

Prepared by



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Images of foothill produce by Keith Walley, a foothill farmer.

The cover image is Alexander Walley, carrying a bundle of celery for juicing.

Cover Design by Elisabetta da Ros (FlairVoyance design).

Image of the downtown Marysville Halls Safe & Lock C. sign on page 20 by Julian Branston.

This report is posted on the County's Yes to Yuba website.

### **Executive Overview**

This report presents the findings of a Needs Assessment for a Foothill food-system, sponsored by Yuba County. In August 2022, the County published a request for a proposal (RFP) on a 'sustainable food system, sourced and supported from within the foothills area', because 'employment opportunities and access to nutritional food is greatly lacking in this area'. Findings for this report were taken from interviews, surveys and focus-group meetings over a period beginning December 2022 and which involved more than 100 people: farmers, producers, livestock-farmers, ranchers, artisans, ag-tourism venues, small businesses, County organizations and others (see *Acknowledgements* on page 34).

This report shows the need for a Foothills food-system and that a food-system could help stimulate the local economy.

### Needs Assessment Approach

As requested by the County, the Needs Assessment team based its study on the four operational areas of a food-system: Farmer, Food, Facility, and Education<sup>1</sup>. Studying these areas helps guide the planning and implementation of a Foothill food-system, first by capturing current conditions and challenges, and second by generating recommendations on how these challenges can be met. Each Operational Area stimulated the following questions:

- Farmer: Will Farmers and producers adapt their lines of production, for example, focus
  on fewer crops while increasing volume?
- 2. Food: Can a new food-system supply-chain include larger-scale consumer types, such as schools, hospitals, food banks, restaurants and retail businesses (termed in this report as consumer-partners)?
- 3. Facility: Does a food-system facility or facilities need a retail space?
- 4. Education: What kind of education program could a food-system offer?

### Needs Assessment Methodology

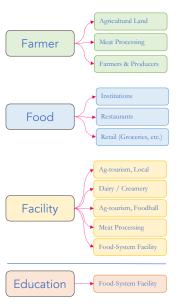
The methodology used to assess the need of a Foothills food-system involved gathering data, views and ideas using Surveys and Focus Groups questionnaires. Surveys were distributed to *Produce*, *Livestock*, *Dairy/Creamery Farmers* and to *Local Ag-tourism* businesses. Survey data and key findings were reported back to the survey respondents for additional feedback and discussion. In the meantime, Focus Group questionnaires were distributed on *Produce*, *Livestock*, *Dairy/Creamery Farmers*, *Agricultural Land*, *Downtown Ag-tourism*, *Education*, *Institutions*, *Meat-Processing*, *Restaurants*, *Retail*, and *Type of Facility*. Each Focus Group then discussed obstacles and opportunities in each operational area, and how these obstacles could be overcome.

### Organization of This Report

This report is arranged under the headings of Farmer, Food, Facility, and Education. Each heading contains:

- 1. An introduction to the Operational Area.
- 2. The Needs Assessment Approach, including the results of surveys and Focus Groups<sup>2</sup> and the questions addressed by each Operational Area, as for example under Farmer, Can local Footbill farmers sustain a food-system?
- 3. A summary of Recommendations for the Operational Area with links to their narrative beginning on page 27.

Recommendations from the activity of this Needs Assessment begin on page 27. A Table of Recommendations by order of priority is presented on page 33 and the criteria for how Recommendations are prioritized is described on page 27.



### Food-System vs. Food-Hub

The County's request for a Needs Assessment distinguishes between a 'food-system', which involves all the components of the aggregation and distribution of local produce, and a 'food-hub', which is often represented as a facility-based work area for local distribution. While different examples of food-distribution systems and food-hub facilities are discussed on page 18, this Needs Assessment looks at a Foothill food-system as a whole, of which a food-hub facility is a singular component.

### Introduction to the Surveyed Area

The Yuba County foothills surveyed in this report relates to an area of some 28 square miles, and a population of around 5,2003 in the towns and communities of Oregon House, Dobbins, Browns Valley, Brownsville and Loma Rica. Survey respondents mainly come from this area (78%). As country, its pristine: forests, pines, cedars, oaks and madrone, mixed with live oak woodlands and grasslands. A 2012 Kennedy/Jenks irrigation study writes that the Oregon House/Dobbins area has 'wide valleys of rolling hills with irrigable soils and mixed outcrops of shallow soils and rock hills' and adds that it is the 'most likely area' to 'increase irrigation lands'. Yuba County itself began during the Gold Rush, with many communities springing from mining towns and logging camps<sup>4</sup>. It's also wine country, from grapes first planted wild in the 1850's, some growing along the banks of the Feather River. Yuba could be a version of the Spanish word 'uba' or 'grapes' but it's more like the name of a Maidu village on the Yuba River<sup>5</sup>. Part of the county falls within the Sierra Foothills American Viticultural Area (AVA), one of the designated wine grape-growing regions of the US that stretches from northern Yuba County to Mariposa County in the south. This AVA contains five other AVAs, including North Yuba, officially registered in 1985 with the opening of the Renaissance Vineyard & Winery (RVW) in Oregon House. More than 100 wineries pocket the foothills, their vineyards between elevations of 1,500 to 3,000 feet, a temperate range but with thin, mountainside soils that produce a medium yield but high-quality fruit.



### Poverty, Food Insecurity, Environmental Conditions

The Rural County Representatives of California (RCRC) reports that 40 of California's 58 counties are rural. Food insecurity and poverty limits pre-dominate in rural counties, along with nutritional deficiency, and low-/fixed-income residences. In March of 2021, Feeding America projected Yuba County's poverty level at 16.4% out of a population of 78,668. A further study from the USDA Economic Research Service (ERS) reports US poverty rates in 2019 'higher in rural areas' at 15.4% compared to urban areas at 11.9%. In recent years, wild-fires, drought and lack of irrigation water have severely impacted Foothill communities, including farming (some using well-water to farm). Additional issues have recently emerged: lack of transportation (discussed on page 15), and vulnerability to climate change, with seasons of severe drought followed by seasons of intense rains and atmospheric rivers.

### **Quality of Foothill Produce**

The area is known for quality products: RVW and <u>Clos Saron</u> are among the local wineries that are nationally recognized; <u>Richards Grassfed Beef</u> is the first west coast beef-company to receive the <u>Savory Institute</u>'s Ecological Outcome Verified (EOV) certificate; <u>Apollo Olive Oil</u> is rated as one of the best olive-oil producers in the country, and the bakery <u>Artisan Lavinia</u> was recently highlighted for their unique artisanry in an <u>article</u> by *The Appeal Democrat*.

# Key Findings: Surveys

### Farmers & Producers

Most of the farmers and producers surveyed (46) farm in the Oregon House/Dobbins area (78%), with a produce range of vegetables (76%), fruit and nuts (60%), and berries/melons (36%). Few grow grains (2%), as the rocky, hilly terrain is unsuitable, while the Yuba County valley is a main producer of grains (rice

% of farmers who would increase production on their current land, given the right conditions and barley). Most surveyed farmers see the benefit of a local food-system, and 82% would increase production on their land accordingly and agree that a

food-system would help reduce food waste. Most farmers see their business improving with a food-system from increased access to existing or new markets (69%), and from collaborating in designing value-add products (64%). However, 56% report issues with the availability of labor, and 47% report issues with the cost of labor (and 31% report both).

For more, see Farmers and Producers on page 9.

#### Ranchers & Livestock Farmers

Ranchers and livestock farmers surveyed express concern at the lack of a local meat-processing facility (which for the purpose of this report includes livestock slaughter), and despite the quality of local meat (see Quality of Foothill Produce on page 4) their livelihood is threatened: 88% of respondents travel well over the optimum distance of 50 miles to a processing facility,

and processing facilities are within the					
Oregon House/Dobbins region					
Facility	County	Miles			
Dixon, CA*	Solano	87.8			
Esparto, CA~	Yolo	78.8			
Petaluma, CA	Sonoma	142			
Reno, NV	Washoe	125			
Modesto, CA	Stanislaus	147			
Turlock, CA	Stanislaus	159			
Orland, CA	Glenn	72.6			
Eureka, CA	Humboldt	269			
* Sheep only	Av. Miles =	135.15			

Currently no USDA Food Safety

Inspection Service (FSIS) slaughter

**50%** travel over 100 miles. Livestock is mainly beef (over **65%**). However, a small- or mid-size USDA-inspected facility would allow for more specialization in all livestock types.

