fifteen Counties are authorized for such special district assessment.[26] Eastern Klickitt CD is using the PACE program for farmland preservation to purchase development rights from farmers.[27] Clark CD is proposing a tax assessment for their operations.[28]

Outcomes for preserving farmland vary. PDR programs implemented across six Mid-Atlantic States (encompassing 269 counties) were found to reduce farmland loss by 40-55% (Liu & Lynch, 2011). However, PACE (or PDR easements) are expensive, time-consuming, require willing landowners, and the farms may not coincide with priorities for preservation (American Farmland Trust, 2010).

Counties may have access to these preservation strategies, but the existence of State-level legislation enabling these policy tools does ensure the policies are actually implemented (Wagner, 2003). In general, counties that utilize a combination of farmland retention policies, and leverage funding from state and federal sources for preservation, are the cases demonstrating the most success in preserving farmland and associated agricultural capacity (Canty et al., 2012; Wagner, 2017).

Benefits of selling development rights include farmers having funds to invest in their operation, farm families saving on future inheritance taxes, and communities incur no property maintenance or other ownership costs (Miller & Krieger, 2004). Easements reduce the market value of the land (the landowner's equity in the land) by the value of the development rights acquired and results in correspondingly lower property taxes.

The future of agriculture depends on the availability of farmland and the next generation of farmers having access to farmland, among other needs. The research report on the "Future of Oregon's Agricultural Land" includes recommendations to: "Promote working lands easements to help retiring farmers generate liquidity from their land, (making the land more affordable to beginning farmers), and permanently protect it from development" (Brekken et al., 2016). In addition, "land-sharing" models lead to better outcomes for both retiring and aspiring farmers, and may be facilitated by community land trusts, creative leasing arrangements on working lands easements, farmer-to-farmer linkages and incubators for training, and succession planning (Brekken et al., 2016).

Easements improve farmers access to, and affordability, of land, when the purchase price is lowered by the development rights acquired, especially if community support is tangible (Equity Trust, 2009). Equity Trust (2009) developed model (and sample) lease arrangements, enabling farmers to work and reside on acquired and conserved farmland where only farmers are allowable leaseholders, for the term of the lease, which further ensures agricultural uses prevail in perpetuity. These and other creative strategies are recommended for addressing the needs of young farmers because Agricultural Conservation Easements are limited in their capacity to improve farm ownership by farmers (Johnson, 2008). For example of an innovative model, young farmers on Vancouver Island near Victoria, British Columbia, created partnerships and garnered significant community support to raise the funds to pay off the other family members for the development values rather than sell the old family farmland to developers for the higher market value (Chambers, 2015). The farmers essentially gave away their right of private ownership of the family farm; and they helped set up the terms of the their long-term lease to "supply the local community with organic produce by supporting biodiversity…"—such that their values would be sustained no matter who the farmer leaseholders are in the future (Chambers, 2015).

The Clark County Agricultural Preservation Advisory Committee (APAC, 2009) recommended TDRs and PDRs be pursued, citing the Comprehensive Growth Management Plan (2007) and the Conservation Areas Acquisition Plan. **For farm preservation strategies**, TDR, and PDR, the APAC Strategies Lead Entity Implementation Matrix recommends that the County the "set up framework [and the] Conservation District or Non-profit could be primary administrator" (Ag Preservation Advisory Committee, 2009: Appendix F).

Evaluation criteria for choosing proposals to fund are outlined in Clark County's Agricultural Preservation report (APAC, 2009: Appendix E).[29] Funding options considered include Conservation Futures, Washington's WWRP, and the federal Farmland Protection Program. For prioritizing and identifying farm area projects, the report lists participation in the Current Use Taxation program, agricultural zoning, the Conservation Areas Acquisition Plan,[30] and the (recommended) Agricultural Production Districts (APAC, 2009: Appendix D).[31]
Criteria for funding farmland preservation projects have also been developed for the WWRP Farmland Preservation Program (2016).[32]

Clark County commissioned a review of policy tools applicable to rural (and resource) lands, including TDR (Berk Consulting, 2012). Forterra, the land trust that wrote the Transfer of Development Rights Program Framework for the report (Berk Consulting, 2012, Attachment C), has helped preserve farmland in Snohomish,[33] Kittitas,[34] and Pierce Counties,[35] for examples. Forterra re-presented TDR information to the Board of County Councilors on September 13, 2017.[36]

To compare TDRs to other selected mechanisms, the table summarizes selected information from: (Ch.2: Comparing TDRs to Other Preservation Solutions, in: Nelson et al., 2012).

Tool	Function	Advantages	Disadvantages	Considerations
TDR	Removes key development rights from farmland; Increases density allowances for developers who compensate farmers for the change in market value	Permanent conservation; Voluntary; Developers pay; Cost reductions for development (infrastructure) due to density; Effective "downzoning" can correct "past zoning mistakes"	Challenging & complicated: Requires decisions and administration; Identifying sending areas to conserve; Urban fringe areas still controversial; No one-size fits all; Appraisal fairness; Affordability of TDRS	Can "downzone" sending area farms (doesn't have to); Devalues property (compensated); Uneven application for density-increases (which can be planned for)
PDR	Removes key development rights from farmland, with compensation to the farmer from many optional sources	Permanent conservation; Voluntary: Multiple sources of funding possible; Willing sellers can agree to reduced purchase cost; Protection is not "sidetracked by development" as with TDRs	Deed restrictions; Require public funds; Change in tax base; May require voter approval	Funding sources can be: bonds, general fund, state/federal grants, taxes on sales or property, private foundations, non-profit conservation organizations; CSA members
Devel-opment Fees	Collected from developers, to be used for funding farmland (or other) conservation purposes	All developers are "responsible for preservation;" Permanent conservation	Collecting enough fees for the conservation fund, Competing with public services (schools, etc)	Do not require increased taxes
Density Trans-fers	Like a TDR but less complicated: developers pay cash *or* preserve land	Don't need specific sending areas; Revenues applied to permanent conservation;	Developers may choose conservation sites not a priority for farmland proponents	Reduces profit margin; More acceptable to developers than TDR or Zoning
Cluster ing	Like a TDR, except development rights transfers are within a single parcel; compensates landowner by lower development fees	Permanent deed-restriction on most of property for farming or open space; allows development on small part of parcel	May not meet overall landuse or agriculture goals; does not prevent conflicts with neighbors	Scatters growth and development far from existing services, increasing traffic and eventual service need costs

4. "No net loss" *Mitigation* Policy

Mitigation is a policy responding to the loss of farms and conversion of agricultural land. The common intent of mitigation is to minimize the extent of impacts. **Federal level projects** involving farm land which fall under the National Environmental Policy Act (NEPA) may include "no net loss." See also the NEPA full definition of mitigation, more commonly applied to wetland mitigation. [37]

The federal Farmland Protection Policy Act (FPPA) "seeks to minimize impacts to prime farmland from federally funded projects but in practice does not achieve the full range of mitigation" (American Farmland Trust, 2002). Mitigation is not widely used, although it can be an effective strategy for raising funds and awareness, as American Farmland Trust (2002) documented in their review of the FPPA for the National Resource Conservation Service (NRCS). NRCS also administers the Agricultural Conservation Easement Program (ACEP), which offers both Agricultural Land Easements for working farms, and the Wetlands Reserve Easements for restoring wetland ecosystems on farmland.[38] The FPPA rating system for projects proposing to convert farmland is based on the Land Evaluation and Site Assessment (LESA) that considers soil quality, and farm viability factors (water, parcel size, access to services, etc).[39]

On the Washington State level, analysts of the "current level of statewide acreage dedicated to working farms (cropland)" recommend that the Washington State Department of Agriculture (WSDA) and the Washington State Conservation Commission's Office of Farmland Preservation work together to "mitigate problems" so that agricultural lands are maintained with "no net loss."[40]

The King County "no net loss" provision falls under Agricultural Production District (APD) policies set forth in the Comprehensive Plan, whereby "conversion of APD land may occur only if mitigated through the addition of agricultural land abutting a King County APD of equal acreage and of equal or greater soils and agricultural value" (American Farmland Trust, 2002). Five APDs were set up in 1985, and conservation efforts through PDRs expanded after the County's Farmland Preservation Program was initiated in 1979 (American Farmland Trust, 2002).

For San Juan County, Washington, the "No Net Loss" policy put forth by the Agricultural Resources Committee states that "…no Agricultural Resources Land should be redesignated unless effective, equivalent mitigation — that assures no net loss in total Agricultural Resource Land — is required as a condition of any such redesignation"[41]

Links to examples of Farmland Mitigation Ordinances and Policies (all in California) are listed on the Municipal Research and Services Center (MRSC) of Washington website along with a full range of the available Farmland Preservation Techniques and Sustainable Agriculture links.[42] Indeed, **California is renowned for Open Space designation**, conservation networks,

land acquisition, and related legislation—efforts responding to development pressures, threats to biodiversity, and environmental degradation (Santos, Watt, & Pincetl, 2014). **California's agricultural landowner tax relief system** was set up to reimburse Counties for tax revenue reductions based on farm enrolment under the Williamson Act (Wetzel, Lacher, Swezey, Moffitt, & Manning, 2012). Counties implement the Act but have traditionally relied on State budget allocations for "Open Space Subvention Program" payments to offset the tax revenue loss (American Farmland Trust, 2016). Governor Brown reinstated the Act in 2011 with a different funding mechanism[43] after Governor Schwarzenegger gutted its budget in 2007.[44]

Under the California Environmental Quality Act (CEQA), conservation easements are one mechanism used for farmland mitigation (Bass, 2014). The cooperation between Imperial County and the California Department of Transportation is one such example of development projects subject to mitigation under the CEQA (American Farmland Trust, 2002). Davis, California offers a localized example of mitigation building on State and Federal authorities.

Davis, California, "no net loss" farmland policy was instituted a through a comprehensive farmland conservation ordinance. In addition to mandates similar to Right-to-farm measures, the ordinance:

> "mandates that every acre of prime farmland that will be converted to urban use be replaced with a comparable acre (1:1 ratio) preserved in perpetuity through a conservation easement or payment of in-lieu fees to the city for use in acquisition of farmland for conservation. Lands subject to conservation easements must have soils that are comparable in quality to those on the converted land, as well as adequate water supply to support the continued agricultural use of the land. No condition (such as partial urban development) can exist on the land that will preclude it from being farmed in the future. To ensure compatibility with the Yolo County Draft Conservation Management Plan, the ordinance states that up to 20 percent of the easement area may be enhanced for wildlife purposes in accordance with State Department of Fish and Game or Yolo County requirements." [45]

Farmland mitigation strategies can be a source of funding for preservation programs from specific farmland properties, although they are not widely implemented. Mitigation depends on having a baseline farmland preservation program. Given successful mitigation programs, such as in Vermont and Massachusetts, American Farmland Trust (2002) found that:

> "Programs that obtain full mitigation for the loss of farmland appear to be most successful when certain conditions [are met]. These include:
>
> 1. A farmland protection program is in place with operators that know the value of local conservation easements and can identify parcels of farmland with equal resource value.
> 2. State and local staff with a history of farmland preservation have worked to convince other state agencies of the need to require mitigation. They also build on earlier efforts and improve the process of mitigation.

3. There must be a strong public perception that farmland is a valuable and diminishing land use. In small states like Vermont and Massachusetts, or in Washington's rapidly growing King County, farmland loss has bolstered public and government support for mitigation.
4. Existing federal and state environmental review processes (NEPA, CEQA, MEPA, ACT 250) have been used to provide greater opportunities for mitigation.
5. A climate of political support by state executive and legislative branches as demonstrated by executive orders and other farmland preservation regulations." (AFT 2002)

State-wide level recommendations for baseline policy tools and improvements are outlined in the WSDA Future of Farming Project evaluation of land protection tools and farmland status reports (AFT & WSDA 2008; WSDA, 2009), and are cited in Clark County's APAC report (2009). In addition, progress can be measured using Farmland Preservation Indicators (Office of Farmland Preservation, 2009).

Farmland preservation may benefit from wetland mitigation, indirectly. For example, in the Seattle foodshed, Skagitonians to Preserve Farmland appealed an attempt to apply wetland mitigation banking to the conversion of a 396-acre former dairy farm into a wetland,[46] reached a settlement agreement in 2009, and is applying all the settlement money to the Farmland Legacy Program to purchase development rights on farmland.[47] The Washington Dept. of Ecology administers the Skagit [County] Environmental Bank sponsored by Clear Valley Environmental Farm, LLC, for the 396-acre wetland area being restored.[48] This example illustrates a challenge for farmers if wetland restoration takes farmland out of production when it is converted to supply conservation services (Bengston, Fletcher, & Nelson, 2004). However, working farmland and conservation restoration can co-exist, such as through the Conservation Reserve Program.[49]

Clark County has some experience in mitigation banking, given three Wetland Bank Projects (Columbia River, East Fork Lewis, and Terrace) involving wetland function restoration and channel habitat rehabilitation projects.[50] A fourth Bank, proposed and under review by the Washington Dept. of Ecology, the 876-acre Wapato Valley Mitigation and Conservation Bank includes extensive restoration projects on the actively managed (for forestry and grazing) Plas Newydd Farm.

The values of stakeholders and level of urgency driving farmland retention make a difference, as with all policy strategies. For example, mitigation is more feasible in areas "threatened with rapid growth and shrinking farmland acreage," and where the farmland is perceived as having important values to protect (American Farmland Trust, 2002). Since mitigation builds upon and integrates other farmland retention programs, similar challenges and opportunities apply. Overall, Clark County's former Agricultural Preservation Advisory Committee (APAC, 2009) "seeks a stable agricultural land base that is not continually converted to alternative land uses and zoning designations or that, through conversion of adjacent properties, causes management conflicts with neighbors and management inefficiencies for agricultural operations."

5. Socio-Economic Considerations

Designating and protecting agricultural lands in the context of urban expansion has been a challenge across the United States and Canada for decades (Caldwell et al., 2017). Western Washington is no exception (Canty et al., 2012; Klein & Reganold, 1998). In areas with high development pressure farmland loss is still high, even with relatively strong farmland protection programs, such as King, Pierce, Snohomish, and Whatcom Counties in Washington State (Canty et al., 2012).

Barriers to overcome in protecting farmland include threats that perpetuate doubts about the future of farming. For example, only 10 percent of agricultural-use landowners surveyed in King County, Washington, felt that agriculture had a "modest" or "bright" future (Oberholtzer, Clancy, & Esseks, 2010). Such an "impermanence syndrome" can arise, particularly in rapidly urbanizing regions, where several factors combine to further reduce the viability of farming (Propst et al., 1990; 2012 eBook). Farm preservation policies in regions with elevated land value, development pressure, and a mixed suburban-rural-farm landscape, are better suited to preserving remnant farms using incentive and acquisition strategies, because restrictive initiatives can actually drive "remaining farmers to sell out immediately to avoid potential future controls" (Propst et al., 1990; 2012 eBook). Protection measures, such as tax relief and/or zoning strategies, by themselves are not permanent, as boundaries can be moved and land use designations can change any farmland protection intent, particularly where urban development pressure is high (Caldwell et al., 2017).

Local prioritization and rural values make a difference in farmland preservation. Farmland preservation may be motivated by a wide range of farm and rural amenities, also including agrarian cultural heritage (Berkes & Ross, 2013). New Hampshire is one of the States that considers support for agriculture as a way to preserve rural character of communities.[51] Motivating values may be combined to encompass the land stewardship ethic goals of agrarians, environmental protection perspectives that farmland is better for nature, and economically-based farmland utilitarian goals (Mariola, 2005). Some farm amenities are marketable, such as agri-tourism, recreation, U-pick, and the production of food for local markets, whereas non-farm amenities include scenic beauty, groundwater recharge, open space, wildlife habitat, and less urban development (Irwin, Nickerson, & Libby, 2003).

Preserving farmland amenities also depends on local conditions, such as whether farmland is already fragmented on the urban fringe. For example, if scenic amenities are targeted, smaller parcels disbursed across rural areas might offer benefits to more people, whereas wildlife habitat amenities would be better served by large contiguous expanses of conserved farmland (Irwin et al., 2003).

Prioritizing Land for Agricultural Preservation depends on objectives and criteria for choices. Based on an extensive review of criteria used in other farmland preservation research around the world, Kerselaers et al (2011) developed a "context-specific value tree" for the agricultural sector to use in a participatory process for evaluating which agricultural land to prioritize for preservation.

Farms generate more revenue than Counties spend on public services needed for residential (or other) development infrastructure**,** according to numerous studies conducted by American Farmland Trust, indicating that farm taxation programs are good long-term fiscal strategies (Bengston et al., 2004; Wagner, 2003).