For more, see Meat-Processing Facility on page 23.

### Creamery & Dairy

The Dairy & Creamery group surveyed was small, yet like the Livestock group, has limited access to a processing facility. 80% of those surveyed would convert above 60% of their milk into dairy products (butter, cheese, yoghurt). This follows a trend in

Dairy / Creamery
Milk Production  Cow - Less than 100 Gals  Goat - Less than 100 Gals
Sheep - More than 100 Gals  Water Buffalo - More than 100 Gals

California dairy-farming, where consumption of fluid-milk has dropped for some decades, yet production has risen. Case studies of this trend (see <u>California</u>

<u>Agriculture: Dimensions and</u>

<u>Issues</u>) show that small dairy-farms pivot to value-add products in order to compete; 40% of California milk goes into making cheese. But the chief obstacle for the Dairy & Creamery group is that building a local USDA-inspected Dairy/Creamery would cost even more than a meat-processing facility.

For more, see Dairy and/or Creamery on page 21.

### Local Ag-Tourism

This survey had a 100% response rate and gathered data on the number and kinds of local agtourism businesses, including

Airbnb owners report over 600 visitors during 1-year with the following occupancy rate:

46%

Cooking and baking, Farming, Wine/olive oil making, Ag-tourism experiences, Alternative healing, Arts and education, Lodging (Airbnb and resorts), and Local restaurant or café. 57% of all local ag-tourism businesses are Airbnbs that hosted over 600 visitors in 1 year, with a combined occupancy rate of 46% (which is low, but also fine for some Airbnb hosts). 95% of respondents would support developing an ag-tourism network, although currently only 57% have an online presence. Overall, local ag-tourism businesses see the benefit of a Foothill food-system and will collaborate on an ag-tourism network, including promoting food-system products. 81% would like a local Visitor Center.

For more, see on page 17.

# Key Findings: Focus Groups

### Agricultural Land

Focus Group members came from the Natural Resources Conservation Service (NRCS), the Yuba County Resource Conservation District (YCRCD), the North Yuba Water District (NYWD) and the Bear Yuba Land Trust (BYLT). BYLT has reserved over 15,000 acres<sup>7</sup>, 40% agricultural with the objective to 'provide land security for farmers so that farmers can provide food security for communities'. This Focus Group discussed the need for a similar land trust to support the proposed Yuba County foodsystem. For more, see on page 8.

#### Restaurants

Restaurants from Marysville and Yuba City were hard hit by Covid and the prevailing economy, and so have a limited or no budget for quality produce. (Foothill Restaurants are generally too small to make an impact as consumer-partners but were involved in the local Ag-tourism Focus Group). However, restaurants can reliably partner with a food-system, since cashflow from customers is immediate, meaning that payment terms for food-system produce can be reasonable as well, i.e., Net seven day. For more, see on page 17.

### Ag-tourism, downtown Retail outlet

With input from Community Development Director Dan Flores and updates by the City of Marysville to its General Plan, this Focus Group discussed ideas in renewing downtown with highend food and beverage retail, and commercial and multi-family housing. A recent prosperity study<sup>10</sup> shows that nearly **26%** of Marysville's top employers work close to downtown, with income levels that could attract a hyper-local food system featuring quality foothill products. For more, see on page 20.

### Meat-processing Facility

Respondents to the Ranchers & Livestock Survey formed this Focus Group and mainly discussed the lack of a local meat-processing facility. 88% travel over the optimum distance of 50 miles to process livestock, raising operating costs and reducing the quality of meat. A meat-processing facility in Yuba County would preserve their livelihood, along with ranchers and livestock farmers in neighboring counties, and also generate revenue for the County.

For more, see on page 23.

### Institutions (Schools, Hospitals, Food Banks)

Data input from the County's institutions (as above) proved useful: e.g., the Marysville Joint Unified School District (MJUSD) serves over 10,000 meals per day. But for schools, hospitals and food banks to purchase local produce requires negotiation and relationship-building. But there's a good incentive; for example, schools in California spend on average \$2.05 per breakfast and \$3.248 for lunch, which federal and state programs will reimburse9.

For more, see on page 13.

#### Retail

Produce managers from grocery retail outlets in Marysville and Yuba City are open to stocking their shelves with local produce but report obstacles to this kind of purchasing agreement. As part of a large retail chain, produce managers have little say in purchasing from local farmers without head-office approval, and most retail chains also rely on large distributors for produce delivery, which adds another level of complexity to obtaining head-office approval for purchasing from a food-system. For more, see on page 17.

### Type of Facility

Respondents most engaged in the local Ag-tourism Survey were invited to discuss the type of facility that would best fit a Foothill food-system. Of the local ag-tourism businesses that joined in, 10% were farmers (vegetables, fruits, herbs, etc.), made wine/olive oil, offered ag-tourism experiences, produced arts and education events, or ran a local restaurant or café, 19% cooked or baked for local restaurants and cafes or offered healing services, and 57% provided lodging (Airbnb and resorts). For more, see on page 22.

### Education

From the Farmer & Producer Survey input on education, few were interested in business skills (27%) or farmer training (38%), yet many face environmental challenges (Wildfires 67%, Drought 64%, Water Supply 53%). This suggests that an education program on environmental challenges would be most useful right now. For more, see on page 26. Note: In addition, the Focus Group recommended the Farm2School program, as this offers 'project-based learning' for children.

For more, see on page 26.

# THE STUDY



Meyer lemons under polypropylene tents in the recent snowfall (winter 2022/3)

### Needs Assessment Approach

The following questions were addressed under Farmer:

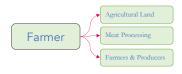
Is there capacity among Foothill farmers and landowners to supply a sustainable food-system? What does the Farmer need to meet the demands of the food-system?

The Farmer Survey/Focus Groups focused on:

- Agricultural Land: The Focus Group questionnaire (60% response rate) led to a discussion on how agricultural land can be reserved for a food-system.
- Meat-Processing: Ranchers and Livestock: The Survey (80% response rate) requested input on the current challenges to small- and mid-size livestock farms.
- 3. Farmers and Producers: The Survey (90% response rate) requested input from farmers and producers on type of produce, number of acres farmed, etc., and the perceived benefit of a food-system.

### **Farmer**

The nearly fifty or so Foothill farmers and producers who participated in this survey combine both dedication and



creativity in their work (see the figure left), while many shoulder an increasing burden in growing quality produce. All of them share a deeply ethical approach to managing the land and preserving agricultural value.

### Introduction: Constraints on Farmers and Producers

Many small farmers surveyed report consumers interested in their produce; one survey respondent reports that some 100 visitors per week visit the farm's produce stall. But business is challenging; expensive labor, materials, supplies; premium cost of farming land; complex applications for government support programs (such as infrastructure improvements); and above all, unpredictable weather and environmental conditions. And if farmers seek to increase their profit, for instance with a farmer's market, then preparing, packaging, marketing and distributing their produce comes at an additional cost.

### Findings and Recommendations

The findings of this report on Farmer cover produce and livestock farming along with a long-term strategy to secure good agricultural land for a food-system. Recommendations based on these findings occur throughout this section, as for example to:

- Identify an accessible tool for assessing the value of Agricultural Land parcels.
- 2. Find the location of a Meat-Processing facility in Yuba County.
- 3. Encourage Farmers and Producers to boost production through NRCS programs.

See the Recommendations between pages 27 and 28 and as prioritized in Table 3 beginning on page 31.

### Agricultural Land

Small- and medium-sized farmers generally find their profit-margins to be slim with high labor, material and distribution costs. However, if a farmer seeks to increase profit by increasing production, good agricultural land may be hard to find because of its cost, and also that landowners might be more interested in subdividing their land for property development rather than negotiating long-term lease agreements.

The aim of the Bear Yuba Land Trust
(BYLT) is to 'provide land security for
farmers so that farmers can provide
food security for communities'.
Erin Tarr, Executive Director, BYLT

### Land Trusts and Conservation Easements

However, there are innovations in preserving agricultural land by which provide farmers an opportunity to make an equitable living. The Bear Yuba Land Trust (BYLT) runs a program called Forever Farms, a partnership of a food coop and education non-profit (Sierra Harvest), a grocery outlet featuring local produce (BriarPatch Food Co-op), an established food-system in neighboring Nevada County (Tahoe Food Hub), and a long-living mid-size farm (Mountain Bounty Farm). (Although BYLT's work is mainly in Nevada County, it has an amicable and non-competitive relationship with Yuba County's YCRCD and its land-trust easements neighbors the Foothill region surveyed in this report.) Arranging a land trust involves 'conservation easements' which 'offer great flexibility'<sup>11</sup> as, for example, to protect a wildlife habitat 'while an easement on a farm might allow continued farming and the addition of agricultural structures.' In a meeting<sup>12</sup> with Erin Tarr, Executive Director of BYLT, she stated that the objective of a land trust is to 'provide land security for farmers so that farmers can provide food security for communities'. With this land reserved, Forever Farms administers reasonable evergreen lease-agreements for farmers, providing their farming is ecologically responsible and keeps the land productive. The Focus Group therefore identified the need for a land trust that would serve a Foothill food-system.

See Recommendations beginning 1 through 5 on page 27.

### Ranchers and Livestock

From the Survey and Focus Group input, it's clear that building a meat-processing facility in Yuba County is a priority. A facility of this kind would preserve the livelihood of livestock farmers and ranchers in Yuba and neighboring counties, help in establishing a local food-system and potentially bring revenue to the County. (Revenue projections for a meat-processing facility are discussed on page 23.) The California Department of Food and Agriculture (CDFA)'s annual agricultural report (2021-2022) shows that livestock (cattle and calves) is the 5th rated commodity in the state, contributing over 3-billion-dollars<sup>13</sup> in business. In Yuba County, after revenues from commodity giants such as rice and walnuts (100 million and over 50 million respectively), the fourth largest agricultural industry in the County is livestock at 25 million<sup>14</sup> in revenue. From this report, the County has over 15,000 head of cattle<sup>15</sup>.

### Meat-Processing Facilities too far for Smaller Livestock Businesses

The lack of meat-processing facilities within a reasonable distance has a serious impact on small- and mid-size livestock farmers and ranchers. Over 88% of those surveyed travel well over the optimum distance of 50 miles to process their meat, a significant increase in their operating costs, while long distances adversely affect their animals, impacting quality. Also, heavy traffic like this tends to stress roads and highways, increasing infrastructure costs, while fossil-fueled carbon emissions damages air-quality and the environment. As one respondent to the survey commented, 'T'd rather spend the money [processing my animals] up here in my own community'.

An issue here might be the perception of distance: the 2008 Farm Act defines locally produced food as, 'less than 400 miles from its origin, or within the State in which it is produced.' But looking at a 2012 USDA report<sup>16</sup> and the ratio of facilities federally-inspected by the Food Safety and Inspection Service (FSIS) to small- and mid-size farmers, US states widely contrast in distance and accessibility<sup>17</sup>. Yet small livestock operations of less than 100 beef head manage 25% of the state's beef livestock<sup>18</sup>. And although data for the 2012 report shows between 25–49 federally-inspected facilities in California that process nearly 3 billion pounds of livestock, yet as previously mentioned, most smaller livestock farmers and ranchers surveyed travel too far, and as small businesses, most find it difficult to schedule processing slots at these facilities. All of which indicates a need for a meat-processing facility for ranchers and livestock farmers in Yuba and neighboring counties. The feasibility with financial projections for this kind of facility are further discussed under Facility, on page 23.

### Farmers and Producers

Following the results of the Farmers & Producers survey, a de-brief meeting with respondents was held on March 15th at the YES Charter Academy. (This kind of de-brief meeting was held only with farmers and



producers, since this was the largest group of survey respondents, many of whom look at a food-system as a viable way to maintain their living, and by keeping this group engaged, a food-system is more likely to succeed.) From the discussion, these farmers love to farm, but find this activity hard to sustain in current economic conditions. In general, this group finds the concept of a food-system economically attractive (collaboration with other farmers in experience, cost-cutting ideas, creating value-add products, etc.), while a centralized facility or facilities to process, package and distribute produce will help reduce their operating costs. However, the debriefing session, while emphasizing farmer's needs (as raised in this report) also brought additional discussion items:

- 1. First, none of the farmers and producers surveyed could be considered a mid-size farm, and in the first phase of a food-system's operation, the consistent volume of produce from a mid-size farm or farms will help stabilize operations while small farmers adjust their lines of produce and ramp-up production accordingly. Although an unfamiliar activity for farmers and producers at first, this kind of planning also brings greater diversity of produce into the local supply-chain. See Recommendation 16 on page 28. The stability that a mid-size farm/producer can bring to a food-system also features in the discussions on land trusts on page 8 and a County meat-processing facility on page 24.
- 2. Second, a critical issue best reported verbatim: 'If I can keep 30% of my gross profit, then I'm a happy man.' Recommendations addressing this relate to a) Farmers and producers accessing federal and state funding on necessary infrastructure improvements as discussed on page 28, b) Planning on purchase agreements with Schools and Foodbanks as discussed on page 13, and c) By developing a 'brand' for the Yuba County food-system as discussed on page 28.
- 3. Third, the cost and scarcity of labor as discussed in the Availability of Labor and the CalWORKs Program on page 10.

### Planning Volumes and Lines of Produce

For a food-system to become an effective distribution of locally grown, nutrient-rich food, analysis is needed on the *current lines and volumes of produce* compared to the needs of the distribution area. An excellent example of this analysis is provided by the Sacramento Area Council of Governments (SACOG)<sup>19</sup> where types and volumes of farmer's produce is compared to the needs of the distribution area (in this case, in the Sacramento region). The comparison shows that farmers over-produced more than 100% in tomatoes, blackberries, peaches and walnuts, yet under-produced more than 90% in lettuce, kale, asparagus, broccoli, celery and spinach. Recommendation 16 on page 28 includes planning the volumes and lines of produce for small-farms to ramp up production for a food-system.

### Boosting the Local Economy

The County's RFP states a commitment 'to supporting a diversified, equitable, vibrant food and farm economy by supporting both large and small food producers and artisan makers'. How can rural residents, particularly those involved in developing a local food-system, enable the County's support? One way is to learn how buying locally impacts the local economy; and if research shows a positive impact, to communicate this to local farmers and producers, and incorporate this into business planning. An influential report from 2016<sup>20</sup> by agricultural economist Shermain Hardesty provides insight into the economic impact of marketing local food. Overall, there were several positive impacts from both supplying and buying local produce, one of the most compelling being that 'Every dollar of food that is produced locally and sold locally' generates 44 cents into the local economy, compared to the sale of non-local products. This means that farmers selling their produce locally, even at a higher price than large retail chains, will positively impact the local economy, which then cycles back to increased buying power for local residents, making local food more affordable.<sup>21</sup>

### Availability of Labor and the CalWORKs Program

In the farmers and producers de-brief meeting, one farmer raised the issue of seasonal labor, which is generally scarce and expensive, with 31% of farmers reporting both issues. However, if demand were to increase for a particular crop to match the demand of a food-system, this farmer added that increasing crop production to meet the need would not be too difficult, as 'it takes the same amount of effort to

Common challenges to production Availability of Labor: 56% Cost of Labor: 47%

grow a few tomato plants as it does to grow 150'. And none of these farmers like to see food-waste. So, adding more lines of produce to match the demand of a food-system could balance the labor need. Bearing this need in mind, a solution could possibly be a County-administered welfare-to-work program that could supply labor for various employments in a food-system (including field work), and the cost of which would not be borne by the farmer but the food-system, which in turn would be partly reimbursed in the initial phase of employment by the County.