Economic benefits may also accrue to County coffers resulting from the elevated land values (and consequential property tax increases) driven by development. These benefits may be realized by the public from parcel tax collection increases from landowners neighboring conserved land, which could be used to finance additional agricultural preservation (Goeoghegan, Lynch et al. 2006). Two of the three Counties studied in Maryland could theoretically generate enough funds to purchase 60% more development rights in the first year, and these property taxes are collected annually in perpetuity, so could help finance open space acquisition over a long term land (Goeoghegan, Lynch et al. 2006). An increase in neighboring land values was not universal for the region studied, likely due to a lower "willingness to pay" in the County which was not under so much pressure to develop and had not already lost as much farm and forest land (Goeoghegan, Lynch et al. 2006).

For perpetuating farmland preservation, there is also the "agricultural transfer tax" when land leaves agricuture to be developed for residential, commercial, or industrial use, whereby such revenue could be used for further farmland preservation (Goeoghegan, Lynch et al. 2006).

Integrated and innovative policies focused on enhancing farm viability in the urban interface have been found to better support farming in urban-influenced counties, and ensure the multiple community benefits of having a sustainable agricultural sector (Jackson-Smith & Sharp, 2008). This is especially true for ***agriculturally important*** metropolitan regions across the U.S. (Jackson-Smith & Jensen, 2009), such as Clark County.

Having complimentary policy tools improves farmland preservation and helps prevent adverse consequences (Bengston et al., 2004). For example, through purchase (or transfer) of conservation easements, landowners can be compensated for the difference in land value associated with zoning restrictions (Bengston et al., 2004). King County, Washington exemplifies integrated policies and initiatives under one overarching Agricultural Program.[52]

To address water access and availability–a key resource limitation for agriculture, a **water shed-level approach** to land use planning across zoning categories would integrate water quality

and agricultural issues in (revised) conservation districts to promote conservation of soil, water, and biodiversity on a geographic basis (Guercio, 2010).

Oregon protects agricultural lands through "Exclusive Farm Use" (EFU) zoning, tax reduction for farm use, and the hallmark land use planning process (1973); and Oregon has instituted additional legal initiatives which support innovative local and regional agriculture marketing and production, as well as more affordable financing for new farm investment for start-ups and expanding operations (loans for land and/or infrastructure) (Boone & Boone, 2012).

Support for Sustaining Agriculture in Clark County continues to expand. Since 2008, Clark County's multi-stakeholder Food System Council has been promoting the retention of agricultural land for local food production and healthy food access goals (FSC 2012, 2013). Numerous other organizations address farm and food system issues in Clark County, as well. Support comes from Clark Conservation District, Clark College, Urban Abundance, WSU Extension, and others involved in local food and agriculture and resource conservation. Slow Foods SW Washington hosts quarterly or monthly events. The Clark County Food System Council is tracking policy and action on the County and State level, and meets monthly. Clark College recently convened a food/farm conference to guide their future endeavors (February, 2017), and some events are convened at the Vancouver Library (October, 2017). In September, 2017, the Food System Council and others convened the first in a series of strategy sessions to promote "food hub" initiatives for connecting farm products with consumers.

Innovative ideas persist. In addition to Food System Council recommendations, a summary of findings from Leadership Clark County's (LCC) 2016 report cites recent and historic agricultural information (including the APAC (2009) report and appendices).[53] Furthermore, the LCC report (p. 13) cites the Growing Healthier Report[54] recommendation for conserving agricultural lands for community food security, including within urban zones as well as outside the Urban Growth Areas. The LCC report, based on secondary research and results of an on-line survey of over 100 stakeholders, indicates that respondents believe local food demand is growing [91%]. A majority of respondents agree with ideas for investing in various opportunities such as **policies to preserve agricultural land [71-80%]**; and partnerships that foster collaboration among organizations and agencies [84%]. Asked who should have primary responsibility for resolving challenges and developing opportunities, **46% responded "hybrid entities that are both public and private"**— more popular than cooperatives [11%], non-profits [10%], government/public-sector [9%], or educational institutions [5%].

Concerted efforts and renewed commitments can serve to protect the future of farming in Clark County. While the farm and farmland losses have been significant and the context of rapid development is still challenging, there is a persistent and growing farming sector steadily gaining recognition for its commercial sustainability and contributions to multiple community benefits.

Appendix A. Agricultural Land and Farm Protection Tools

The following list of tools is derived from the assessment by American Farmland Trust on how Puget Sound Counties in Washington State "score" for farmland protection (Canty et al., 2012). **Bolded items are covered in detail in this paper,** underlined items are utilized in Clark County, including: Growth Management Act provisions (Growth Management Area boundaries, etc.), zoning provisions governing resource and rural land uses (agriculture, forestry, etc.), Right-to-farm ordinance(s), and Current Use Taxation.

- Land Use Regulation
  - Growth Management Planning
  - **Agricultural Production Districts**
  - **Policies for "no net loss" of farmland**
  - **Right-to-farm**
- County Zoning
  - Agriculture, Rural, or other Resource designations (restricts or permits uses, subdivisions, parcel sizes, etc.)
  - Ordinances and Permitting (clustering, agri-tourism, etc.)
  - Zoning types:
    - Large lot residential Zoning
    - Exclusive agricultural zoning
    - Cluster zoning, and Performance-based zoning
- County Property Taxation
  - Current Use property tax assessment and relief (see also Whatcom County with ~100% enrollment)
  - Conservation Futures Program tax collection (see also Thurston County)
- **Incentive-based, Voluntary, Programs for Land Preservation**
  - Purchase of Development Rights or
  - Purchase of Conservation Easements
  - Transfer of Development Rights
  - Purchase (by public agency, land trust or private entity) with easement
- Economic Development Strategies
  - Coordinated farm support (County collaboration with University Extension, Conservation Districts, etc.)
  - Agricultural Commission (Agricultural Advisory Board in Skagit County)
  - Marketing program
  - Agricultural Assessment (and/or Food System Assessment)
  - Agricultural Strategic Planning
  - Assistance for farmers with permitting processes

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Clark County Agriculture

From local roots to future bounty

Prepared by the Loco4Locavores Team
Leadership Clark County, Class of 2016

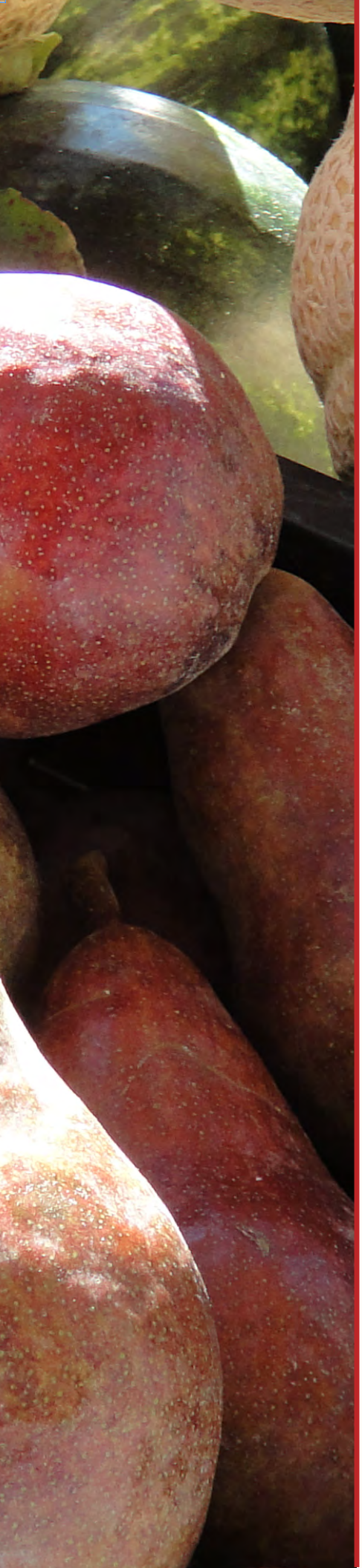


Table of Contents

The Loco4Locavores Team, Leadership Clark County Class of 2016, included Julie Arenz, Chris Attaway, Chelsea Chunn, Catrina Galicz, Scott Johnson, and Cyndie Meyer.

We would like to acknowledge the expertise and assistance of John Spady, Executive Director of Community Forums Network©, and the support of local resident, Heather Tishbein, who both volunteered countless hours to assist in the survey process associated with this report. If further analysis of the survey is of interest, please reach John Spady at CFNetwork@CommunityForums.org or 1-(800)-369-2584.

Introduction

In Clark County, Washington – as in communities around the world – local decision makers struggle to prioritize the use of resources such as labor, land, water, and energy to maximize the local quality of life and economic potential. Competing interests from multiple sectors including residents, businesses, government, industry, real estate, health, environment, and agriculture make these decisions challenging and often conflict-laden. Because the intrinsic value of some sectors, such as agriculture, is often difficult to measure, it can be challenging to judge its importance in the community's physical and economic landscape.

As the Columbia River Economic Development Council (CREDC) plans for the future of Clark County's economy, they recognize the potential impact on local agriculture and food production. The CREDC and community partners must debate the questions: What is the proper place for agriculture in our local economic development strategy? Will financial investment and resource retention grow the local agriculture sector, or has the era of rural Clark County passed? Will infrastructure to support food aggregation, processing, distribution, product development, and marketing harvest sufficient financial gain to make the required investment worthwhile for Clark County's future? What value should we place on preserving the area's agricultural heritage, the health benefits of locally produced food, and the security benefits of meeting our community's nutritional needs in times of disaster? Is Clark County best served by prioritizing agriculture, or should we pave over local farmland in favor of industry and housing?

These are some of the decisions to be made in a realm that is often least considered in Clark County's economic development plans. To provide background on this topic, CREDC charged a team from the 2016 class of Leadership Clark County with the task of collecting data and input about the local agricultural economy. The following report summarizes this information, places it in an historical context, includes recommendations from expert advisory groups, and suggests next steps for CREDC to consider.

Historical roots

The history of Southwest Washington is forever linked with the legacy of Lewis and Clark, the Hudson's Bay Company, Fort Vancouver's fur trading operations, and the timber industry. But in its earliest years, Clark County also had a thriving agricultural economy. In fact, the National Park Service notes that although Fort Vancouver "was a headquarters and primary supply depot for fur trading operations, it employed more people at agriculture than any other activity."

Fort Vancouver, at the location of today's county seat, the City of Vancouver, took shape on the north bank of the Columbia River in 1825, twenty years before Clark County became a reality. Here, Hudson's Bay company established agricultural and livestock areas including a series of "plains and prairies" (including Fourth Plain) that extended for 30 miles to the north and east of the fort. Agricultural products from fields adjacent to the fort and from the Willamette Valley were transported by river to trading sites far inland.

Barberton Grange

The Donation Land Act of 1850 provided free land for settlers and opened the entire county for land claims. Settlers flocked to the area and the local agriculture flourished.

In response to the growing agricultural community, granges were organized. Farming around Barberton Grange, in today's St. John's area, dates back to 1848 and the arrival of the area's first pioneers. The LaCenter Grange was founded in 1874 and Mt. Valley Grange, which originated in Chelatchie Prairie, was founded in 1889.

Local grange activity impacted the entire state when the Washington State Grange was founded in 1889 at the Pioneer Store in LaCamas (now Camas). This effort was spurred in part by objections to the proposed state constitution that had just been drafted in Olympia.

The Camas Grange founded some of the first co-ops in the area, including the Pioneer Fruit Cooperative and the Washougal Growers Packing Corporation. In subsequent years, the Grange joined campaigns against entrenched political parties and business monopolies and fought for improvements for the education of rural children. The Grange helped farmers gain buying power, develop markets, and exert pressure on elected officials for improvements. It was

also instrumental in breaking the monopoly that riverboat companies held on river transportation, thereby reducing shipping costs for agricultural products going to Portland and other locations on the Columbia and Willamette rivers.

The Grange was an important social connection for isolated farm families. Here, local farmers had an opportunity to exchange news and ideas. Most importantly, the Grange provided relief and assistance to farmers in times of need such as illnesses or crop failure.

Early Clark County farms grew a variety of agricultural products, including hops, potatoes, hay, poultry, beef, and fruit. Prunes and dairy products played a particularly large role in Clark County's agricultural history.

Because fruit grown in the Northwest had to be dried for shipment, prunes were an ideal crop for Clark County farmers. In 1876, Vancouver businessman Arthur Hidden introduced the first Italian prune trees that soon made Clark County famous. His 3.5-acre orchard produced such a profit that others soon followed. Seven years after he planted his first trees, Hidden built Washington's first prune dryer and processed 5,000 pounds of fruit.

By 1888, Vancouver prune orchards were marketing 200,000 pounds of dried prunes a year in the county's eight commercial dryers — and more than 300 acres of land was covered with prune trees. By the turn of the century, there were more than 435,000 Italian plum trees in Clark County producing more than 819 tons of fruit. After drying, more than 75 percent of the prune crop was exported to Eastern Europe.

Andersen Prune Orchard
Clark County Historical Society

Shifting crop patterns were reflected in the changing names of geographical features. Strawberry Knoll 10 to 12 miles east of Vancouver became Prune Hill when M. A. Boyle planted 350 plum trees there in 1883. Fruit Valley, west of Vancouver, received its name because of all the orchards there. Fourth Plain, the large plain about four miles northeast of Fort Vancouver, long known for plentiful apple and pear orchards, was named "Orchards" in 1885 when a post office was established in the area.

Prune Queen
Clark County Historical Society

Prunes were such an important part of Clark County's economy that the crop was celebrated with an annual Prune Festival. In 1919, Prune Queen Fay presided over the first festivities that featured a marching group of

"Prunarians" who wore matching suits made by Washougal'a woolen mill. The Prunarians were led by the "Big Prune."

Clark County was known as the "Prune Capital of the World" through the 1920's, with production spiking to 17 million pounds per year. By 1930, however, the industry began to decline. California farmers grew more prune varieties, World War II dampened the export market, and a pest infestation destroyed many orchards. Clark County's prune farms never fully recovered. In 1937, Clark County's prune production had fallen to 1.2 million pounds.

Despite the decline, prunes were still grown in the county. In a March 2012 Columbian newspaper article, journalist Sue Vorenberg quoted Joe Beaudoin, owner of Joe's Place Farm: "When we moved here in 1942, the whole Mill Plain area to the top of Prune Hill — pretty much everybody had prune trees...and there were dryers about every quarter-mile."

Vorenberg also quoted Frances Kunze, owner of Kunze farms: "When I came here, Fruit Valley was filled with prunes, but at that time industry was also coming in, and new houses were being built, and after that the prune industry shrank to almost nothing."

Dairy farming was another robust agricultural industry in Clark County, with many dairy farms located in and around Battle Ground. Individually, dairy farmers lacked the ability to market or transport products beyond the immediate area, but in the early 1900's they banded together to strengthen their capacity. Already allied through membership in local Grange chapters, these dairy farmers forged a vigorous cooperative movement in Battle Ground and surrounding communities. By combining efforts, they built common delivery stations, and aggregated their combined output. The cooperative dairy system proved to be so successful that the model was later adopted by egg producers and others.

The Battle Ground Dairymen's Co-Operative Association started production in 1924, and by 1928 it was running day and night. In January and February of 1928 alone, it handled more than 557,000 gallons of milk. It was also known over the years as the Washington Dairyman's Cooperative, the Clark County Dairymen's Cooperative, and

AgCo. By the 1950's Clark County ranked fifth in the state in the number of dairy farms. In 2002, the cooperative was purchased by Wilco Farm Stores, which still operates in Battle Ground and East Vancouver today.

Between 1945 and 1954, the number of farms in Clark County dropped by 434. By 1954, there were still 4,100 farms in Clark County. Of these, 617 were dairy farms, 220 were fruit and nut farms, and 220 raised poultry. At the time, Clark County was the top producer of filberts in the state (providing 25 percent of the nation's filberts), fourth largest producer of strawberries and timothy hay, and ranked sixth for dairy, fruit, and chickens.

Although the number of farms in Clark County was still ranked fourth in the state in 1954, two-thirds of remaining farms were less than 50 acres in size. Farmland values in 1954 had increased from a low during the Great Depression to a high of $280 per acre including buildings. Sub-division and sales of historic, large land grant parcels and growing demand for housing and industrial land contributed to the decrease in dedicated farmland.

By the 1950's, many farmers were no longer able to earn enough from farm production to maintain their livelihoods. Fifty-seven percent of all farm operators held non-farm jobs for more than 100 days per year by 1954.

Combine harvester (1910)
Clark County Historical Society

Today, only six centennial farms still operate in Clark County. A few are still owned and operated by descendants of the original owners including BiZi Farms (est. 1872), Hazen/Frazier Farm (est. 1876), and Mattson Farm (est. 1883).

Workers at Albert and Ed Christiansen Hop Yards
Clark County Historical Society

Current profile

According to the 2012 Census of Agriculture (COA), Clark County's agricultural economy comprised 1,929 farms on 74,758 acres, with a market value of $50.9 million dollars. Milk, fryers and berries were the county's top three agricultural products.

Key points identified by comparing the 2007 COA with 2012 census:

- Clark County agriculture is viable and sustainable.
- Clark County pastureland has growth potential as cropland.
- Smaller farms exert less overall impact than mid- to large-scale farms.
- Meat and poultry products are an area of potential growth.
- Current farm owners/operators are aging and a new generation of farmers will be needed to maintain and grow Clark County's agriculture industry.

Market share

Market value decreased three percent between 2007 and 2012, but Clark County remained in the upper two-thirds of Washington State's $10 billion agriculture industry. Clark County ranks third in Washington State for nursery and green house floriculture, fifth in berry production, and eighth in corn for animal feed. Twenty-five percent of Washington's persimmon crop is grown in Clark County, and we have the state's second highest concentration of berry farms, with 177 farms and 1,086 acres devoted to berry production. Clark County poultry production is second in the state for broilers and ninth in production of layers and pullets. We lead the state in walnut growing with 14 farms.

Expenses

In 2012, farm expenses totaled $54.7 million. This included $5.7 million in property taxes, nearly $1 million for utilities, $1.3 for repairs, supplies and maintenance, $2.7 million on fuel, and $15 million for feed.

Farm Size

A 2007 report by Globalwise for Clark County noted that more land had been transferred into the current use farm and agriculture program than was commercially farmed. As of 2006, there were a total of 48,450 acres in these designations in the county. By 2012, 86 percent of farms were smaller than 50 acres in size, and encompassed approximately 37 percent of total productive farmland.

Employment

On the county's small farms, the main source of labor is typically the owner-operator and family members. In 1969, owner-operators made up 60 percent of farm employment in the county. Farm proprietors' share of employment increased until 1978 when it reached 87 percent. It dipped through the next decade, but proprietor share of farm employment then reached its all time high of 93.5 percent in 2012.

Because farm labor expenses are significantly reduced on owner-operated farms, and because these farmers often work at off-farm jobs to supplement their families' income, some producers can continue farming when commercial agriculture is otherwise no longer viable. Today, only 35 percent of Clark County farmers are exclusively employed in farming.

In 2012, there were 3,072 farm operators and 8,851 food and farming jobs in Clark County. This figure represented more than seven percent of Clark County jobs in 2012, a time when unemployment crept above 10 percent. Agriculture accounted for almost as many jobs as the top eight private employers in Clark County combined.

Hired farm labor accounted for an additional 2,211 workers, including 454 migrant workers, for a $9 million payroll. Contract labor on 178 farms cost farmers nearly $1 million. The 2012 COA also reported an additional 2,476 unpaid workers on Clark County farms. Thirty percent of Clark County farmers are female, and the average age of Clark County farmers is 59 years.

Evidence of growth and support

The number of farm outlets is evidence of an increasing small farm industry in Clark County. According to a survey of Clark County's food system in 2008, there were four farmers markets, 10 CSA (community-supported agriculture) farms, four community gardens, and 42 fruit and vegetable stands. By 2014, there were seven farmers markets, and the 2012 COA reported 39 CSA farms, 141 farms producing value-added commodities, 43 farms with on-farm packing facilities, and 85 farms selling direct to retail outlets. Eight-five percent of vegetables grown were "harvested for fresh market" (compared to being harvested for processing). There was an 88 percent increase in the acres of vegetables reported to the COA between 2007 and 2012.

Grass roots support for local agriculture is also growing. Local farmers market managers collaborate to share wisdom and marketing expertise. Organizations such as Slow Foods, Southwest Washington Tilth, the Clark County Food System Council, and the Clark-Cowlitz Farm Bureau support local agriculture.

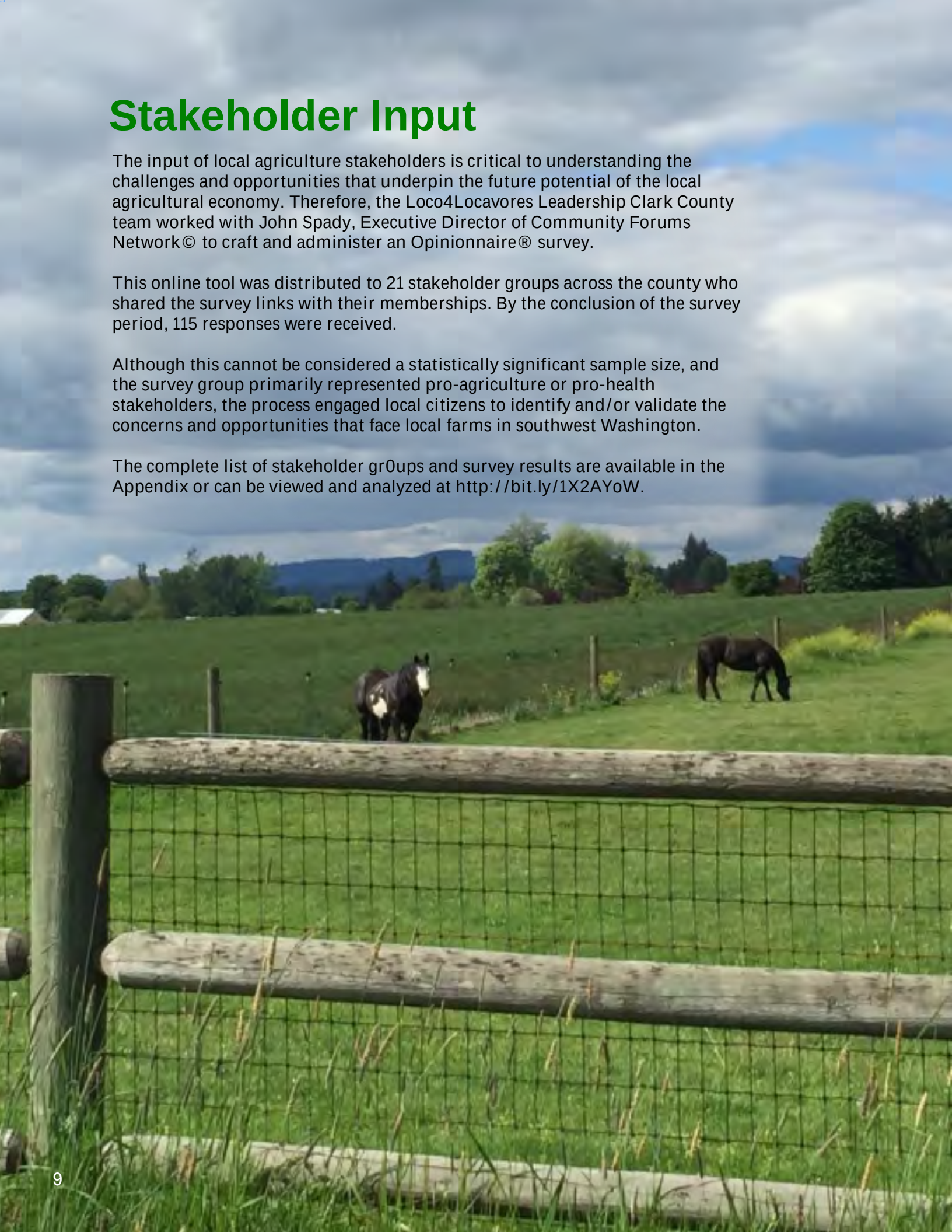
Stakeholder Input

The input of local agriculture stakeholders is critical to understanding the challenges and opportunities that underpin the future potential of the local agricultural economy. Therefore, the Loco4Locavores Leadership Clark County team worked with John Spady, Executive Director of Community Forums Network© to craft and administer an Opinionnaire® survey.

This online tool was distributed to 21 stakeholder groups across the county who shared the survey links with their memberships. By the conclusion of the survey period, 115 responses were received.

Although this cannot be considered a statistically significant sample size, and the survey group primarily represented pro-agriculture or pro-health stakeholders, the process engaged local citizens to identify and/or validate the concerns and opportunities that face local farms in southwest Washington.

The complete list of stakeholder gr0ups and survey results are available in the Appendix or can be viewed and analyzed at http://bit.ly/1X2AYoW.



Stakeholder Summary

Farming has the potential to contribute significantly to an area's economy and to provide the surrounding community with multiple benefits; however, farming requires a unique and intense focus by owners/operators that leaves little time for business development, market research, planning, or creating support industries. Most Clark County farmers operate independently, and are often so busy running their farms while also working non-farming jobs, that they have neither the time nor know-how to lobby for policy changes, forecast market trends, develop business models, or identify new markets.

Local farmers report that they are discouraged to see the profitability of their chosen professions dwindle. Although they view policies, tax structures, and resource designations as becoming less favorable to agriculture, they are unable to independently conduct the outreach necessary to educate the community and rally adequate support for clearer market direction, cooperative effort, and business and policy support. Local agriculture stakeholders see the state of the local agricultural economy as balancing on a fulcrum that could tip either way depending on the support and partnership of other stakeholders, community partners, business owners, customers, residents, policy makers, and investors.

Local stakeholders recognize that an economic development strategy for Clark County's agricultural industry could move in one of three directions. It could:

1) Continue to exclude agriculture from the Clark County's overall economic development plan, leaving this sector to weather current and future market forces unassisted,
2) Implement strategies to bolster and sustain local agriculture's current status and market share, or
3) Implement strategies and forge partnerships to grow and develop local agriculture into a thriving segment of Clark County's economic profile.

The following summary of stakeholder input identifies multiple strategies and potential activities that can help maintain or grow of the local agriculture sector. As an example, the high cost of purchasing and maintaining farm equipment often presents an insurmountable obstacle for small farm owners. A used, five-year-old combine harvester costs approximately $150,000, and maintenance for this equipment can exceed two percent of the purchase price for every 400 hours of operation. Downtime, missed work, and transportation costs to move the equipment for repair add additional expense.

Developing a shared purchasing/shared use cooperative for farm equipment may provide an answer for local farms while also creating a potential allied business opportunity. Collective ownership of high cost equipment and a cooperative, lend/lease, or timeshare arrangement would potentially reduce the cost to the farmer and increase the potential for sustainability. Developing a workforce specializing in farm equipment maintenance or a mobile maintenance service would further decrease downtime and operating costs.

Stakeholders also highlighted the need for assistance to cultivate market demand with large-scale commercial buyers. Burgerville, Inc.'s Farmer Outreach Program is one example of a farm-to-retailer partnership. In this model, Burgerville contracts with local farms to supply food products for their restaurants, collaborates with farmers to ensure production is adequate to meet the company's needs, and engages a local trucking company to transport farm products to their final use destination. Although this model holds promise, individual farmers lack the time and expertise to negotiate such business relationships and need assistance to develop the infrastructure to aggregate and ship their products to meet large-scale demand.

Additional feedback garnered from the stakeholder survey follows:

Local agriculture has both extrinsic and intrinsic value to the citizens of Clark County and the quality of life in our area. Local agriculture:

- Supports national and local food security by reducing community dependence on outside food sources, fossil fuels, and access points.
- Reduces the distance food travels, thereby reducing environmental impact, preserving nutritional value, and increasing food safety.
- Preserves Clark County's agricultural tradition and our area's historical roots.
- Supports a clean watershed, clean air, and preserves an attractive rural environment.
- Contributes to the local economy by encouraging residents to spend locally.
- Has a strong economic potential due to a growing locavore movement, agritourism, and thriving viniculture.
- Has growth potential if supported as a valued local industry.

Fiscal and policy supports that consider the following factors can help to maintain and grow local farms (see 2009 Agriculture Preservation Strategies Report attached):

- Flat, fertile farmland is a limited resource in Clark County.
- Land use zoning can protect agriculture while promoting mixed use for industry and housing.
- Creative financial tools such as transfer of development rights can help farmers pull gains from the land while maintaining agricultural use for future generations.
- New farmers need connection to lenders who understand the unique needs of farming. This resource is dwindling as lenders with agricultural experience retire from the workforce.
- The structure and designation of taxes and water fees can be adjusted to prioritize land use for food production and security.
- Subsidies to encourage start-up farms and small farms would help them to flourish.
- Establishing a local agricultural advisory council may be one way to address this need.

The market for local farm products can be enhanced by:

- Addressing regulatory restrictions on food processing and sales.
- Creating a local food hub that can aggregate and distribute local products.
- Establishing a local industrial level commissary and incubator kitchen to transform local farm products into marketable food products.
- Providing local farmers with market research, visioning, and training to support strategic agricultural decisions.

The affordability of farming can be improved by:

- Establishing local USDA processing plants or mobile processing units for grain, meats, poultry.
- Establishing a local farm co-op for farm supplies and shared-use equipment.
- Training farm equipment repair technicians and attracting repair services to the local area.
- Increase opportunities for access and visibility of farm labor career pathways to promote the growth and retention of local workers.

Infrastructure to support the growth of local agriculture could include:

- An online grange to facilitate farmer-to-farmer connection, shared use of resources, and decision making.
- Dedicated advertising and market development for local agricultural products – both large and small scale.
- Promoting agritourism such as local farm maps, bike rides to farms, connection of trails and parks/camping with farms, infrastructure and maps to connect scenic farm roads, promotion of horse ranching/riding.
- Establishing more local food outlets
  - ✓ Establish pop-up markets or produce wagons that farmers can use to sell produce in neighborhoods.
  - ✓ Create a farmers' business alliance through which individual farmers can join together to bid on large-scale opportunities (i.e., jails, schools, etc.).
  - ✓ Neighborhood outlets for small farm sales.

Local food production can extend beyond farms and be augmented by:

- Backyard gardens.
- School gardens.
- Community gardens in parks, open spaces, and roof tops.
- Hydroponic and vertical gardens.

Advisory Input

Several publications by local and state agencies and advisory groups identified key investments and supports needed to increase the viability of a local agricultural economy. These reports are available in their entirety either online or in the appendices, and key points are summarized here.

In his 2008 report, *Food and Farm Economy in Clark County*, Ken Meter, a national expert on food systems, stated:

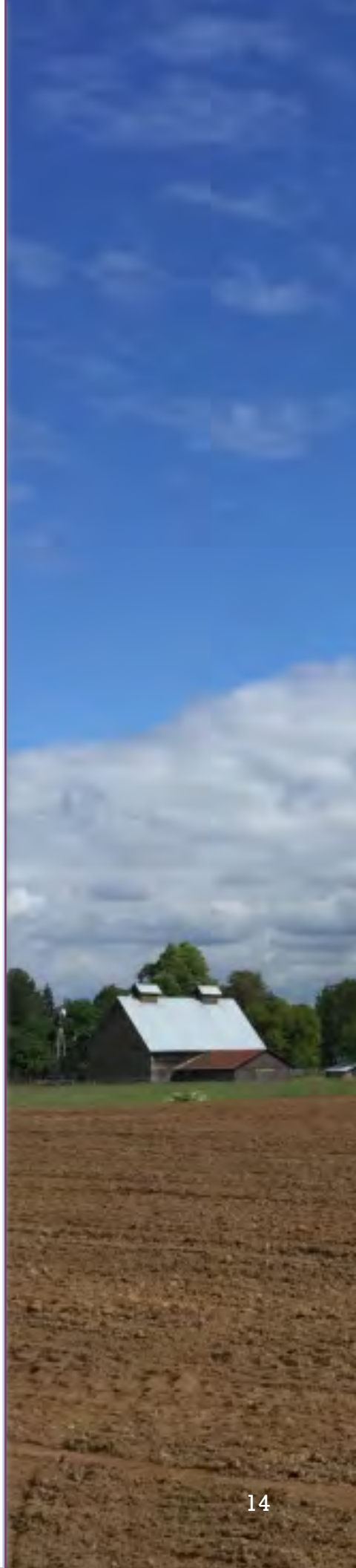
> [Clark County food] producers spend $400,000 more each year to produce crops and livestock than they earn in sales. In the course of farming at a loss, farmers spend $30 million buying farm inputs that are sourced outside the county. Meanwhile, Clark County consumers buy $700 million of food produced outside the county. This amounts to an overall flow of $730 million *away* from the county each year — over twelve times the value of all agricultural products now produced in Clark County.

The AG 2000 Project: Implications for the Future of Farming was initiated by the Washington State Department of Agriculture in 1986 after Washington agriculture had gone through difficult times similar to those of 1998-2004. Its main goal was to develop long-term coordinated economic strategies for Washington agriculture to the year 2000. The project outlined five major economic strategies that needed emphasis. These strategies are still valid today and are echoed in the input from local Clark County stakeholders gathered through the survey conducted for this report.

1. Invest in domestic and international marketing, including expanded market information, target market analyses, product development, promotion, and enhanced marketing support programs and services.
2. Commercialize science and technology through new discoveries, technology development, and commercialization.
3. Create value-added processing by improving the business climate and encouraging or recruiting selected processing activities. Processing can add value through a single technology, such as freezing or canning; through blending of ingredients, as in cranapple juice; or through development of more sophisticated prepared meals or microwavable products.
4. Build infrastructure, especially in education, finance, and transportation.
5. Manage natural resources through multi-interest coalitions, increased efficiency in natural resource use, and increased education of the public and industry about agriculture and the environment.