### CalWORKS Program

Labor for both farmers/producers and the food-system (for example, preparing and packing produce in a food-system facility) could be provided by the CalWORKs program, administered by Yuba County's Health and Human Services (HHS). CalWORKs is a welfare-to-work program that resulted from legislative<sup>22</sup> reform in 1997. The legislative text of CalWORKs states that with those receiving cash-aid from the government, the aim is to employ 'all able-bodied participants'<sup>23</sup>.

'Self-sufficiency is our goal for CalWORKs families'.

Courtney Pyse, Program Manager, Health and Human Services

An interview with the HSS program manager of CalWORKs expands on how this program works: the intent of CalWORKS is 'creating inclusive and diverse job opportunities in our workforce' by 'expanding employment and career development options here' in Yuba County. CalWORKs offers several types of benefits for county-residents in poverty, for example, children without parents, or families with children where the principal wage-earner is unemployed. One type of CalWORKs benefit is ESE or expanded-subsidized employment, which helps welfare-to-work adults (ages 18 to 59) find and secure employment. ESE establishes a partnership between welfare-to-work individuals and employers ready to hire them and reimburses the employer's payment of salary to the ESE employee during their initial employment. The salary benefit works in phases: 100% for the first 3-months, 75% thereon to 6-months, and so on. ESE can end at any point but cannot exceed 1 year, including salary benefits. Based on their aptitude and interests, HSS also encourages welfare-to-work participants by providing books, school supplies, etc.

For HSS, a food-system in the Foothills will provide opportunities for rural residents on CalWORKs to exit the poverty-cycle and actively re-enter employment. In 2022, HHS published the results of a survey on the County's community health, using a framework developed by the <u>US Department of Social Services</u> called *Healthy People 2030*. In brief, the *Healthy People 2030* framework views factors impacting health and well-being through a lens of 'social determinants'. These social determinants are a) Economic Stability, b) Education Access and Quality, c) Health Care Access and Quality, d) Neighborhood and Built Environment, e) Social and Community Context. Respondents to the HHS survey rated Economic Stability at 43%, the highest by far of all survey responses to social determinants<sup>24</sup>. As a social determinant, Economic Stability includes poverty and access to good food. Two economic stability objectives of the *Healthy People 2030* framework aim to Reduce the proportion of people living in poverty and to Reduce household food insecurity and hunger.

In Yuba County, nearly 1,300 residents are on CalWORKs, with a little over 900 of them ready to work<sup>25</sup>. The success of ESE is measured by the number of participants that complete 3-, 6-, 9- and 12-month phases and remain fully employed after that. In 2021, 19 or around 2% welfare-to-work individuals entered ESE, and successfully completed it. This might not seem an indicator of success considering the County's number of welfare-to-work individuals. However, it's significant that 100% of those entering the program become fully employed. The Stanford University Center on Poverty and Inequality reports<sup>26</sup> that CalWORKs is arguably one of the 'three largest antipoverty programs in California'<sup>27</sup>, trimming 'the child poverty rate by between 2 and 4' percent.

Partnering with HHS CalWORKS could provide a source of labor for farmers/producers and a food-system facility, partly offsetting the operating cost in the initial phases of a new food-system, while providing HHS opportunities to source work in the foothills where the general trend is little employment, low income and unreliable transportation.

For Recommendations on labor and CalWORKS, see 10 on page 28.

For additional Farmer and Producer Recommendations, see 9 and also 11 to 17 beginning on page 28.



### Needs Assessment Approach

The following question were addressed under Food:

What do large-scale institutional consumers need to purchase from the growers and producers of a Food-system?

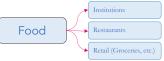
Under Food were assigned Focus Groups on:

- 1. Institutions (Schools, Hospitals, Foodbanks)
- 2. Restaurants
- 3. Retail

Representatives from Institutions, Restaurants and Retail (a combined response rate of 44%) were asked if their food management and budget would include local produce, and if so, what were the obstacles to purchase agreements.

### Food

The area surveyed is nationally recognized for its quality foods, from



wines and olive oil to the craft approach of *Artisan Lavinia*, a bakery which fresh-mills and leavens its flour naturally before baking. Many of the food purveyors who participated in this survey have a craft-like approach to what they do. Yet many need to make the leap to a wider distribution and larger, institutional markets.

### Introduction: Food and Health

Aside from helping farmers make an equitable living, a food-system also promises many benefits to consumers: in a current cultural trend, local nutrient-rich food is promoted as 'medicine', for example, the Food Fix<sup>28</sup> campaign, which applies to psychological health as well. Research on the after-effects of the Covid pandemic<sup>29</sup> show the 'negative effect of quarantine on mental health<sup>30</sup> while further research correlates food with physical and psychological health, and the cause of chronic disease (see Table 1<sup>31</sup> on page 13). In children specifically, research links good nutrition with improved academic performance<sup>32</sup> and mental health, i.e., improved self-esteem and resilience to stress. Recognizing this could have a lasting impact on the social determinants of health in our communities.

### Findings and Recommendations

Under the Operational Area of **Food**, the findings of this report cover the engagement of farmers and producers with 'consumer-partners', the improved health and wellbeing of consumers and the growth of communities. Recommendations on these findings occur throughout this section, for example, promoting the <u>Farm2School</u> program in Yuba County school-districts, as discussed on page 26.

See the Recommendations between pages 29 and 30 and as prioritized in Table 3 beginning on page 31.

### Institutions

From input gathered through the Questionnaires and discussion with institution representatives, purchasing local produce from a food-system will require significant operational changes. For example, produce managers for retail outlets will generally need executive approval to buy produce from a food-system. However, a food-system would need an institution as a consumer-partner for it to succeed, and this requires time and resources in building a relationship with an institution as a consumer-partner, and in the case of retail, with food-distribution companies as well. Obtaining this kind of consumer-partner could be achieved in the following incremental steps:

- 1. To pilot local food being purchased by a school, as for example through the Farm2School program (see on page 26).
- 2. Obtain survey data from a large, professional income institutions, as for example a hospital. This survey data would provide insight into the food-needs of hospital staff, which a food-system could target (see on page 14).
- 3. Assist the region's <u>Food Bank</u> and other food distribution entities to establish a food-distribution system for needy families and communities (see on page 15).
- 4. Under the category of Institutions, and Communities and Government, including the military, as potential consumer-partners (see on page 16).

#### **Schools**

Daily Average of Meals	Served
Breakfast	3,723
Lunch	5,966
Afterschool meal (supper)	702
Total	10,391

The Foothill region in this report falls within the boundary of the Marysville Joint Unified School District (MJUSD), which operates over 20 schools in Yuba County, serving approximately 10,000 meals to students from preschool through Grade 12 (see the Table on the right<sup>33</sup>). In Oregon

House itself, there's also the Yuba Environmental

Sciences (YES) charter school<sup>34</sup> under the County's Office of Education (YCOE), with some 170 students from local communities. YES actively supports providing locally-grown food to its students and a 'project-based learning' approach where students run a kitchen garden and raise chickens to provide eggs for the cafeteria<sup>35</sup>. The Camptonville community, 20 miles from Oregon House, partners with All Children Thrive (ACT) which supports community action for the wellbeing of children<sup>36</sup>. However, larger school districts face obstacles when it comes to purchasing food from local farmers and producers:

### **Net Invoice Agreement**

With a net invoice agreement, an organization promises to pay the full amount of the invoice within a set term, generally