In 2009, an update to the *Future of Farming* report proposed a strategic plan that identified the following key recommendations that still apply today:

1. Make agriculture a priority. This will require more widespread acceptance of agriculture's importance to the state, and greater emphasis in future policymaking on agriculture's needs.
2. Eliminate regulatory barriers. The accumulation of complex local, state, and federal regulations has become a major threat to agriculture's competitiveness and to the retention of the state's food processing industry. It has become a serious deterrent to entry of the next generation of farmers and agribusinesses.
3. Protect key resources in agriculture. The land, water, labor, and energy resources that are crucial to agriculture's survival are under threat. Agriculture's access to those resources needs to be protected.
4. Strengthen key support services. Global markets have become intensely competitive and demanding. To compete effectively, Washington agriculture needs major assistance in advanced research and applied technology and in other marketing services such as transportation and processing.
5. Harness emerging opportunities. Agriculture must recognize, monitor, and tap into emerging factors in a timely manner.



The Growing Healthier Report, published by the Public Health Advisory Council and Clark County Public Health in 2013, linked the growing rate of obesity and chronic disease with lack of access to health foods. The report made the following policy recommendations to support local agriculture as part of an overall plan to support a healthy, thriving community:

Support increased local production of food:

- Support and promote current farmers markets and development of new markets.
- Require or incentivize community gardens or urban agriculture space to accompany new development through dedications, easements, or impact fees.
- Establish community gardens in existing parks and open spaces.
- Establish a level-of-service standard for community gardens.

Conserve the county's designated agricultural lands and support for the widest variety of agricultural crops and products:

- Integrate food system elements into all planning efforts, including land use and economic development.
- Create a land use category for urban agriculture, distinguishing it from rural agriculture as smaller, temporary, less intensive, and of short-term commercial significance or critical importance to community food security. Allow this use within the UGA.
- In addition to long-term commercial significance, consider community food security in all land use decisions relating to agricultural land.
- Define community gardens and/or urban agricultural areas as an urban service to be concentrated in UGAs.
- Add or modify Comprehensive Plan goals to include community food security.

Ensure that food infrastructure accompanies population growth by assessing and planning for food production, processing, wholesale, retail, and waste management activities:

- Consider strategies such as enterprise zones, tax incentives, financing initiatives, technical support, and regulatory streamlining for healthy food businesses.
- Assess government-owned land suitable for cultivation and support opportunities for food production activities on these sites.
- Allow greater flexibility to farmers regarding development standards and commercial uses on farmland to support direct marketing of local agricultural products.

Next Steps

The following ideas are offered to CREDC as possible next steps for engagement/study:

- Extend the community opinion process initiated for this report to include a broader section of stakeholders, a more focused set of queries, and a deeper analysis of results.
- Utilize the *USDA Economics of Local Food Systems Toolkit* to make more deliberate and credible measurements of local and regional economic activity and other ancillary benefits. (See sources for link)
- Engage local civic and business leaders to discuss investment and support for a local food incubator/commissary kitchen and a local food hub. Partners that have expressed interest in these discussions include: Burgerville, Inc., Mill Creek Pub, WSU Clark County Extension, City of Vancouver Department of Economic Development, the Vancouver Farmers Market Foundation, Salmon Creek Farmers Market, and Clark County Public Health.
- Evaluate return on investment for support systems such as a farm cooperative for equipment and supplies, a virtual grange, produce wagons, and mobile processing.
- Investigate and develop potential domestic and international markets.
- Conduct and disseminate research on trending markets and consumer demand.
- Convene and collaborate with a broad cross-section of stakeholders to discuss partnership, investment opportunity, and policy needs. Willing partners for such collaborations include: Identity Clark County, Southwest Washington Tilth, the Clark County Food System Council, the Healthy Living Collaborative, Clark County Grown, Slow Foods, Washington State University Vancouver, Washington State University Clark County Extension, and Clark County Public Health to convene a broad cross section of stakeholders to discuss partnership, investment opportunity, and policy needs.

Sources

Links are provided for sources not included in the appendices.

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C. Analysis of the Agricultural Economic Trends and Conditions in Clark County Washington. (2013). Globalwise.

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CLARK COUNTY FOOD SYSTEM COUNCIL

Promoting Agricultural Food Production in Clark County

A proposal developed by the
Clark County Food System Council
November 2013

Clark County Food System Council

Promoting Agricultural Food Production in Clark County

Overview

The Food System Council proposes that Clark County support agricultural production by maintaining rural lands that are best suited for farming. The Council's analysis shows that Clark County has about 80,000 acres that comprise the best farming land, as shown on the map on the following pages. We have a responsibility to conserve this most valuable resource for agriculture production and for maintaining a local, thriving food system for future generations.

The recommendations in this proposal support many of the Growth Management Act's planning goals, namely: reducing sprawl, maintaining and enhancing natural resource industries, encouraging the retention of open spaces, and protecting the environment.

Our need to feed ourselves must be carefully considered before any of these lands are added to the Urban Growth Area.

We all need to eat

Our food system has become increasingly complex, which has reduced local control related to food safety, food security and food economics. Community residents are demanding a stronger local food system with more choices. For example, in the past 5 years Clark County has seen an increase in the number of Community Supported Agriculture programs, growth in the number of farmers markets, and more interest in locally sourced and organically grown food. To achieve a sustainable, resilient, safe, and prosperous food system, it's critical that we examine our own ability to plan for and grow food.

The United States is not producing enough fruits, vegetables, whole grains, and dairy products for all U.S. consumption as recommended by the USDA Dietary Guidelines for Americans. (American Farmland Trust) To feed Clark County's population, we would need to produce about 4.5 pounds of food per person per day, but our western Washington food shed produces just 2 pounds. (Western Washington Food Shed Study) That means we're already vulnerable to disruptions in the food system, and it's time to evaluate how we can maintain our productive capacity.

There are three major issues in considering the value of preserving agriculture production:

Employment and the Economy

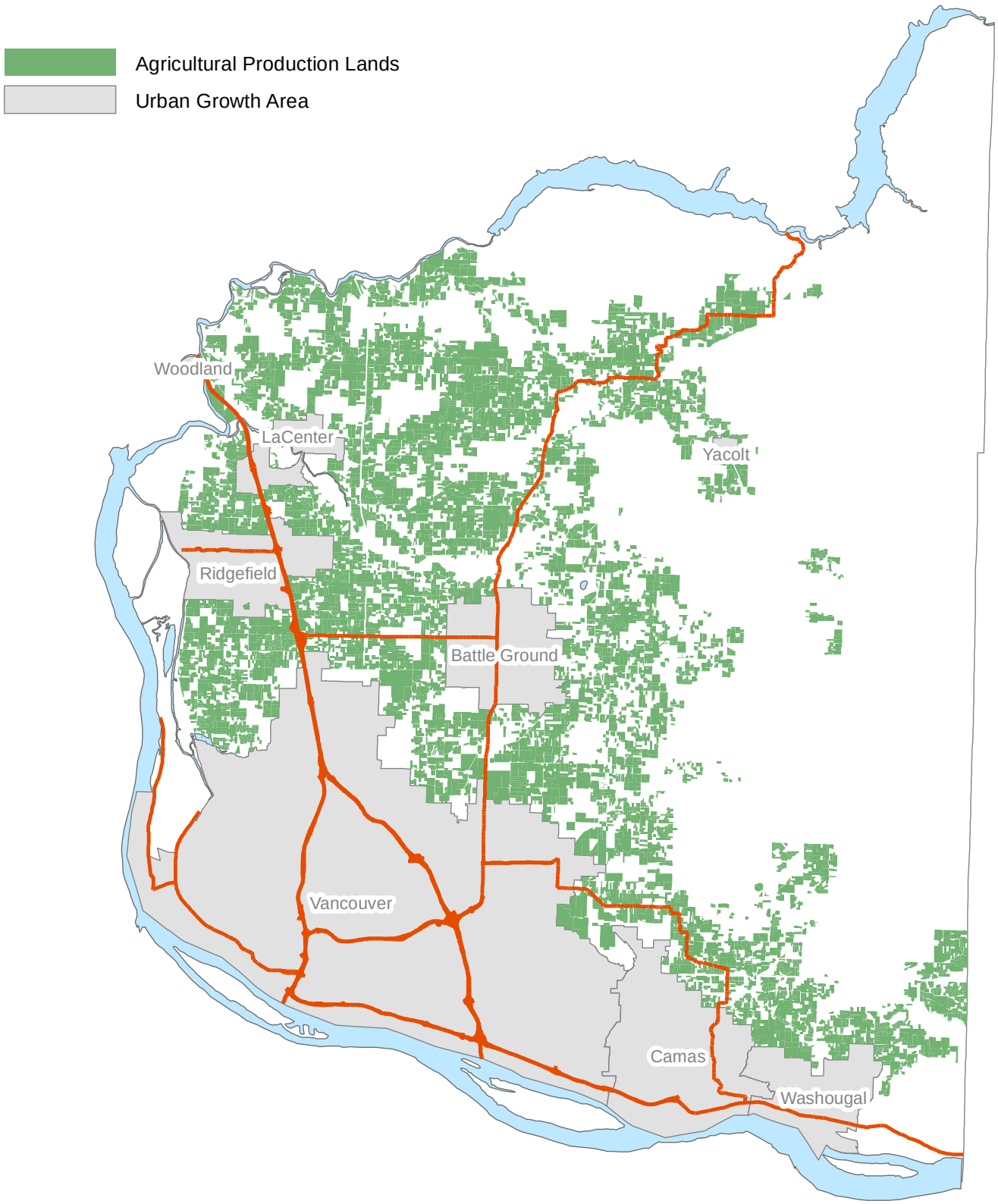
1. Farmland is not vacant, it is home to jobs. In Clark County, more than 4,000 people are employed on farms. (2007 USDA Agriculture Census) With the number of farms increasing and a desire for food grown using more labor-intensive, sustainable practices, we need to assure these jobs stay here.
2. Supporting local farms keeps our money circulating locally. Every pound of food produced locally reduces the need to import food and strengthens our own food system of processing, distributing and selling.
3. Local farm entrepreneurship and agri-tourism creates an environment to live, work and play, which helps make Clark County more business-friendly.
4. Locally produced food travels shorter distances, reducing transportation costs and carbon footprint while maintaining food quality.
5. Increasing the amount of food produced and made available to local consumers is part of economic development and contributes to environmental sustainability.
6. Privately-owned and managed agriculture land generates more local tax revenues than it costs in services. (Farmland Trust Center)

Health

1. Good farming practices can help preserve clean water and healthy soil. Almost all of Clark County's water comes from underground aquifers. (Clark Public Utilities) Preserving lands that provide natural buffers protects natural aquifers, and healthy aquifers are less costly to maintain than water treatment plants.
2. Fresh fruits and vegetables are an important part of a healthy diet, and a diet rich in fresh produce helps prevent obesity and cardiovascular disease.
2. Encouraging the production, distribution, and procurement of food from local farms could increase the availability to and consumption of locally produced foods by community residents, enhance the ability of the food system to provide sufficient quantities of healthier foods, and increase the viability of local farms and food security for communities.
3. Maintaining the potential to grow more of our own food helps make us resilient in the event of major emergencies. Resiliency is an attribute of a healthy community.
4. Local food has a lower risk of causing food-borne illnesses because it spends less time in transit, doesn't change hands as often and is more apt to be processed in small batches.

Quality of Life

1. The rural character of farm land enhances the quality of life, and is attractive to employers wanting to locate in Clark County.
2. Agricultural land provides habitat for wildlife and allows natural water filtration.
3. Strengthening our ability and the potential to grow and produce more of our own food helps make us more secure and less vulnerable in the event of a major emergency that disrupts the food system.
4. Food grown closer to consumers uses less fossil fuels which contribute to pollution and greenhouse gases emissions, the ultimate results of which are deteriorating air quality, extreme heat days, flooding and drought, and other impacts to human health. (Growing Healthier Report)



Clark County's Best Farm Land

Source: Clark County GIS

0 2.5 5 10 Miles

For further information contact Clark County
Public Health Assessment & Evaluation
brendon.haggerty@clark.wa.gov or (360) 397-8000 ext. 7281

How we got here

We developed this proposal by looking at characteristics of the land that make it suitable for food production. These include:

Soil	We included lands that have good to moderate agricultural soils, classified as type I-IV by the National Resource Conservation Service.
Slope	We included lands that are flat or rolling.
Size	We included lands that have at least 4 acres outside the buffers around critical stream habitat.
Zoning	We included lands that are currently zoned for agriculture or rural residences.
Tax status	We excluded lands that are tax exempt because they are owned by churches, land trusts, or governments.

Next steps

The Clark County Food System Council suggests that the Board of County Commissioners, during the current update of the comprehensive plan consider voluntary measures to protect and maintain agriculturally productive lands. Various tools are available to do this, all of which would be voluntary on the part of the landowner. According to the American Farmland Trust, land use policies and zoning are the most important factors in maintaining agriculture production and a healthy local food system. In addition to determining where our agriculture production lands are, we need to develop tools and systems in order to maintain and expand our food production. The Food System Council is ready to help the County assess, discuss and develop tools appropriate for our community, and how best to respect property rights while offering land owners alternatives and choice in setting aside land for agricultural purposes. We welcome feedback on the content of this document.

The Clark County Food System Council is a citizen advisory board comprised of individuals from many sectors of the community food system. These constituents come together around common interests and beliefs about a healthy, sustainable food system for Clark County. Support is coordinated by Clark County Public Health.

2013-14 Clark County Food System Council

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Community Support

Members of the Clark County Food System Council met with representatives or the boards of these organizations to share this proposal and garner support. These organizations agree with the recommendations contained in this proposal. The Food System Council is currently engaged with other groups interested in lending their support to this proposal, and we continue to seek additional partners in this work.

Clark County Public Health Advisory Council

Slow Food Southwest Washington

Hazel Dell Public Market

Urban Abundance

Friends of Clark County

Camas Farmers Market

Salmon Creek Farmers Market

Vancouver Farmers Market

Neighborhood Associations Council

Clark County Planning Commission (pending)

Clark County Food Bank (pending)

Clark County Commission on Aging (pending)

New Seasons Market (pending)

Hunters Greens Farm

Neighbor's Market

Inspiration Plantation

April Joy Farm

Coyote Ridge Farm

Friendly Haven Rise Farm

NW Organics Farm

Garden Delights Farm

Ag Census Data

2012-2017

	2012	2017	change (ac)	% change
land in farms	74,758	91,737	16,979	**23**
cropland	29,006	24,336	(4,670)	-16
pasture	29,869	48,858	18,989	64
woodland	14,497	23,994	9,497	66

				2012-2022
	2012	2022	change (ac)	% change
land in farms	74,758	56,038	(18,720)	-25
cropland	29,006	22,009	(6,997)	-24
pasture	29,869	14,081	(15,788)	-53
woodland	14,497	14,431	(66)	0

				2017-2022
	2017	2022	change (ac)	% change
land in farms	91,737	56,038	(35,699)	-39
cropland	24,336	22,009	(2,327)	-10
pasture	48,858	14,081	(34,777)	-71
woodland	23,994	14,431	(9,563)	-40

See also Table 2, Ch. 4, Wait 2021

CHAPTER 4: PROFILE OF CLARK COUNTY AGRICULTURE

Introduction

Chapter 4 sets the context for this case study that explores the vulnerabilities of farming resources in rapidly urbanizing regions and the factors that affect the sustainability of local food product marketing. It sets the context for Chapters 5 and 6 that present the farm-level results of assessing the agronomic, economic, environmental, and social indicators of the agroecosystem resilience assessment. Drawing primarily from secondary (publicly available) and participant observation data, this chapter identifies key issues and trends affecting farm viability in Clark County. To situate direct market farms and food production in the context of Clark County's agriculture and farmland, this chapter begins by introducing the geopolitical setting of Clark County. The first section profiles Clark County's agricultural sector within that setting. The second section describes key sociopolitical parameters in Clark County, including land use designation, growth management strategies, and stakeholder perspectives.

Agriculture is important in Clark County. Specifically, small-scale farms are highly productive and benefit from access to direct consumer markets for high-value crops. However, farming in Clark County faces immense development pressures and is declining, and the conversion of land to non-agricultural development is rampant. The scope of the loss is masked by high turnover and a lack of clear data.

Geopolitical Environment of the Urban Region

Clark County provides a distinctive geopolitical landscape for investigating the challenges and opportunities for urban region agricultural resilience. Clark County is located in

the northernmost part of the Willamette Valley, an ecoregion known for productive soils, temperate climate, diverse agriculture, and growing urban population.[iii] Situated in the northern part of the Portland (OR)–Vancouver (WA) Metropolitan Region, Clark County is one of the most rapidly urbanizing counties in Washington State (Born and Martin, 2011) and is well-known for sprawling development (Williams-Derry, 2012).

Profile of Clark County Agriculture

This section illustrates the economic significance of food and farming in Clark County by summarizing key indicators from secondary data. Several sources of data are available, with each offering different perspectives and metrics on the characteristics of agriculture. The source data vary by dates, the underlying datasets informing the summaries, specific types of data collected and reported, and frequency of updates. Secondary data primarily derive from USDA, Washington State Department of Agriculture (WSDA), and Clark County. [iv] Additionally, the Department of Commerce tracks assessed value pertaining to agricultural use designations. Importantly, American Farmland Trust (2020) research illuminates natural resource characteristics and land use change.[v] Some longitudinal evidence is derived from the USDA Census of Agriculture, conducted every five years, most recently in 2017.

A summary of key indicators is presented in Table 2: Census of Agriculture Highlights for Clark County, WA. The most recent data from the Washington Department of Agriculture (WSDA) cropland geodatabase is from 2019.

Table 2: Census of Agriculture Highlights for Clark County, WA

Census of Ag Indicators	2012	2017	% Change 2012–2017	% Change 2007–2012
Land in farms (acres)	74,758	90,737	21%	-5%
Cropland acres	29,006	24,336	-16%	
Pastureland acres	29,869	48,858	64%	
Woodland acres	14,497	23,994	66%	
Number of farms	1,929	1,978	3%	-8%
Scale by Sales				
Tot. market value of ag products sold ($1,000)	$50,900	$47,702	-6%	-3%
Market value of cropland sales ($1,000)	$18,900	$29,873	58%	
Livestock sales, (incl. poultry, and products 2017) ($1,000)	$32,000	$27,829	-13%	
Net cash farm income ($1,000)	$2,398	-$9,582	-490%	
Productivity				
Sales/acre from farmland	$681	$526	-23%	
Sales/acre from cropland	$652	$1,228	88%	
Per Average Farm				
Average farm size (acres)	39	46	18%	5%
Average net cash farm income	$1,243	-$4,844	-490%	
Average market value of products sold	$26,367	$24,116	-9%	5%

Agricultural Importance for Metropolitan Clark County

Agriculturally important (AI) metropolitan regions, as defined by gross sales and gross sales per acre, were measured in the 2002 Census of Agriculture by Jackson-Smith (Jackson-Smith and Jensen). In general, the AI threshold for total sales is "between $36.1 and $72.5 million in 2002" (Jackson-Smith and Jensen, 2009). For the sales per acre threshold to be considered AI, a county would be measured as being "in the top quartile of either 'sales per acre of farmland' or 'sales per acre of cropland' as reported in the agricultural census (over $366 and $638 per acre, respectively, in 2002)" (Jackson-Smith and Jensen, 2009). Clark County qualifies as AI, but not by a wide margin.

AI Farm Sales

Considering gross sales in the 2012 Census of Agriculture, the total market value of crops and livestock sold by Clark County farms was $50.9 million (3% less than 2007).[vi] In 2017, Clark County met the AI thresholds for gross sales even though the "total market value of crops and livestock sold" declined by 7% to $47.7 million (USDA NASS, 2019). However, the cropland (only) sales market value rose between 2012 and 2017 by 42%, according to the data compiled from the respective Census of Agriculture database categories (USDA, 2014b; USDA NASS, 2019). At the same interval, the overall "average market value of products sold per farm" fell by 9%. Indeed, gross sales are not the only factor to consider regarding the viability of farming. While overall farm expenditures may exceed gross sales, for a net contribution to the economy, data reveal a deficit for the farms. That is, the net cash farm income in 2017 was negative $9.6 million, a negative 499% change since 2012 (see Table 2) (USDA 2019, Clark

County Profile). In aggregate, the farms are losing money, as they report spending more than their gross sales can cover, even when adding the government payments (33 farms received $208,000) and “income from farm-related sources” (368 farms earned $6.75 million) (USDA, 2019). The “average per farm” net income was negative $4.8 million in 2017, and only 41 (2.1%) of farms had “value of sales” of $100,000 or more (USDA, 2019).

AI Farm Productivity

As an estimate of productivity for Clark County (and AI qualification), the calculated cropland sales (18.9 $million) per cropland acres (29,006) in 2012 was $652/acre (USDA, 2014b). In the 2017 Census of Agriculture, the calculated cropland sales/acre value for Clark County was $1,228/acre, extrapolated from the underlying data (USDA NASS, 2019). Members of the Clark County Agricultural Preservation Committee “suggested that well-managed high-value agricultural producers are capable of grossing $8,000 to $12,000 per acre in Clark County” (Globalwise Inc, 2007).

Land in Farms

Notably, the 2017 Census reports show a 21.4% increase in “land in farms,” so the baseline changed. The data are therefore not interpretable longitudinally to determine trends. A small number of very large properties that were not previously included in the Census have caused the land in farms to increase dramatically (NAAS regional office personal communication, 2020). The total number of farms rose by only 3% in 2017. Also of note, the land in farms reflects everything considered a farm, which means there are revenues of $1,000 or more for the Census respondent (NAAS regional office personal communication, referring to the

Census of Agriculture explanatory Addendum). In 2017, more than half of all farms reported "value of sales" less than $2,500 (USDA NASS, 2019).

What kind of land was added? Between 2012 and 2017, there was a reported 16.1% decrease in "cropland acres," while data reflect a significant increase for both "pastureland" and "woodland" acres (USDA NASS, 2019). It could be assumed the acres added were in pasture and forest, given the dramatic (more than 60%) rise in acreage for those categories (see also Table 2). Comprising 27 % of all land in farms in 2017, there were 24,336 acres of cropland, a decrease of 16% from the 28,986 acres in the 2012 Census of Agriculture (USDA, 2014b; USDA NASS, 2019). Cropland actually harvested came from only 1,028 of the total number of farms' total acreage (USDA 2019). This is not much of a change. In the 2012 Census of Agriculture, the total cropland harvested was from 1,022 farms (53% of the total number of farms) for a total of 24,099 acres (83% of the total cropland). For further comparison, WSDA (2019) reports 28,725 acres of cropland (after subtracting non-cropland types from the total acreage mapped), but WSDA does not specify how much of that land was actually harvested. (See also Figure 7. Cropland Types: Summary of Percent Acres.)

Small-scale farms dominate Clark County. Of the cropland harvested in 2012, 25% was from farms less than 50 acres in size (USDA 2014) (See). By area, the majority of the farms (86%) are smaller than 50 acres in size (in 2012 and 2017), and they encompassed approximately 37% of the total land in farms area in 2012 (Figure 5) (USDA, 2012).

The average size of farms had risen by 5% between 2007 and 2012 to 39 acres (USDA, 2014b). In 2017, the average size was 46 acres, and the median size was 10 acres (USDA NASS,

2019). See also Figure 5: Land in Farms by Acreage (2012 Census of Ag), Clark County. The dominance of small-acreage farms less than 50 acres is not a new nor recent phenomenon for Clark County agriculture according to historical statistics (Globalwise Inc, 2007).

Figure 5: Land in Farms by Acreage (2012 Census of Ag), Clark County

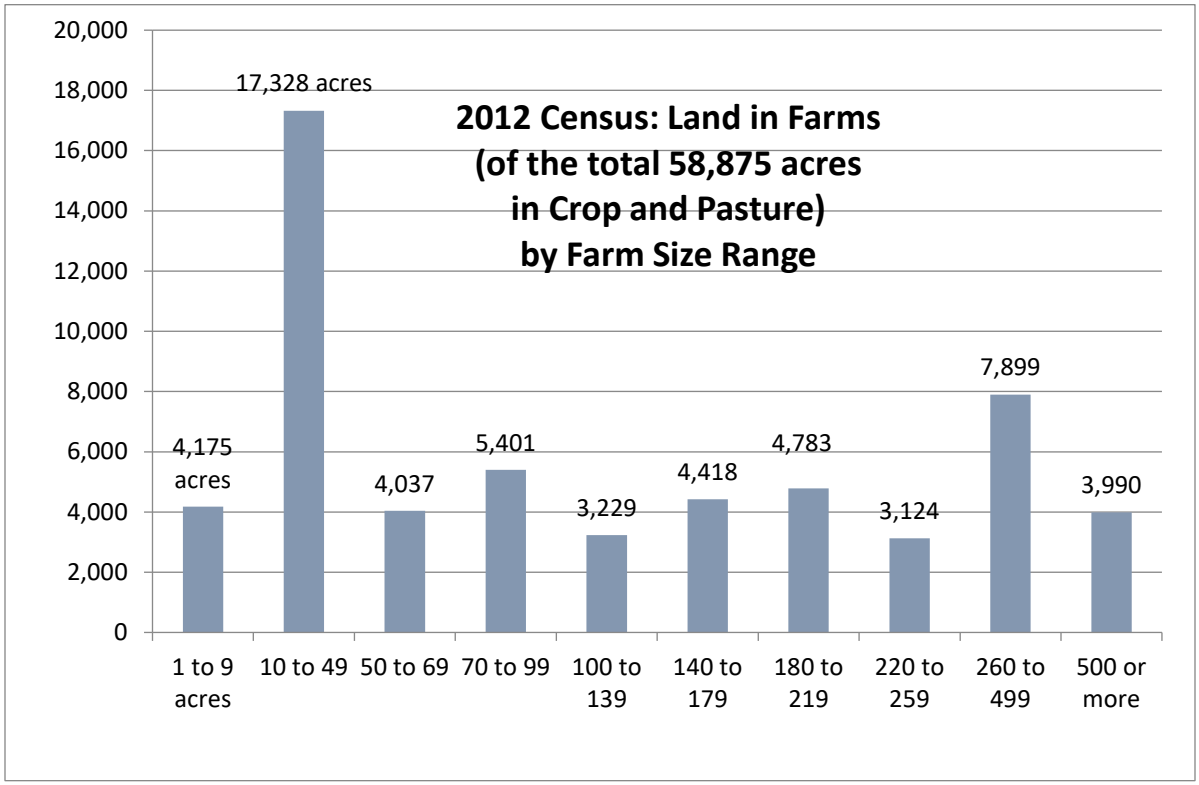
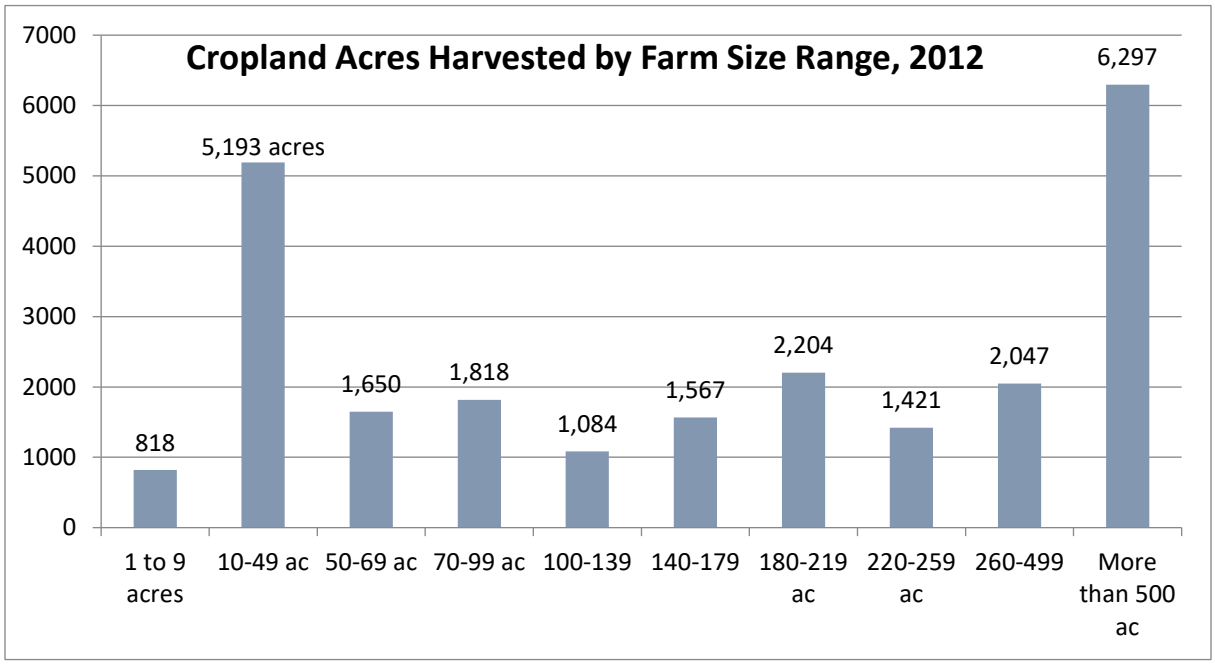


Figure 6: Cropland Harvested by Farm Size Range, 2012 Census of Ag, Clark County



Cropland and Crops in Clark County

WSDA 2019 Cropland Types

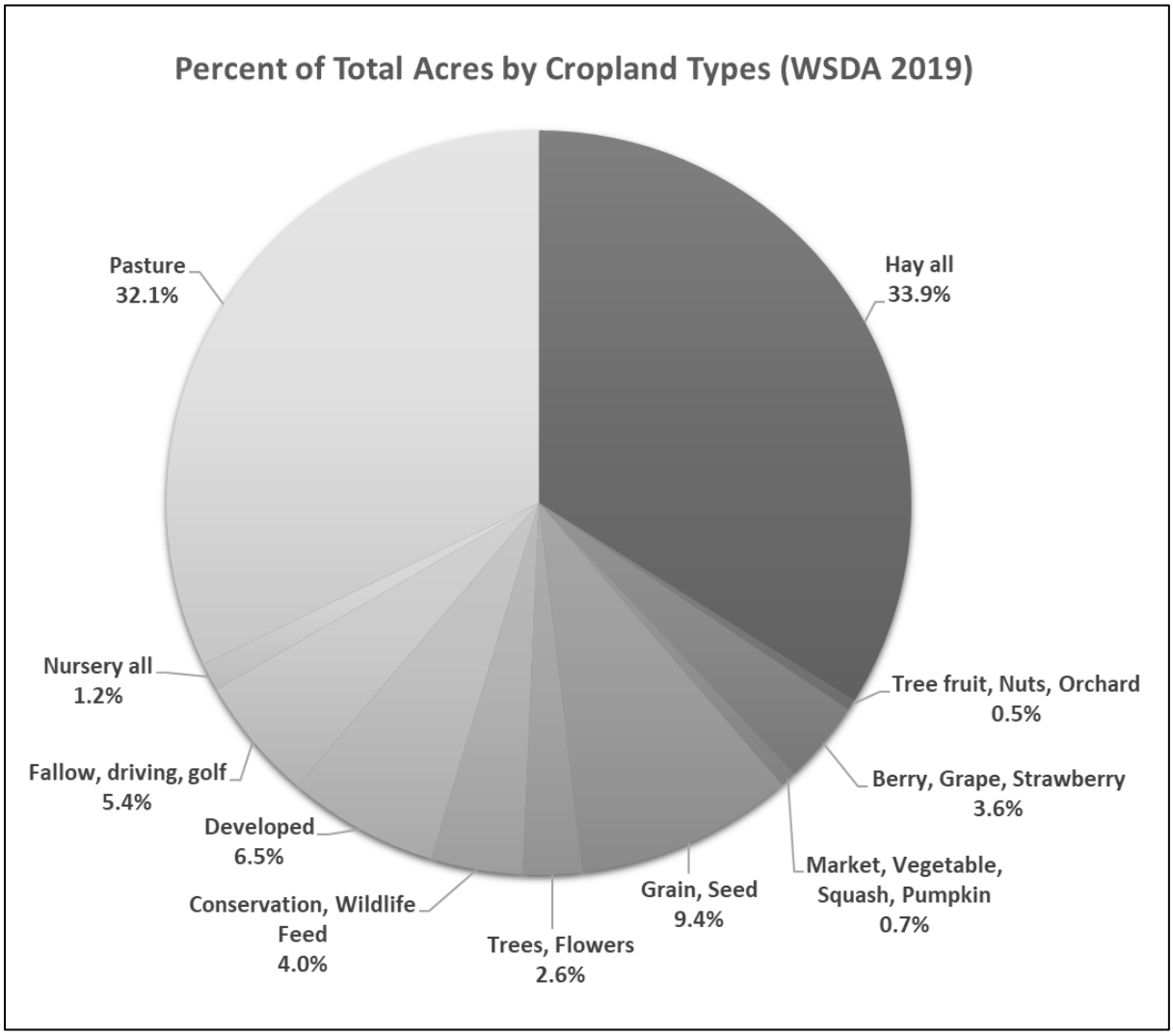
Table 3 shows all the cropland types, comprising 31,388 acres. Some cropland categories are more reflective of no-crop land use, such as developed, golf course, and driving range. For Figure 7: Cropland Types, some of the categories are combined to simplify the display.