Neurotransmitter	Effects of deficiency	Foods to avoid	Foods to consume
Acetylcholine	Deterioration of memory and imagination	Sugar	Organic/free-range egg
	Fewer dreams	Deep-fried foods	Organic or wild fish
			(e.g., salmon, mackerel sardines, fresh tuna)
	Increased confusion,	Junk foods	
	forgetfulness and	Refined/processed foods	
	disorganisation	Cigarettes	
		Alcohol	
Serotonin	Low mood	Alcohol	Fish
	Difficulty sleeping		Fruits
	Feeling 'disconnected'		Eggs
	Lacking joy		Avocado
			Wheatgerm
			Low-fat cheese
			Lean, organic poultry
Dopamine	Lacking drive, motivation and/or enthusiasm	Tea and coffee	Regular, balanced meal
	Crave stimulants	Caffeinated drinks	Fruits and vegetables
		and pills	high in vitamin C
			Wheatgerm
			Fermented products
Gamma-Amino Butyric	Hard to relax	Sugar	Dark green vegetables
Acid (GABA)	Anxious about things	Alcohol	Seeds and nuts
	Irritable	Tea and Coffee	Potatoes
	Self-critical	Caffeinated drinks	Bananas

30-days. This is accepted practice between seller and buyer for a product, service or transaction. However, a model food-system/food-hub and to support farmers and producers make an equitable living, and this means paying upon receipt of produce yet having enough cash-flow to wait for consumer-partners to pay their invoices in turn, a likely 30-days. Therefore, the operator of

a food-system must have enough working capital, projected through its first years of operation, to handle this pattern of transactions. Price too could be a factor for farmers and producers who are considering engaging with a food-system, as schools are required to procure from the lowest price vendor. In general, small farmers cannot compete with industrial farming.

See Recommendation 21 on page 29 on the USDA's micro-purchasing agreements for small- and mid-size farmers and producers.

### Menu Management

The volume of meals served in a school district, particularly in urban areas, requires advance menu-planning: for example, MJUSD schedules its menus months ahead in order to manage its volume of meals, and the <u>Central Kitchen</u> for Sacramento City Unified School District (<u>SCUSD</u>) serves 43,000 meals per day, and accordingly designs its menus a year in advance. This means that a local producer must consistently deliver produce according to the schedule of school menus. But this also means that small farms can prioritize and scale to high-demand produce, and it's likely the relationship between school and producer will allow planning for flexible menus, for example, zucchini in summer, butternut squash in winter. The advantage of a large distribution network like the Central Kitchen is that it can build relationships with many producers and consumers, as for example, the Central Kitchen also distributes to Sacramento's <u>Mulvaney's Building and Loan</u>. However, a smaller food-system/food-hub in a rural area might not have the volume and the number of connections to afford this choice, at least in its initial phase of operation.

### Food Inspection

Commercial/certified kitchens are regulated environments, and any public-serving organization with a food-service must observe health and safety regulations, particularly with food and food preparation. This can be an obstacle to kitchen managers and staff who are considering menus with local produce — a failure to meet regulation criteria could mean that funding is withdrawn.

However, some school districts, especially in California, find their way past these obstacles including fear of regulations, and have well-established Farm-to-School programs; nearby Winters of Yolo County procures 97% of its kitchen produce from local farmers within 50 miles. Other data shows that farmers and producers involved in a Farm2School program find an average increase of 5%<sup>37</sup> in their income.

### **Produce Preparation and Processing**

Food preparation and processing can be an obstacle too. Kitchens must log the weight and percentage of foods in their menus, and large food distribution companies make this easier by pre-packaging products to weight and volume, enabling kitchen staff to fulfill regulations. Small farmers do not have the time or the means to prepare their produce in this way, nor do schools have enough staff to clean and prepare produce according to regulations. However,

'Mother nature is the best chef!'

Juan Cordon, Senior Director of Student Nutrition, Vacaville Unified School District

food preparation is one of the key activities in a model Foothill food-system, where a facility or facilities would feature a preparation area for cleaning and preparing produce, perhaps associated with a certified kitchen.

See Recommendation 12 on page 28 which relates to the regulation amounts of food for school-meals, and for Schools in general, Recommendations 18 to 21 on page 29.

### Hospitals

The Adventist Health and Rideout hospital in Marysville, with a staff of a little over 2,000 employees, occupies a campus of some six square blocks in the old historic city, including the main hospital and a cancer center in partnership with UC Davis. Adventist is a faith-based, non-profit organization, and from its headquarters in Roseville operates over 80 sites, mainly on the West coast. In 2020, the Adventist Group acquired Blue Zones<sup>38</sup> as part of a strategy to become a 'catalyst for overall community health and

wellbeing'. The Blue Zones program was developed by Dan Buettner from his research study on healthy longevity<sup>39</sup> in several communities around the world, including California's Loma Linda, where people consistently and happily live to over 100 years old. Calling these communities 'Blue Zones', Mr. Buettner researched their factors that led to healthy longevity, from which he developed a program that he began to promote in other communities. Blue Zones now actively partners with civic government in many cities across the northern US, with 8 sites in California, among them the twin cities of Marysville and Yuba City. Blue Zones Project – Yuba Sutter kicked-off this initiative in April 2022, and as an influencer and a source of education materials, promises support in the development of a Foothill food-system.

However, if a food-system requires larger-scale customers for financial stability, then the Adventist Rideout hospital could be a significant partner, even ideal, since its approach to health includes preventative care, fundamentally through diet, exercise and community involvement, corresponding to Blue Zones

### Case Study of a Successful Farm-to-Hospital Program

In a recent event on connecting small and local farms to wholesale buyers (March 9, 2023, Woodland, California), sponsored by the UC Cooperative Extension and Valley Vision (among others), the UC Davis Medical Center in Sacramento made a presentation on its Farm-to-Hospital program. The kitchen is committed to sourcing produce from local farmers, and whenever possible, to serve fresh produce in its meals, rather than processed and stored food. Currently, the medical center consumes 50%-70% of local produce, and a 100% of its protein comes from California; this means the hospital procures almost exclusively from food-systems and food-hubs. The hospital has more than 600 beds, serves over 6000 meals daily with a kitchen staff of around 200 and its Farm-to-Hospital program has won multiple sustainable health care awards. However, in procuring from local farmers, pre-prepped vegetables are a must.

principles. Before this Needs Assessment, a staff member of the Adventist Rideout Hospital related that during the Covid crisis, hospital staff would have welcomed fresh-produce, packages of fruits and vegetables. This modified the view of the Needs Assessment Team to consider both *patients and* staff in the supply of good, nutrient-rich food to hospitals. This in turn raised awareness of the need for a retail space in Marysville that could offer fresh fruits and produce, not only for work lunches and breaks, but also to take home.

### Food Banks

Several organizations are involved in the distribution of food to Yuba County communities, families and individuals threatened with food-insecurity: principally the <u>Yuba Sutter Food Bank</u>, along with the <u>Foothill Food Pantry</u><sup>40</sup>, and the Yuba Foothills Agricultural Communities Association (<u>YFACA</u>) who distribute food as well, along with training in homesteading skills, for example, preserving vegetables. However, with these organizations working independently, there's a less cohesive food distribution to those at the

	California	Yuba County
Occupied housing units	13,217,586	26,888
without vehicles	911,655	1,760
	6.9%	6.5%

poverty level: recent extreme and unpredictable weather conditions, including snow and heavy rain, stranded many people at higher elevation, including those who rely on donated food, and have no transportation: 6.5% of households in the County have no transport, particularly in rural areas<sup>41</sup>. (The state average is 6.9%, which may seem comparable

except that commuters in urban areas will use public transportation, rideshare services, or both. The rural figure of 6.5% is a more reliable indicator of socio-economic factors.) However, community development is strong in the area, for example 20 miles from Oregon House, residents of Camptonville have steadily worked on a <u>community partnership</u> since 2001. In a survey to residents on community health, one respondent commented on the lack of a 'food bank, meals on wheels'<sup>42</sup>. Community meetings too have

raised issues with transportation as a little more than 25% of Dobbins households have no vehicles<sup>43</sup>, and identified strategies to improve mobility, bike paths being an example.