Table 3: Cropland Type Acres in 2019 (WSDA 2019)

Cropland Type	Sum of Acres
Alfalfa Hay	124.59
Alfalfa/Grass Hay	109.10
Apple	17.33
Barley	279.64
Blueberry	309.37
Caneberry	528.82
Chestnut	6.34
Christmas Tree	810.33
Clover Hay	10.78
Clover/Grass Hay	28.45
Corn, Field	1,800.70
Corn, Sweet	6.02
CRP/Conservation	278.04
Dahlia	0.75
Developed	2,055.21
Driving Range	3.15
Fallow	1,094.04
Fescue Seed	344.60
Filbert	19.48
Golf Course	604.57
Grape, Wine	113.75

Cropland Type	Sum of Acres
Grass Hay	10,332.54
Market Crops	200.28
Nectarine/Peach	9.73
Nursery, Greenhouse	4.36
Nursery, Ornamental	229.49
Nursery, Silviculture	146.44
Oat	231.89
Oat Hay	39.47
Orchard, Unknown	20.02
Pasture	10,091.08
Pear	15.74
Pumpkin	3.37
Silviculture	305.42
Squash	1.62
Strawberry	177.18
Unknown	8.34
Walnut	56.40
Wheat	306.48
Wildlife Feed	663.46
Grand Total Acres	**31,388**

Figure 7. Cropland Types: Summary of Percent Acres



To derive indications of agricultural products in Clark County, the 2012 Census of Agriculture assigned all farms a code: See Figure 8: Products by Industry Classification (2012). The meat, dairy, and egg categories encompass nearly 61% of the farms. The top crop items (by acres) are hay and corn. Top cropland included 1,086 acres in berries. Berries (including fruits and tree nuts) were also among the top five commodity items by sales. Unfortunately, both the

number of berry acres and the number of dairy farms declined further. Three dairy farms remained in the most recent crop survey (WSDA, 2019). All Fruits, tree nuts, and berries in Clark County came from 231 farms in 2017, generating $7.2 million, up from 217 farms in 2012. Also, in 2017, vegetables, melons, potatoes, and sweet potatoes were sold for $1.6 million from 124 farms, whereas there were too few farms to report on in 2012 (USDA, 2019). It would be interesting to see the overlap between these crops and regional marketing trends.

Figure 8: Products by Industry Classification (2012)

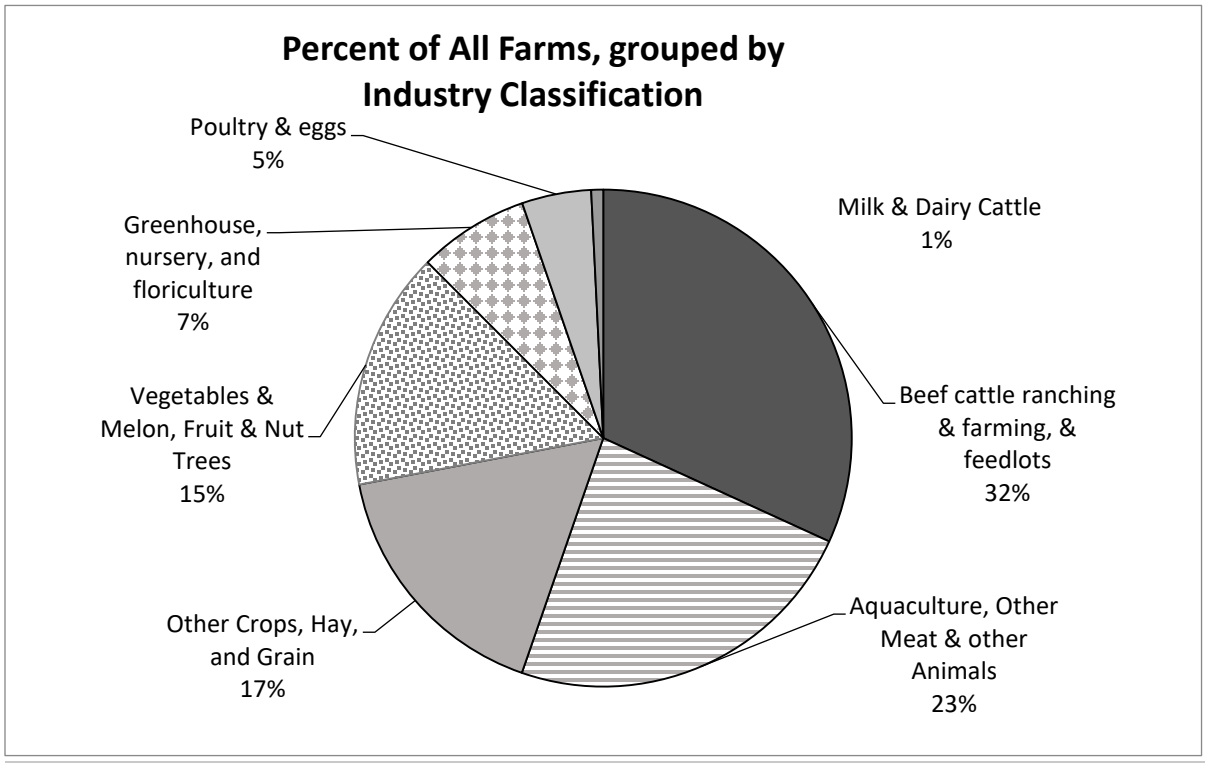


Figure 9: Value of Sales by Commodity Group

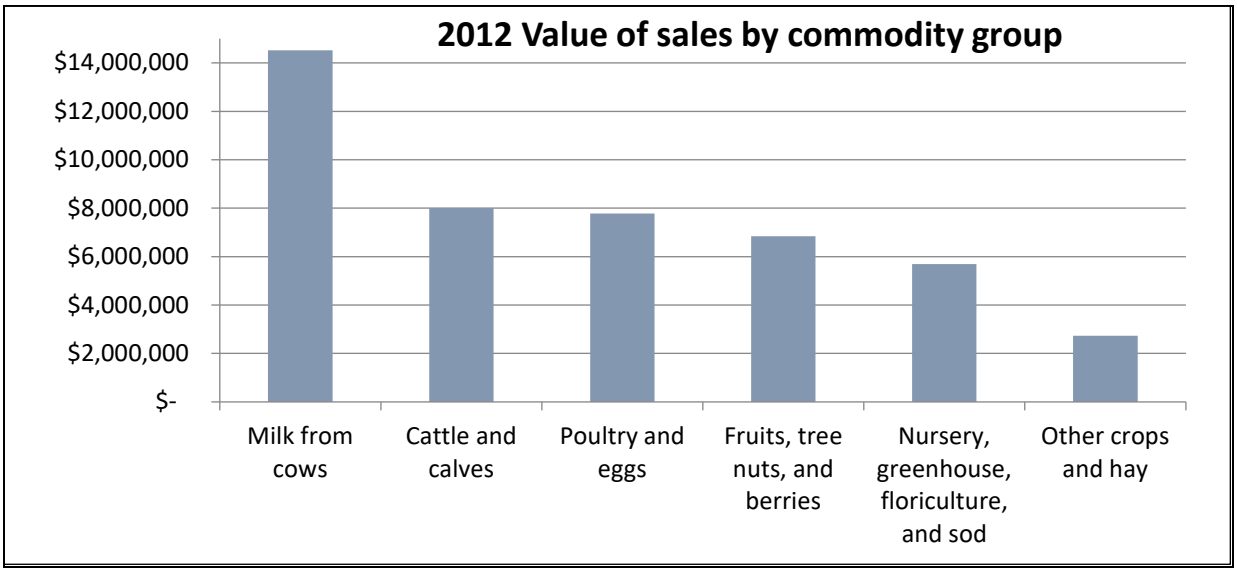
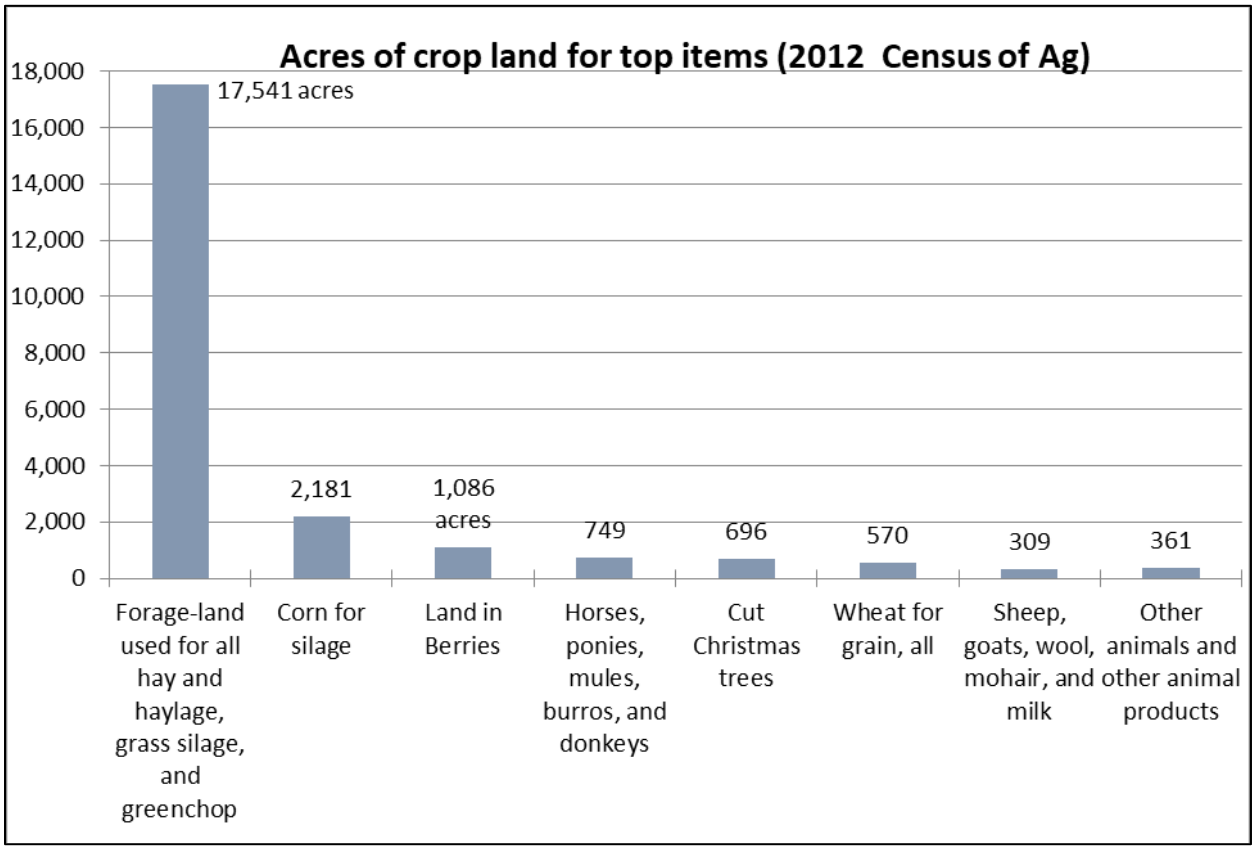


Figure 10: Top Crops by Acres



Conservation Cropland (WSDA and USDA)

WSDA (2019) reports 278 acres in CRP/Conservation cropland type (Table 3), and combined with wildlife feed, makes up 4% of cropland (Figure 7). CRP/ Conservation refers to the voluntary federal Conservation Reserve Program (CRP) whereby Commodity Credit Corporation pays annual rent to enrolled landowners and provides 50% cost-share assistance for establishing approved conservation practices (USDA Natural Resources Conservation Service, 2019). Contracts are 10–15 years (USDA Natural Resources Conservation Service, 2019). The limited Clark County participation has declined over time (USDA, 2014; 2019).

In 2017, the acreage of government payments was $208,000, a 29% reduction from 2012 (USDA, 2019), in contrast to a 155% increase in 2012 over 2007 for such payments (USDA, 2014b). A subset of overall government payments, 10 owners enrolled land in the Conservation Reserve, Wetlands Reserve, Farmable Wetlands, or Conservation Reserve Enhancement Program in 2017, half the number in 2012, while the acreage enrolled in one of these programs fell from 2,319 acres in 2012 to 70 acres in 2017 (USDA, 2019). Land enrolled in crop insurance programs applied to 178 acres on 14 farms in 2017 (USDA, 2019). Perhaps farms large enough to qualify for these programs no longer farm.

Additional Economic Contributions of Farming

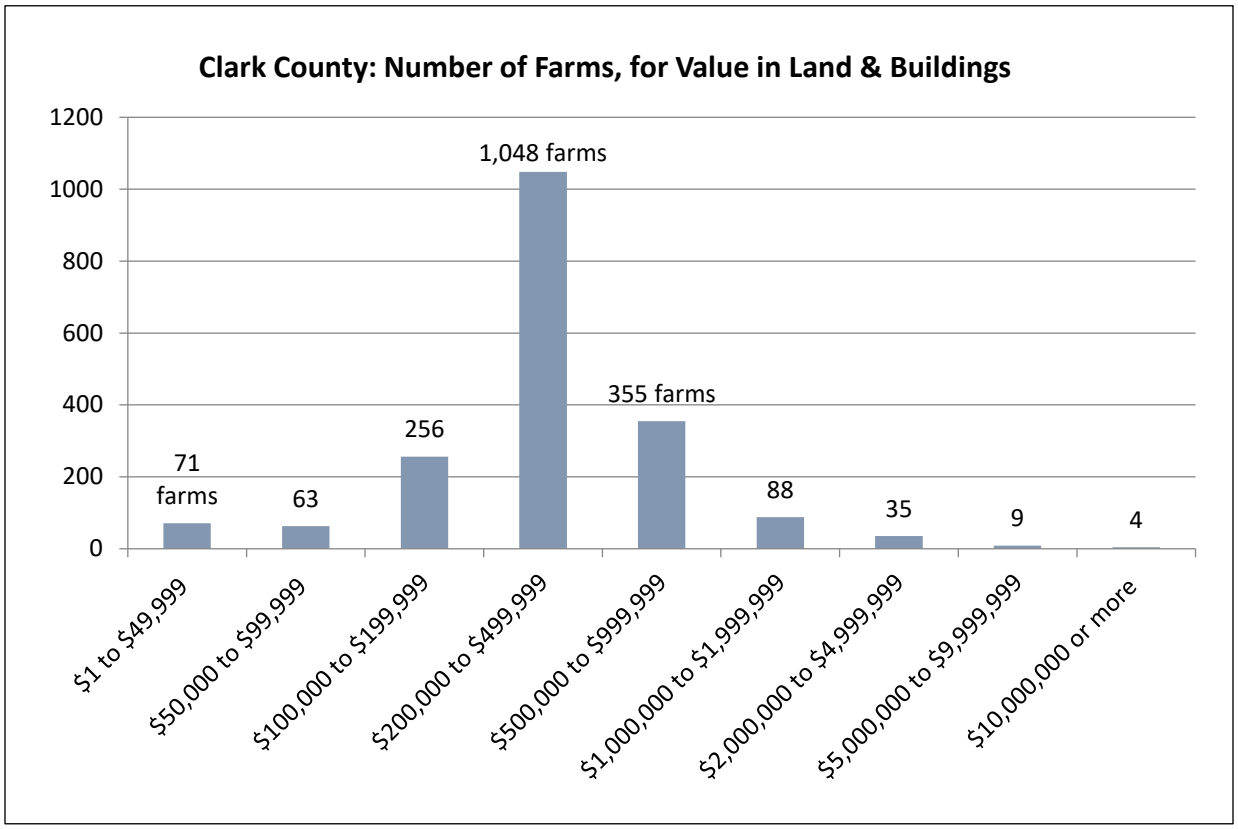
Farming generates significant economic activity in Clark County. According to the 2012 Census of Agriculture, farm expenditures totaled $54.7 million, including $5.7 million in property taxes, nearly $1 million for utilities, $1.3 million for repairs, supplies, and maintenance, $2.7 million on fuel, and $15 million for feed, among other farm production expense categories

(USDA, 2014). In addition, 384 of the farms reported additional gross income from farm-related sources in 2012, totaling nearly $6 million—including $249,000 from agri-tourism and recreational services and $1.6 million for forest products (excluding Christmas trees).

Farm Assets

Farms have considerable value in their land and buildings, and these are among the assets lost on conversion to non-agricultural land uses (Figure 11).

Figure 11: Value of Land and Buildings (2012 Census of Ag, Clark County)



Diversification from the commodity crops is also marginally tracked, signifying increasing relevance to the agricultural profile of the County. The following are a few indicators.

Diversified Farming Sector Indicators 2012 Census of Agriculture

The 2012 Census of Agriculture reported Clark County as having 39 community-supported agriculture (CSA) farms, 141 farms producing value-added commodities, 43 farms with on-farm packing facilities, and 85 farms selling directly to retail outlets; 85% of the vegetables grown are "harvested for fresh market" (USDA, 2014a). Rotational grazing was practiced on 345 farms; 25 farms reported that they use organic methods, generating a total of $841,000 in sales, with 12 being certified organic; and production from the two industry classifications of "Vegetable & Melon" and "Fruit & Nut Trees" combined comes from 15% of all the farms in Clark County (USDA, 2014a). There was an 88% increase in the acres of vegetables reported between 2007 and 2012 (Smee, 2015).

Clark County ranked highest in the percent of the area in farms among Western Washington counties[vii] and had the highest number of farms direct marketing according to the 2007 Census of Agriculture (Ostrom, 2010). Between 2002 and 2012, the number of direct market farms in Clark County grew by 40% (Smee, 2015). In 2015, there were seven consistent farmers markets and more than 20 active CSA farms (Wait and Ostrom, 2016). More than 40 roadside farm stands were mapped in 2008 for the food system assessment (Gilroy, 2008).

In 2017, three were 332 farms selling directly to consumers, generating $2.7 million in sales, decreasing from the 410 farms in 2012 with $2.1 sales value. Direct sales to retail, institutions, and food hubs were first reported in 2017, at 49 farms with $228,000 in sales. In addition, 52 farms reported a sales value of $1.5 million (USDA, 2019).

Clark County Land Tenure: Types of Farms and Farmers

Patterns of land ownership and operator demographics are also tracked indicators that can illuminate trends and help focus attention on potential solutions. According to the 2017 Census of Agriculture, Clark County farms with full owners number 1,744 farms (of the total 1,978 operated farms), of which 864 farms have harvested cropland (of the total 1,028 farms with harvested cropland) (Table 2) (USDA, 2019). Overall, Clark County has 15–24% rented agricultural lands as of the 2017 Census of Agriculture (Petrzelka, Filipiak, Roesch-McNally, and AFT, 2019). Farms with part owners (173) manage 20,225 acres with a little over half (11,519 acres) harvesting cropland on rented land; There are 61 tenant farms (non-owners) on 2,596 acres with crops harvested on 1,304 acres from 40 of the farms (USDA, 2019). Recall that the overall acreage increases reflect a couple of large properties being added to the Census in 2017.

Table 4: Operator Ownership Levels

Tenure of operators	2012 Number of producers (farms)	2012 Farmland (acres)	2017 Number of operators (farms)	2017 FarmLand (acres)*
Full owners	1,682	41,854	1,744	67,916
Part owners	182	29,503	173	20,225
Tenants	65	3,401	61	2,596
Total Producers	1,929	74,758	3,552	90,737

Using a different database to survey non-operator landowners (NOL) across Washington State, American Farmland Trust (AFT) found that the majority (94%) have crops growing on their land; 74% inherited the land; 21% live on the land; and 69% anticipate the next owner will be a relative who will either farm or rent out the land for farming (Petrezelka, Filipiak, Roesch-McNally, and Barnett, 2020). The majority of NOLs in Washington State responded that the next

owner of the land would be a relative, either renting (47%) or farming (22%) (Petrezelka et al., 2020). AFT also reports that current NOL farm operators are relatives (40%), neighbors/friends (34%), while 24% have operators who are neither friend nor family member (Petrezelka et al., 2020).

Producer Jobs

A substantial increase in the total number of producers reflected in the 2017 Census of Agriculture is likely because the 2017 Census survey enabled respondents to list more than three producers (prior surveys only had space for three). As of 2017, there are 70 farms with more than four producers. The number of female producers increased to more than 1,620 in 2017, likely due to adding more producers to the list (likely wives, sister, and/or daughter operators). Only 1,061 producers claim farming as their primary occupation. Producers working more than 200 days off the farm number 1,449. In 2012, 94% of principal operators were white male, and of the farms that only have one operator, 90% were run by women (USDA, 2012)

Table 5: Principal Operator Characteristics 2012 and 2017

Race of Principle Operator	2012 Number of Operators	2017	% Change 2012-2017
American Indian or Alaska Native	33	22	-50 %
Asian	33	51	35 %
Black or African American	(5 in 2007) 0	0	0 %
Native Hawaiian or Pacific Islander	5	3	-67 %
White	2,953	3,337	12 %
More than one race	29	74	61 %
All operators of Spanish, Hispanic, or Latino Origin	82	99	17 %
Primary Occupation Farming		1,061	
With Military Service	1,064	458	-132 %
New & beginning farmers		1,064	

Jobs in Farming and Food Processing

While there is evidence for a significant farm and food sector, even in the recent past, the losses continue to portend unfavorably. Several different sources of data on labor indicate an important sector. In addition to the total of 3,072 farm operators in Clark County in 2012 (USDA, 2014), there were also 2,476 unpaid workers who are "agricultural workers not on the payroll who performed activities or work on a farm or ranch."[viii] Hired farm labor is another category in the Census of Agriculture, which reported 2,211 workers, including 454 migrant workers, for a $9 million payroll. Contract labor on 178 farms cost farmers nearly $1 million. WSDA (2019) reported that Clark County's food processing industry generated 1,029 jobs to attain gross sales of $364 million in 2012—with milk, fryers, and berries the top three products and contributing to an overall food and farm product sales of approximately $475 Million.[ix] In summary, there were 8,851 food and farming jobs, comprising more than 7% of the jobs in Clark County in 2012, at a time when there was 10.4% unemployment[x] (Wait, 2014). This is almost as many jobs as the top eight single largest private employers in Clark County combined (Wait, 2014).

However, potential has been lost. Between 1994 and 2004, the number of Clark County's food processing operations declined, and the sourcing of local products being manufactured also declined such that remaining processing facilities primarily import raw product (fruit and vegetables) from elsewhere (Globalwise Inc, 2007). Large-acre vegetable farms had disappeared by 2002 (Globalwise Inc, 2007). Fruit and dairy productions have also declined, as illustrated in the following section.

Agriculture Land use Conversion and Policy

Clark County is clearly losing farmland and farms. Economic forces and market changes interplay with the land use challenges to render Clark County food farming vulnerable. Policies designed to support agricultural production capacity appear to be ineffective, despite efforts by stakeholders to mitigate development through advocacy, conservation, and/or farmer-support efforts. This section provides insights into the agricultural profile of Clark County in relation to land use factors. As cited herein, the data used for this section primarily derive from secondary sources.

After briefly introducing the applicable policies, this section presents evidence about the available farmland status within Clark County (by growth management zoning and tax relief based on land valuation). Next, two specific crop production capacity losses that further illustrate the problematic transitions are highlighted. Then, the political situation is discussed, as controversies described illustrate stakeholder perspectives and challenges to agricultural sustainability. With a more positive tone, the final subsection is a brief summary of agricultural support infrastructure and highlights the county's assets, including a brief overview of civil society support for food farming.

Land use Policies in Clark County

Strategies currently utilized in Clark County include (a) Growth Management Act planning (urban growth area (UGA) boundaries and zoning for resource and rural land uses), as well as a Right-to-farm ordinance (Wait, 2015). In addition, landowners may qualify for property tax discounts under current use for land designated as open space or actively managed for

agriculture or forestry (Smee, 2015). These common agricultural land protection measures are not permanent. Boundaries can be moved and land use designations can change, particularly where urban development pressure is high (Caldwell, Hilts, and Wilton, 2017).

Growth Management Act (GMA)

Clark County is required to adhere to the Growth Management Act (GMA, 1990) for urban counties in Washington, requiring a growth management plan (GMP) update every eight years. The intent of the GMA is to set out rules for comprehensive plan development and implementation, whereby counties allocate developable lands to accommodate population growth and prevent expensive sprawl, all the while protecting critical areas, rural land character, and resource lands (Futurewise, 2005). Counties were instructed to conduct an area-wide process (WAC 365-190-050) in order to develop regulations that conserve farmland (WAC 365-196-815). GMPs intend the protection of "agricultural lands of long-term commercial significance" from the tendencies for land conversion due to city annexation and expansion of UGAs (Quinn-Brintnall, 2011).

The GMA also governs zoning designations and associated parcel sizes. Large lots are supposed to maintain agricultural sustainability, keep per-acre values affordable to farmers, and prevent fragmentation (Canty, Martinsons, and Kumar, 2012; Hendrickson, 2005; Vermont Natural Resources Council, 2013; Wilkerson, 2004). However, minimum parcel size requirements for agricultural zones can sometimes actually exacerbate the problem of parcels being "too small to plow and too big to mow" (Propst, Harper, and Mantell, 1990; 2012). Rural zoning does not protect existing agricultural uses per se (Canty et al., 2012).

Current Use

Washington State code also establishes parameters for property tax reduction for land designated as open space, thereby qualifying parcels are required to be actively involved in "Current Use" for commercial natural resource enterprises. The Open Space Farm and Agricultural Land program is governed by state statute RCW 84.34 and WAC 458-30 and managed by the Assessor's Office (Clark County Assessor). If/when landowners no longer meet the minimum requirements, they (or new owners) can be assessed back taxes and interest penalties (Stienbarger and Ramey, 2004).

Right-to-farm

Right-to-farm laws are intended to protect farmers' reasonable activities from being considered a nuisance by neighbors or local authorities (Green, 2005). Washington's Right-to-Farm Act (RCW 7.48.300-.320) governs farms conducting operations alongside residential development such that: "farming practices may continue if: 1. They are consistent with good agricultural practices; 2. The agricultural practice precedes non-agricultural development; and 3. There's no substantial impact on public health and safety" (Barney & Worth Inc. and Globalwise Inc., 2016). Clark County's applicable code follows state code, including procedures to notify landowners and buyers of the potential impacts of resource agriculture and forest activities,[xi] but stakeholders advised Right-to-Farm be strengthened and integrated with zoning Titles to better protect agricultural activities (Ag Preservation Advisory Committee, 2009).

Farmland Situation in Clark County

This section first presents secondary data on the status of agricultural land with respect to the land use designation. There are three primary ways county planners and consultants for the County characterize the agricultural land situation. The county develops growth management plans to address zoning and land use designations and boundaries. The county's current use tax assessment designations are informed by land valuations as well as landowner activities and choices. These complex interacting policies, described briefly below, are controversial in Clark County as they impact the level of protection afforded. Stakeholder actions to address agricultural capacity illustrate their importance.

Agricultural Land in Clark County

To complicate any analyses about the status of agricultural land in Clark County, the boundaries between urban, suburban, and more rural zone areas are indistinct. For instance, 34% of the land inside the UGA was still in forest and agriculture zoning in 2005–2006 (Kline, Thiers, Ozawa, Yeakley, and Gordon, 2014: 61). An analysis of UGA expansion plans in 2007 found that 25% of Clark County's commercial agricultural land was located within the UGA, and 15% of identified farms were mapped within the 2004 city limits (Globalwise Inc, 2007). The 2007 Globalwise project attempted to put all of the actual farms on the map but was not funded to ensure a complete census recommended by stakeholders (Prenguber, personal communication, 2014). Urban farms are particularly vulnerable. Local media reports document that urban farms face immense pressures and contractions from development including encroachment by roadways and land conversion to housing developments (Baker, 2011; Oliver,

2014). Urban development pressures, on top of labor shortages, have caused even iconic urban farms to go out of business (Granneman, 2020).

Land use Designation by Zoning and Current Use

An understanding about how farming is protected (or not), and by which policies, could inform future planning and/or policy reform. In 2007, there were 16,569 acres in the current use taxation category for farm and agricultural lands, including 6,700 acres that were also zoned agriculture (Ag-20) (Globalwise Inc, 2007). The other approximately 60% of the land was in other zoning designation, primarily rural: 3,371 acres on 341 parcels were designated R-5, and 137 parcels comprising 184 acres were designated R-10, with another 173 parcels of 5,377 acres total in other land use designations (Globalwise Inc, 2007).

Current use is also applicable to other zoning categories, but how much of the rural zoning might be in current use was not reported. Overall, the subsequent 2012 Rural Lands Study indicated a steady decline (-4% growth) in farm and agriculture acres in the current use category between 1989 and 2010 (Berk Consulting, 2012). The 2012 agricultural land analysis included a county assessor sourced map showing agricultural current use parcels within and near city UGAs of Vancouver, Ridgefield, and Camas, but acreage totals were not provided (Berk Consulting, 2012: Exhibit 6: Location of Parcels in Current Use (2011)). Rural lot size zoning is controversial in Clark County as the site of sprawling subdivisions (Case, 2012).

On February 27, 2018, Clark County's Community Planning staff outlined their 2018 Work Program at a County Council work session. The presentation reported 38,000 acres in Current Use Taxation for Farm and Agriculture, and 32,000 acres zoned as (Ag 20). They

approximated that the total acres in overlapping designations, being in both agricultural zoning and the current use reduced tax category, as 16,000 acres (Orjiako and Anderson, 2018). Acknowledging the uncertainties of the estimations, staff were requesting a budget for an area-wide agriculture assessment "pursuant to WAC Chapter 365-190-050 Minimum Guidelines." Given the difference in the 2007 and 2018 reporting on agricultural land status, and the lack of response from the Assessor's office for an update (March 2020), it is impossible to ascertain trends or present status.

In Clark County, policy makers pay attention to the reduced tax revenue from land in current use, where the increasing value of the land means the difference between regular property taxes and the discounted agricultural use tax is significant (Berk Consulting, 2012). Counties are required to assess the difference between the current use value and the underlying land's true and fair value. In 2012, Clark County's developable land was reportedly valued at $14,700 per acre, which is higher than the Washington-wide average value of $1,600 per acre (Berk Consulting, 2012). The value of taxable property (by assessed value) went up over 8% in Clark County from 2017 to 2018.[xii] The overall land valuation data, for Clark County's current use tax assessment purposes, is tracked by the WA Department of Commerce, as follows. For the 4,219 parcels encompassing 63,365 acres in 2018, the current use land value assessed (including forest, agriculture, and open space) was $21.9 million; whereas the tax would be assessed at $1,065.8 million for its "True and Fair Value"—a difference of 192 percent ($1,043.8 million).[xiii] Land values interact with rates of sprawl and the viability of the agricultural sector (AFT, 2002a; Kuethe, Ifft, and Morehart, 2011; Livanis, Moss, Breneman, and Nehring, 2006).

Indeed, despite policy intent, the high rate of prime farmland turnover to non-agricultural land uses continues (Canty et al., 2012; Francis et al., 2012; Sorensen, Freedgood, Dempsey, and Theobald, 2018; Daniels, 2017). As introduced in chapter 2, new research on farmland conversion reveals that the majority of farmland converted to non-agricultural uses between 2001 and 2016 had a high level of productivity, versatility, and resiliency (high PVR index) for its national significance and/or "Washington's best land" designation (AFT, 2020a). While some of this conversion went directly into urban and highly developed (UHD) land use, the low-density residential (LDR) areas in Washington State were "70 times more likely to be converted to UHD by 2016, compared to other agricultural land" (AFT, 2020a). In the same period, Clark County lost 6,100 acres converted to LDR or UHD, and 4,800 acres of which classify as high PVR (AFT email communication, 2020). What critical mass of farmland is needed to sustain an agricultural sector may vary over time based on farmer adaptations to changes, but some research suggests that counties with fewer farmland acres could experience a higher rate of loss (Lynch and Carpenter, 2003). Obviously, population growth, land values, and urban expansion are taking a toll, but they are not the only factors.

Economic climate also has impacts on farmland loss. For instance, two urban farmers reported they had moved into town and were farming their backyard because they had lost their real farm to foreclosure and were trying to apply their skills to earn some extra cash while feeding themselves, and they said they were not alone (participant observation (PO), Uptown Vancouver Farmers Market, 2012). Evidence confirms that housing development expansion picked up again after the Great Recession of 2008 had considerably slowed growth and

development for a period (Freedgood, 2014). However, there is still no current nor recent reliably accurate determination of existing farms or agricultural land in Clark County. What other evidence provides insight into the downward trends? The following section explores specific crop examples.

Farm Production Losses

Clark County is purported in land use planning documents to exhibit an agricultural sector in transition (Berk Consulting, 2012; Globalwise Inc, 2007). The new (as of 2017) WSU Extension specialist says agriculture is in a state of instability amid a "surprising number of farms" and has the inherent soil quality potential to improve enough to resemble better-producing counties in the Willamette Valley and other counties in Washington (O'Dea, 2019). Looking at history, unstable seems to be the norm. Changes spanned the rapid growth of the 1950s and beyond with the turnover in prime crops and an overall steady decline in commodity production (Globalwise Inc, 2007). For example, Clark County was once a prune capital and later a haven for other fruit production (Globalwise Inc, 2007). All that remains of a once-thriving 20-acre family pear orchard, destroyed when the pear market crashed, are the 30 trees on the homestead portion of the property (PO, 2015 Food System Council Forum). Land and crops are both transitioning under pressures, which the dairy and berry industries exemplify. The following two examples illustrate that land access is an important factor for farm viability. Farms are vulnerable to land loss, when their scale of operation requires an adequate land base they may not fully control, such as when they have to rely on leased land threatened by development.

The farm-level investments and support for improved operations do not translate into long-term viability in the face of rapid development.

Losing Dairy Farms

The current state of the once-thriving dairy industry is now too few (less than four) dairy farms to even report on in the 2017 Census. Once a dairy-rich county, many dairy farmers have either retired their farming operations altogether (see below), changed to other products, or are trying to get out of the dairy business. A retired extension agent said that many diaries had relocated to Eastern Washington for the drier climate and less regulatory burden (Personal communication, 2014). In addition, one dairy keeps trying to convert their agricultural land to non-agricultural use. The 600- acre Lagler Dairy has proposed a zoning conversion from agriculture to rural industrial. The county government has considered the landowner's petition by taking responsibility for the required process (Kadel, 2015). Indeed, the de-designation proposal was included in a chosen 2016 GMA alternative and the zoning change plan was later withdrawn by the county due to the growth management board's determination, which was based on Friends of Clark County's (FOCC) successful appeal (Bannan, 2019).