Food banks began as a measure for reducing hunger<sup>44</sup>, but in the current concerns over climate-change, measuring food-waste and recapturing food for consumption directly benefits the environment as well. Data is compelling on the reasons for reducing food waste. The <u>Global FoodBanking Network</u> reports that 14% of food is lost before packaging, and 17% is lost to waste, a total of over 30% in food waste, and continues that in 2019, the joint-effort of food-recovery from three food-banks<sup>45</sup> resulted in the recovery of '3.75 million metric tons of food' and prevented '12 billion kilograms of greenhouse gases from entering the atmosphere'<sup>46</sup>. But aside from the virtues of food-recovery, could food distribution from food-recovery be combined with a food-system offering local produce that would benefit communities, farmers and producers, along with the environment? One solution could be to integrate a federal food program for low-income households with a Foothill food-system, as discussed below.

### **Supplemental Nutrition Assistance Program (SNAP)**

The USDA's Food and Nutrition Service (FNS) SNAP program in California, known as <u>CalFresh</u>, currently distributes food benefits via EBT cards to over 28,000 households in California's Congressional District 1<sup>47</sup>, which includes most of Yuba County, specifically the Oregon House/Dobbins area. The program works with a household using an EBT card, pre-qualified to receive SNAP benefits, for food purchases from a retailer or farmer's markets that has been pre-approved to process SNAP benefits with EBT equipment<sup>48</sup>. At the sale, the EBT card is debited, and the retailer/farmer's market is credited; EBT transactions are generally finalized at the end of a business day. During the Covid pandemic and the rise of poverty levels, the SNAP program was extended with emergency allotments (EAs): this was to be phased out<sup>49</sup> by February of this year, 2023. However, an average of '\$471 million in SNAP benefits were issued each month in CA in FY 2020'. These SNAP benefits provide an economic stimulus to 'farmers, processors, distributors and retailers'. And there are currently over 24,000 California food retailers that accept SNAP.<sup>50</sup> See Recommendations 25 to 27 on page 29.

#### Other Institutions

During this Needs Assessment, additional types of Institutions came under review as potential consumer-partners in a food-system: Communities, Government (federal, state, local), and Military.

### **Communities**

As discussed on page 15, organized communities with objectives for communal health and welfare<sup>51</sup> could become consumer-partners in a food-system. See Recommendation 22 on page 29.

### Government, Military

Caltrans DOT	720	Government, State
Yuba County	851	Government, Local
Adventist Rideout	2,109	Health Care
Beale Air Force Base	6,316	Military
	1,571	Government

The Yuba-Sutter Economic Development Corporation (YSEDC) published a prosperity 2020-2025 study for the Yuba-Sutter region. Appendix I<sup>52</sup> refers to the top employers in both Yuba and Sutter counties. The Caltrans state office in Marysville and Yuba County local government has respectively over 700 and a little more that 850 employees<sup>53</sup>, while the Beale

Air Force Base (AFB) has the highest number of employees by far, with over 6,000. The Beale AFB too has a large civilian population, with over 8,000 family members, 1,800 civilian employees and over 6,000 retirees, a high cost-of-living, and a competitive housing market<sup>54</sup>. But to establish Beale AFB as a consumer-partner will have its challenges: a military installation will have its own supply-chains, contracting requirements and additional security and regulations concerning its personnel. See Recommendation 22 on page 29.

### Restaurants

Input into the Questionnaires and discussion with restauranteurs, mainly in Marysville and Yuba City, show that this kind of business, post-Covid and under current economic pressure, generally have small or no budget for quality produce, and if willing to make this kind of purchase, will not order sufficient volume to sustain a new food-system/food-hub in its initial phase of operation. However, this could change through other initiatives, especially if local food begins to feature more frequently on menus, for example:

- Promoting Farm-to-Fork dinners across a wider interest group, both locally and in town. See the discussion on downtown Marysville on page 30.
- 2. Obtaining survey data from large, professional income organizations like a hospital as discussed on page 14, as this data will show interest in local food, produce, beers and wines.

See Recommendations 28 to 29 on page 30.

### Retail

Most of the grocery retail outlets in Marysville and Yuba City responded to Questionnaires and interviews by describing similar obstacles to purchasing from a local food-system. As part of large retail chains, produce managers have little say in purchasing from local farmers without head-office approval. If there were agreement, then a process of approving produce would involve environmental testing, developing SKUs, and so on (all at a cost where who pays would have to be agreed). Large distributors<sup>55</sup> too are also involved, which would involve the same obstacles.

However, one grocery retail expressed interest in sourcing produce from a food-system, the <u>New Earth Market</u> in Yuba City. Currently *New Earth Market* buys from Foothills farmers and producers but a formal purchase agreement with a food-system aggregating Foothill produce could only be reached once the Food-system identity or 'brand' is established (see Recommendation 15 on page 28).

(It's also possible that, in line with the BYLT and Forever Farms Land Trust as described under Land Trusts and Conservation Easements on page 8, that *New Earth Market* could become partners in the Yuba County food-system, along with a land trust organization and a mid-size farm.)



### Needs Assessment Approach

The following questions were addressed under Facility:

Is there potential for Ag-tourism in this area? Is there a need for a local Dairy and/or Creamery? What type of facility would best suit a Foothill food-system? What would be the best kind of meat-processing facility for local, small livestock farmers?

Under Facility, Surveys were distributed on:

- Ag-tourism, local attractions Facility Survey: Local Agtourism businesses (100% response rate) were asked if a Foothill food-system could fuel Ag-tourism business.
- Dairy and/or Creamery Facility Survey: Local Dairy and/or Creamery farmers (100% response rate) were asked whether a Dairy/Creamery facility was needed.

Also under Facility, Focus Groups discussed:

- Ag-tourism, downtown Retail outlet (Food-hall, Showcase)
   Facility Focus Group: Representatives from Marysville and Yuba City (75% response rate) discussed developing downtown Marysville, including a showcase of Foothill produce.
- 4. Type of Facility Facility Focus Group: Respondents to the local Ag-tourism survey discussed food-system facilities.
- Meat-processing Facility: Respondents to the Meatprocessing facility Survey discussed a Yuba County meat-processing facility.

# **Facility**

Owners and managers of ag-tourism businesses in the area surveyed proved



to be a lively group, and the responses to the survey were full of good ideas and useful comments. Motivated by this Needs Assessment, this group continues to meet and share ideas on establishing an ag-tourism network, and how it would operate.

### Introduction: Food-System Facility

As a collecting point for produce and value-add products, a food-system facility takes on the labor that generally falls on the farmer, including food-preparation, packaging and marketing, while it's also the distribution center for the consumer-partner network. The farmer and producer accordingly keep a larger portion of their profit; and with institution-type customers, a food-system can employ additional staff and improve operations.

### Findings and Recommendations

The findings of this report on **Facility** covers a range of facilities that could support the development of a food-system, for example, a self-contained processing hub, or a processing-hub with a retail outlet. Separate specialized facilities were also discussed, for example, meat-processing, dairy/creamery, that in turn could become partners in a food-system. Recommendations based on these findings occur throughout this section, including:

- Building a local ag-tourism network to mutually benefit it and a Foothill food-system.
- 2. Encouraging a showcase of Foothill products in down-town Marysville.
- 3. Generating economic development (ED) indicators in building local specialized facilities, i.e., a meat-processing facility.

See the Recommendations on page 31 and as prioritized in Table 3 beginning on page 31.

### Food-System Studies

Rural areas across the country, such as the Yuba County Foothills, trend to poverty levels, as discussed on page 4. SACOG's 2014 study<sup>56</sup> shows that a food-system can help reverse this economic prevalence, for example, the chronic historic poverty of some areas. The study's comprehensive approach generated enough material for a business model for prospective food-systems/food-hubs<sup>57</sup> and has proved influential in the development of food-systems and hubs in the Sacramento valley and northern California. Here are some data-points on the variations of food-systems and hubs:

- 76% are supplied by small- or mid-sized producers
- 61% are supplied by 40 producers or less
- 74% report most consumer-partners within 100 miles
- Consumer-partners tend to be restaurants (not the case in this report), small groceries and schools
- A retail outlet, aside from the distribution network, significantly increases sales
- The average production of farmers and producers is 5 different lines.

### And with these types of operation:

- 62% started operation with 5-years (as of 2013)
- Average sales in 2012 were above \$3.7 million for each hub
- 95% experienced increase in demand for produce
- 47% were for-profit, 34% non-profit, 13% cooperatives and 4% publicly owned.

Another influential report, the Economic and Community Development Outcomes of Healthy Food Retail<sup>58</sup>, describes food-hubs as 'critical for smaller-scale operations that - may be limited by other resources such as refrigerated delivery trucks or knowing where to advertise and sell to potential customers.' The report continues, 'By coordinating both supply chain and buyer logistics, food-hubs not only create and retain jobs (packaging and handling, delivery, farmers) but also generate regional economic revenue by increasing the capacity of local farms to reach a wider customer base'. From 2013 to 2020 the number of food-hubs in the US went from a little over 170 to over 400. In 2019, out of a statistical sampling of 88 food-hubs<sup>59</sup>, the number of full-time employees totaled 1,464, ranging from 1 fulltime employee to 295, which averages out to nearly 17 full-time employees per food-hub. In the same statistical sampling, the operating expense ratio (OER) for the 88 food-hubs show that two thirds were breaking even or making a profit. However, this statistical sampling shows that around a third of these food-hubs rely on funding (federal, state, foundation) but does not correlate this to those currently breaking even or making a profit (although the reliance on this kind of funding is expected to drop by 30%).

### Aq-Tourism, Local Attractions

The local Ag-tourism Survey had a response rate of 100%, although there is no direct link between developing a local food-system and local ag-tourism businesses (wineries, a bakery, restaurants, Airbnb's, Airbnb events, resorts, etc.). However, those participating in the Survey and the Focus Group meeting fully appreciated that a local food-system, once developed, could stimulate the local economy and benefit local ag-tourism as well. So, the challenge becomes how to develop a local ag-tourism network that is both cost-effective to build and relatively easy to maintain. See Recommendations 30 to 33 on page 30.

### Ag-Tourism, Downtown (Foodhall)

The Focus Group for Ag-tourism downtown Marysville was kick-started by an interview with Dan Flores, the city's Community Development director, who's a champion for developing downtown Marysville. The content of his interview was used as primary input into the Focus Group meeting, members of which included the Marysville City Council, Yuba County Community Development and Services Agency (CDSA), Yuba Sutter Arts & Culture, The Appeal Democrat and the small business owner of Bridge Coffee Company. The Focus Group discussed current plans for developing downtown Marysville, changing the perception of downtown Marysville as a desirable place to live, difficulties for small businesses to expand and attract more customers/business, and the lack of data on professional employees in Marysville (for example, the Adventist Rideout Hospital, Yuba County Government offices, Caltrans, Health and Human Services, and so on) who have spending power, but small choice in products, venues and events in downtown Marysville. A particular subject was the 'Medical Arts' district, which is featured in the City's general plan, as referenced on page 21.

### Developing Downtown Marysville

From his interview, it's clear that Community Development Director Dan Flores had a lively interest in renewing downtown Marysville as a destination for locals and visitors alike. There's also impetus from a creative team representing Marysville including the City Mayor and Council, who appreciate the city's history —pockets from the old world, beautiful brick buildings— and its economic potential considering high-income workplaces in the vicinity, for example the Adventist Rideout hospital. One vision is to create a vibrant food scene, with a food-hall in a central location, surrounded by small, specialized restaurants. A food-hall would represent and sell local produce and artisan products, which in turn would fulfill a critical phase in developing a Foothill food-system (Marysville is some 30 miles away from Oregon House/Dobbins). Downtown Marysville, including shops, restaurants, eateries, food-trucks, etc., would benefit from a supply of premium foothill produce and artisan products, among which would be nationally known wines and olive-oil. And as Marysville is half-way between Sacramento and Oregon House/ Dobbins, visitors to Yuba County would experience premium produce in downtown Marysville and so become incentivized to visit the foothills.



Hall's Safe & Lock C. sign, corner of 4th and D, Marysville

### Blue Zones Project - Yuba Sutter

The Blue Zones Project – Yuba Sutter identifies the above approach as well, although more from the point of view of improved health outcomes for Yuba-Sutter residents. Its Discovery Report (4/2022) proposes creating 'a food hall that features the food products and cuisines of residents, entrepreneurs and farmers' and its Food Policy Team recommends to 'conduct a feasibility study and planning' for such a project. A study of this kind would explore:

- 1. The interest of local residents in downtown products, venues and events
- 2. Current numbers of visitors from Sacramento and other areas who are ag-tourists and wine enthusiasts
- 3. Workers commuting to the Adventist Rideout Hospital, Caltrans, as discussed in Other Institutions on page 16.

This last grouping is of particular interest, especially with over 2,000 staff at the hospital, many with a high-income, but who generally do not live in Marysville because there's little housing that would attract this income group. A bustling food culture within walking distance of the hospital would be a powerful recommendation for its employees to live in, and enjoy, downtown Marysville.

### **Medical Arts District**

Hospital staff are generally high-income, as shown in the infographic on the right, although these salary amounts are speculative 60. Yet there is a lack of fresh, nourishing food, choice of dining and entertainment and good housing to attract this income group to downtown Marysville. However, there are plans to develop downtown Marysville, and as reported by the Appeal Democrat 61, the city's general plan for 2050 seeks to add 'vibrancy, housing, nightlife, entertainment, services, activities' to downtown, and includes the medical arts district 62 as an area for redevelopment. The Yuba Water Agency (YWA) supports this in its Strategic Plan for Economic Growth in Yuba County, and states that developing the 'medical arts district' of downtown Marysville scores high on an economic development (ED) scale 63. But to support the momentum to rejuvenate downtown Marysville, further insight is needed on:

(Source: glassdoor)					
Critical Care RN	\$	138,974			
Doctor	\$	234,173			
Laboratory Assistant	\$	41,649			
Mental Health Technician	\$	36,935			
New Grad RN	\$	79,535			
Reg. Nurse, Clinical Coord.	\$	87,705			
Reg. Affairs Specialist I	\$	68,523			
Respiratory Therapist	\$	88,136			
RN New Grad Residency	\$	77,772			
Staff RN	\$	94,684			
Average salary	\$	94,809			

Estimate of Medical Staff Salaries, Adventist Rideout Hospital

- 1. Kinds of products, venues and events that would attract people downtown.
- 2. Consumer interest from Adventist Rideout Hospital, Caltrans, Yuba County government offices, Health and Human Services, and so on.

See Recommendations 22 to 24 on page 29.

### Dairy and/or Creamery

The distribution of a Survey to local individuals interested in dairy farming and milk products was small, compared to the target distribution of *Farmers* and *Livestock*. However, the response rate was high at 100%, and all the Survey respondents attended a follow-up Focus Group meeting to discuss dairy/creamery facilities when considering that:

- Both a Dairy and a Creamery are USDA-regulated facilities. For a Dairy to produce fluid-milk ready for retail, the milk
  must be processed in a USDA-compliant facility, which is regularly inspected by the USDA.
- Once fluid-milk is processed in this way, it can then be released commercially, or used in a Creamery for turning into milk
  products such as butter, cheese and yoghurt.

However, both a Dairy and a Creamery are expensive facilities to build, operate and maintain, and just as with a meat-processing facility, there are federal regulations to prevent contaminated food from entering the supply-chain and the waste generated from production in damaging the environment. Fluid-milk is pasteurized before it can be sold, and the production of value-add products from fluid-milk, for example, butter, cheese, yoghurt, generates waste in the forms of whey, wastewater, sludge, which is highly toxic to air, soil and water<sup>64</sup>.