Dairy farms implementing conservation practices with public cost-share and grant funding can reap financial benefits from the investments, allay regulatory burdens, and along with the environmental benefits, be rendered more resilient (Friedman and Sands, 2019). Given a Clark Conservation District (CCD) cost-share grant, one of the last remaining sizable dairies installed a manure separator to dry manure for barn stall bedding material (PO, CCD Conservation Commission field tour and annual confab, July 2015). Speaking about the cost of

the project, the farmer said he “saved a ton of money,” and while there was “fertilizer loss” because there was no longer a need to spread manure into the fields, “that’s a lot of sawdust we didn’t have to buy and unload,” saving fuel expense (Dairy farmer, July 2015). “I wouldn’t have done it without the help, but now that I’ve seen it, I would do it.” They got help with the lagoon as well. The farmer told the tour participants that the neighbors have not complained about farm odors, not directly, but that the land issue and traffic were big problems. “We own 160 acres, farming 400 some acres…the majority is here, and 200 acres over in Pioneer; two pieces are going to go into houses.” “Wherever there’s growth… the traffic is just unbelievable, and people have no idea about slow tractors.” He said there are “too many people moving in; I’m 64, so I don’t know, I might relocate. I might hang it up. I have 3 girls. When we finish here, if they decide they want to try it somewhere else” (PO, dairy farmer, July 2015). Unfortunately, the urban pressures on land availability, amid an unfavorable dairy market, were not adequately mitigated by the public-private partnership investment. Four years later, Farmer Ed asked, “Did you see the farm graveyard along the road in Ridgefield? There was farm equipment parked along the road, and a big auction going on last weekend!” (PO, SC Farmers Market, 2019). As predicted by the farmer, a threshold was crossed where keeping this land in dairying was no longer viable. The question to the CCD, “what happened to the manure digester?” went unanswered. This example shows how vulnerable farms requiring large tracts of land can be, and how development can squeeze the farmers out of business, despite public investments. The next example illustrates some of the same land access issues, particularly for farms changing leadership as the next generation takes over.

Losing Berry Land

Berry acreage in Clark County saw a 28% reduction between 2007 and 2017 (USDA Census of Agriculture). One multi-generation family farm recently switched from being a long-time berry operation to growing grass seed because seed yields a more reliable income (Jenkins, 2020). To have enough acres (200–300) for grass farming means leasing land up to 90 miles away in Oregon to the south and Lewis County to the north, says the farmer who claims he loses about 50 acres a year to development and is being pushed to the north (Jenkins, 2020). The same farm participated in a raspberry processing trial funded by the Washington Red Raspberry Commission[xiv]. They were known in the region as a market for smaller-scale fruit farms (PO, Food Equity Delegate's meeting, 2014). The well-established farm was receiving attention from agricultural support infrastructure and had stature as a commodity producer and value-added aggregator. Research, infrastructure, and demand for fruit did not change the overall industry climate enough to keep food production going after the son inherited the farm and sought to make a better living for his family because the fruit business had become too unreliable (Jenkins, 2020). This example illustrates the retention of some agricultural capacity, but the loss of food production due in part to the economic vulnerability of food crops.

Policy Actions to Address Agricultural Capacity in Clark County

Farmers continually face uncertainties due to the changeability policies enabling agricultural land use changes, due to zoning and urban growth boundary modifications, and due to the development land speculation inherent in current use programs (AFT, 1998; 2002b; 2003; Steiner, Dunford, and Koler, 1983). Farmers complain about not being able to plan, given the

cycle of GMP revisions, and the fluctuations in land values affecting their access to farmable land (Ag Preservation Advisory Committee, 2009).

Current Use for Agriculture

The current use property tax break utilized by developers (owners who maintained minimal agricultural activities but had no intentions of keeping the land in agriculture) had long been a complaint by local farmers (Gillespie, 2015a). Unfair enrollment in the program is being reduced due to recent County Tax Assessor's office efforts to audit compliance with requirements and agreements, resulting in fines being levied as well (Gillespie, 2015a). Even though penalties and back taxes are incurred when the current use is changed before the timeline, this does not deter land speculation, as developers (including farmers) can build the tax burden into the cost of their development. A 2015 survey of direct market farms in Clark County indicated an increase in participation by landowners in the current use program over the prior decade and overall satisfaction with the program (Smee, 2015). However, landowners expressed the need for more support for farms to address a host of issues such as "zoning, development pressure, neighbor disputes, labor, and consumer outreach" and expressed that "insecurity or volatility of farming" is a bigger concern for them than current use program reform (Smee, 2015). These findings echo others (Ag Preservation Advisory Committee, 2009; Office of Farmland Preservation, 2009).

Indeed, in addition to farmland protection, the need for much more support for farming in Clark County has been well documented. Recognizing the problems, numerous corresponding recommendations for concerted and targeted efforts to stem the exodus of food farming are not

new (Ag Preservation Advisory Committee, 2009; Clark County Food System Council, 2012; 2013; Globalwise Inc, 2007; Gilroy, 2008; Meter, 2008; Public Health, 2012). Farmers' voices have apparently been unheeded. An educational DVD was intended to highlight the importance of farming in Clark County (Grgich and Jividen, 2008). Local economic development efforts to address food farming in Clark County were built into professional development training that included events to facilitate stakeholder input (Leadership Clark County CREDC "Produce Pals" Team, 2015). Secondary research, another forum, and an online survey additionally reiterated the needs and possible solutions (Loco4Locavores Team, 2016).

Furthermore, the alarming decline in agricultural production capacity has been recognized but not abated, as exemplified in each of the last GMP updates. For the 2008 update, an additional incremental loss of farmland from proposed UGA expansion was not deemed significant compared to the overall downward trend between 1994 and 2004 (Globalwise Inc, 2007). Spearheaded by FOCC and other farm advocates, the "Farming is not Dead" sign-carrying photo petition campaign sought to gain recognition in the context of the 2016 GMP update's proposed alternatives that would eliminate or reduce minimum parcel size zoning on rural and resource lands (Gillespie, 2015b; Steenbarger, 2015). FOCC regularly promotes agricultural land conservation policies available to county decision-makers and appreciated the fact that a no-net-loss policy actually exists in Davis, California, and King County, Washington (Wait, 2017). Many people wonder if Clark County can cultivate farming because as land conversion problems have been recognized for decades, small-scale farming persists anyway, and solutions are proposed (Thomas, 2017). Trends seem to beget further degradation rather than

increased protection. For example, policy makers were using small-scale statistics as part of their efforts to justify downsizing agricultural parcels and eliminating any rural parcel size restrictions in an alternative for the 2016 GMP for Clark County (Case, 2012; Yorke, 2016).

Growth Management Planning

Both 2008 and 2016 GMP updates have been appealed by the Futurewise-FOCC team. Their most recent petition to the Washington State GMA Hearings Board challenged the legality of the GMP on several counts. Clark County's 2016 GMP included the expansion of the UGA boundaries of the Cities of Ridgefield and La Center UGA further into areas once dominated by rural, agricultural, and forest land use designations.[xv] The cities had immediately annexed the land, so the incremental urban zone expansion was deemed moot (FOCC personal communications, 2019–2020). On another appeal count, to solve the GMA Hearings Board findings in favor of FOCC, the county withdrew up-zoning plans that would have reduced minimum parcel sizes for agricultural and forest land from the current AG-20 and FR-40 zoning categories. The county also withdrew the proposed de-designation of 600 acres of dairy land from agriculture to light industrial, as proposed by the landowner (FOCC personal communication, 2020). As well, the county apparently lost the impetus to conduct an area-wide agricultural assessment, a process that is called for by the state when further loss of agricultural land is being proposed. The assessment was the reason behind the February 2018 work session presentation by the planning department where they presented their estimates of current use and agricultural zoning. A bid request was developed but never released by the procurement staff.

Agricultural Programming Opportunities Bypassed

When given an opportunity to support agriculture in Clark County, the government failed. Here is further evidence of Clark County's lack of political support for agriculture. In both 2018 and 2019, the CCD failed to obtain support from the county government. A funding mechanism authorized by the state and implemented in 13 counties, rates and charges derive from landowner parcel assessment fees in order to provide stable funding. The proposal to collect a fee from landowners failed twice in Clark County despite the evidence of widespread support for such a measure.[xvi] Among other conservation (water and soil protection), the CCD had a budget line for an Agriculture program that would serve to advise the County, among other basic agricultural support strategies. County CDs that receive such basic funding have robust agricultural support programs comprising a whole suite of educational and technical assistance programs. Snohomish and Pierce Counties are notable models of CDs not totally reliant on grant funding for specific projects. The programs have continuity and therefore provide resilient social and technical infrastructure in support of the agriculture sector.

Clark County Social Infrastructure Assets

Support for sustaining agriculture in Clark County persists. **S**ince 2008, Clark County's multi-stakeholder Food System Council (FSC) has been promoting the retention of agricultural land for local food production and healthy food access goals (FSC 2012, 2013). Numerous other organizations also address farm and food system issues in Clark County. In addition to the CCD, support has come from Clark College, Urban Abundance, WSU Extension, and others involved in local food and agriculture and resource conservation. Slow Foods SW Washington has hosted quarterly or monthly events, as well as annual gleaning events. The FSC is tracking policy and action

on the county and state level and meets monthly. Clark College convened a food/farm conference to guide their future endeavors (February 2017). Some events are convened at the Vancouver Library (October 2017). In September 2017, the FSC and others convened the first in a series of strategy sessions to promote food hub initiatives for connecting farm products with consumers. By the end of 2019, the Second Mile Marketplace was established.

Indeed, Clark County appears to have many of the basic social infrastructural ingredients needed to actualize a resilient local agrifood system. However, the public agencies serving the agricultural community and landowners, primarily Clark County's WSU Extension and the CCD, have limited funding and staff to fully support the agricultural community's needs. The all-volunteer, multi-stakeholder FSC provides a context for networking across food security, farms, and local food organizations. The FSC specializes in hosting food system forums designed for education and networking, but they do not implement programs. Given the farmers' markets, CSA farms, farm stands, community gardens, and a new food hub, the region seems determined to build capacity to feed the growing consumer demand. Even the emergency food system is involved.

Food Security Infrastructure

Many food banks are increasingly involved in regional food systems initiatives and building capacity to distribute locally grown and fresh food to food-insecure people (Fisher, 2017). In Clark County, more of the food bank food is fresh due to their new facility's cold storage, various relationships with farms, and their own farming (Hewitt, 2013). At the 78th Street Heritage Farm, there are 10 acres under vegetable production just for the Clark County

Food Bank (CCFB), alongside crops grown by veterans. Between the farm, a church, and two acres at the CCFB facility, 100,000 pounds of produce were grown as part of the Farming and Gleaning Program.[xvii] Farmer involvement is growing. In 2019, the food bank distributed 190,720 pounds of local farm and farmers market produce. CCFB participates in the two new programs that actually pay farmers. The Farm to Food Pantry pilot initiative generated $65,000 in payments across Washington and was augmented by local farm donations and gleaning to distribute 315,000 of local produce (WSDA and Harvest Against Hunger, 2019). The mutual benefits are lauded, but small by comparison to overall emergency food distribution. Overall, CCFB distribution is "8 million pounds of food and 6.7 million meals a year," while "supporting 43 partners at 130 distribution sites."[xviii] This is an increase from the 3.9 million pounds of food in 2012 when there were 29 food pantries (Hewitt, 2013).

Many people are also growing food for their families and neighbors as self-provisioning. For example, the Heritage Farm community garden area has 80 individual plots and is only one of 82 community gardens in Clark County located on County properties, schools, churches, senior centers, and housing developments.[xix]

Conclusion

This chapter first profiled agricultural production in Clark County based on secondary data. While food farming in Clark County is still important in terms of sales, land, jobs, and productivity, the steady decline in production capacity is ongoing. Furthermore, food production is a relatively small proportion of overall cropland type (5% vegetables, fruit, and orchards, WSDA, 2019), with only 15% of farms producing such food crops (USDA 2012).

Next, this chapter presented available information on farmland policies and land use designations. Secondarily sourced data was augmented by participant observation field notes. The overall purpose was to show that the policies in place have not prevented declines in capacity. There are supportive forces, but the administrative and legal strategies amid a lack of political will and mutual lack of adequate information render solutions more remote. In contrast, Clark County does have assets. The problems and solutions are well-known, and the basic ingredients present, yet there seems to be an ongoing stagnation in the overall capacity to build a resilient local food system. The battle between saving the land versus private property development has not been solved in this fragmented context, despite forums, reports, appeals, ordinances, and pleas. Yet, the hard work to produce food continues amid the hurdles.

Overall, this chapter exposes the problem of interpreting various sources of secondary data to provide an accurate profile. Other research outlines this problematic gap in the data needed inform policy (Hunt and Matteson, 2012; O'Hara and Benson, 2019), particularly in urbanizing regions (O'Hara and Lin, 2020). Further gaps are revealed, in that policies and support systems exist, but do not appear to be adequate to ensure farm or food system resilience.

CHAPTER 5: PROFILE OF STUDY FARMS

This chapter profiles the Clark County farms selected for this study. Data come from the Clark County Assessor Maps Online parcel information that provides areal views, soil suitability mapping, and the value of land and buildings. These data are comparable to county-wide information. In addition, data from the farm resilience indicators and selected qualitative data are included to further explain the results, elucidate farmer perspectives, and provide illustrative examples. Results from the farm resilience assessment indicators are shown in figures for farm scale (gross sales and acreage), land adequacy, soil rating, and asset values.

Study Farm Location by Land use Zoning Designation and Tax Status

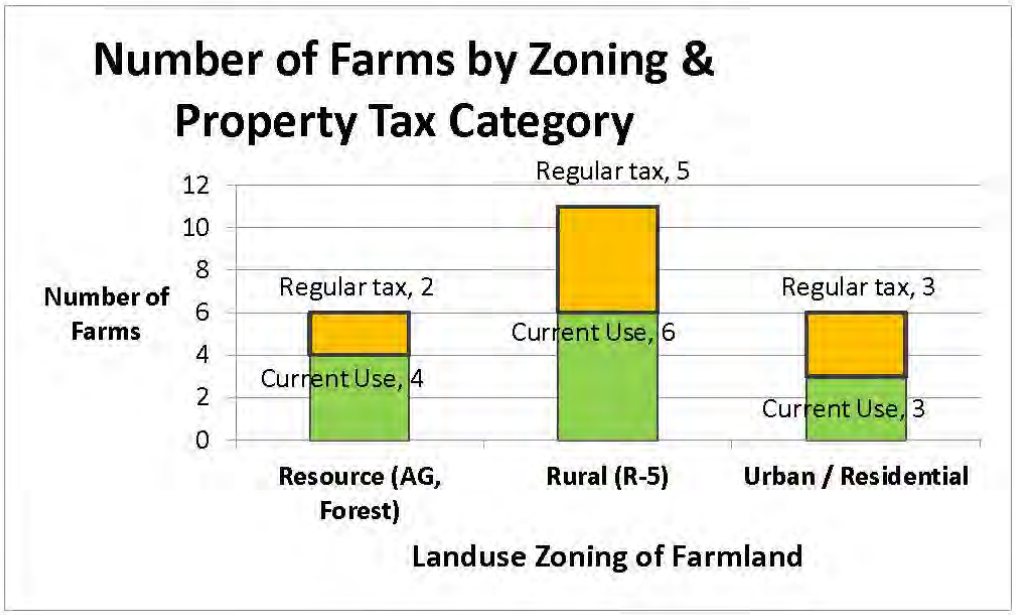
This section summarizes the study farm profile results that are available directly from the Clark County Maps Online website for each farm (by parcel). Land use zoning designation (agriculture, rural, or residential) and property tax category (regular or discounted current use) serve to locate the selected farms within the county context.

This diverse sample of direct market farms includes farms that are variously located in rural areas, among mixed residential suburbs, and within densifying city neighborhoods. Several farms are adjacent to the UGA boundary. Figure 12 shows the zoning and tax status of the 23 farms selected for the study. The farmland falls into three categories of land use zoning, according to Clark County Assessor's data on the parcels themselves: resource (agriculture or forestry), rural, and urban/residential.

The county website parcel information specifies whether the property tax assessment is based on market value (regular) or is reduced because of the land use designations under current

use taxation. Property tax is reduced for 13 of the farms based on current use for agriculture, forestry, or open space, as shown in Figure 12. Farm parcels with senior citizen owners may also qualify for greatly reduced property taxes. Such study farms are included in the current use category, whether they have a resource basis for reduced taxes or not. For example, one study farm had an open space designation, which was changed by the county based on the county assessor review of minimum acreage requirements (Farmer P, personal communication), so they applied the senior discount. They had 9.8 acres, just below the 10-acre minimum for open space.

Figure 12: Number of Farms by Zoning and Property Tax Category



One study farmer said they did not know when they purchased their home on five acres that it was under current use for agriculture because it was part of a subdivision of similar parcels with farmland all around. The realtor had not informed them. They have kept up at least the