Distributions of Farms, Revenue, and Cows by Herd Size, 2017						
1	Dairy Farms Milk Revenue			Milk Cows		
Cows/Farm	Number	Percent	\$ Millions	Percent	Thousands	Percent
1 to 499	395	30.9%	364	5.6	94	5.4%
500 to 999	296	23.1%	829	12.8	210	12.0%
1000 to 2499	390	30.5%	2,385	36.8	638	36.5%
2500 to 4999	163	12.7%	1,968	30.4	547	31.2%
5000 or more	35	2.7%	931	14.4	262	15.0%
Total	1,279	99.9%	6,477	100	1,751	100%

Yet this Focus Group clearly appreciates that regulated fluid-milk and value-add Table 2: Data from NASS/USDA US Census of Agriculture 2017

products could mean a viable dairy business. Diverting milk production into value-add products is now a general trend. Small dairy farmers in California run over 30% of the dairy business and generates over 360 million in revenue (see highlighted cell in Table 2). A 2015 report by the <u>California League of Food Processors</u> analyzes the economic impact of the food and beverage industries in California, using a well-reputed economic modelling software called IMPLAN (<u>Impact Analysis for Planning</u>). Using IMPLAN modelling, the report states that 'each dollar of value added in food and beverage processing generates \$3.25 dollars in additional economic activity'65. The report adds that 'Milk production is California's largest agricultural industry' and 'its leading food

processing industry'. In 2012, the dairy industry's value-add products amounted to \$3.37 billion. Using IMPLAN to establish economic impact multipliers, the 'total economic impact of dairy processing in California is \$15.6 billion'.

While dairy farmers seek to continue a viable business and most have an interest in a local food-system, none have the capital to invest in a facility. In this case, a local PMA could be an option (as discussed on page 23), perhaps with a shared processing space or 'clean room'. And there are dairy and creamery models to reference for a possible way forward. For example, contact could be made with the dairy-products cooperative <u>Grass Valley Dairy</u> and also <u>Cindy Daley</u>, a professor of agriculture at Chico University and the supervisor of the only <u>college organic dairy in the west</u>. Also Focus Group visits could be arranged to the <u>Marin French Cheese Company</u>, the oldest cheese-making company in the US, using quality milk from cows pastured at <u>North Bay dairies</u>, and to a local creamery in Penn Valley, the <u>Blue Oaks Ranch</u>. See Recommendation **34** on page 30.

## Type of Facility

The Focus Group for Type of Facility came from respondents to the local Ag-tourism Survey that were most engaged and gave the most input. Of the local ag-tourism businesses represented, **10%** were Farms, made wine/olive oil, offered ag-tourism experiences, produced arts and education events, or ran a local restaurant or café. **19%** cooked or baked for local restaurants and cafes or offered healing services, and **57%** provided lodging, which includes Airbnb and resorts.

### **Emerging Locations**

Before and during this Needs Assessment, several local facilities were identified as possible venues for food preparation and packaging, while discussions considered whether a central facility is needed at all, the option of mobile-processing, or that a warehouse-like 'processing facility' could also be customer-facing. Whatever the type of facility, additional factors need to be discussed, for example, the cost and logistics of transportation and whether the proposed food-system would have a facility or facilities for produce preparation, packaging and distribution.

### **Transportation**

In a UC Cooperative Extension/Valley Vision event<sup>66</sup>, one of the subjects raised was the rising cost and logistical challenges of transportation. The business model of a food-hub/food-system is often collaborative: accordingly, many local food distribution networks find innovative ways to distribute produce at a shared cost. For a Yuba County food-system to work, it would need to study transportation use-cases to find the best option for distributing produce. See Recommendations 36 and 37 on page 31.

### Food-System and Food-hub Types

As pointed out at the beginning of this report, the Needs Assessment should not be limited to a facility for processing and distributing local produce, rather a food-system in its entirety, including consumer-partners and facility or facilities. There's also the distinction between wholesale and direct sales: Michigan State University's 2019 study<sup>67</sup> reports 39% of operations are primarily wholesale, 32% a hybrid of wholesale and direct sales, and 22% direct sales<sup>68</sup> where the direct sales model 'has remained fairly stable'. There're also valuable observations on employment: of the 88 'food-hubs' surveyed, the staff involved in processing, marketing and transportation were classified as full-time, part-time, and seasonal, and included both managerial and nonmanagerial roles. The average number of employees per hub was 17, a number which trends up to 19 the longer a hub stays in business. See Recommendations 35 to 37 on page 31.

### Meat-Processing Facility

As previously discussed see on page 8, Foothill livestock farmers and ranchers currently travel too far to process their livestock, which raises their operating costs and effects the quality of their meat. The discussion continues here with the feasibility of building a small- or mid-size facility in the County, that would serve livestock farmers and ranchers in Yuba and neighboring counties.

### The Feasibility of a Small- or Medium-Size Meat-Processing Facility

### **Small-Size Facility**

A USDA report from 2012, referenced on page 9, defines a small meat-processing facility as having the capacity of no more than 10,000 livestock head per annum. Another report<sup>69</sup> settles this number out to a little over 6,000 per annum, with numbers of 1,000, 3,000 and 2,000 respectively for beef, sheep and pigs. Taking the capacity as 10,000 (2,000, 5,000 and 3,000 respectively for beef, sheep and pigs) and from survey data, the average cost to process at \$907, \$180 and \$548 respectively, the projected annual revenue of a small facility would be nearly 4 and a half million. Since the number of respondents to the survey (19) only represents 41% of the capacity for a small facility, the projected annual revenue would therefore increase.

### Medium-Size Facility

Using the same USDA report, the capacity of a medium-sized facility could be as nearly one million head per annum<sup>70</sup>. Taking the capacity at an average 500,000 head and assuming that Yuba and neighboring counties can fill this capacity (Yuba County has a little over 15,000 head of cattle) while using the same ratio and cost to process of beef, sheep and pigs as for a small facility, the projected revenue is around twenty-two million (ninety, fifty and eighty-two million respectively). The advantage too of a medium-size facility is that it could include all types of livestock<sup>71</sup>, with study models to help plan this kind of specialization<sup>72</sup>. The survey respondents mainly farm beef, but also goats, sheep and pigs. However, proposing a medium-sized facility would need much more economic analysis and capacity planning, as discussed in *Measuring Economic Development* below.

**Note**: The livestock survey did not include poultry, as there are few poultry-farmers in the Foothill area. But it's worth considering this livestock business as well, but more from the approach of a startup business. And there's an opportunity for small poultry-farmers to meet USDA-inspected processing standards at less expense<sup>73</sup>. See Recommendations 6 to 8 on page 28.

### Private Membership Association (PMA)

What then are the options for small- and medium-size livestock farmers who travel too far, find it difficult to schedule processing slots, and must wait to see if a local facility develops? Some will consider a private membership association (PMA), which in the context of meat-processing means a local facility processing livestock and offering the meat to its association members. In this case, capacity is limited, which the operator of a PMA may well prefer, and has no formal inspection service. But the meat is fresh, local and often a stimulus for farm-to-fork dinners. However, none of this meat can enter the retail supply-chain, and as reported in a data-point of the Livestock survey, a USDA-inspected facility will process meat at a lower price (since this kind of regulated environment means more efficient processing), with the difference in cost per head of around \$100 to process. However, as one respondent reported, 'I'd be interested in paying more than I do now per head if it meant travelling a shorter distance'.

#### Measuring Economic Development

These preliminary projections for a small- or medium-size facility might appear encouraging, but only an in-depth analysis of economic projections is likely to attract private investment into building a processing facility, whether small- or mid-size. This requires projecting cost of building, including operating cost, projection of profit, and then modeling the factors influencing

economic development, using for example the input-output (I-O) model. The IMPLAN software, developed for this purpose, covers a range of business scenarios, for example Economic Development, Healthcare, Government, etc..

Recommendation 6 on page 28 includes using IMPLAN<sup>74</sup> to analyze the economic development from building a small- or medium-sized livestock facility.

### Current Feasibility Study for a Facility in Placer County

In 2016, the Sierra Foothills Meat Company commissioned a feasibility study<sup>75</sup> for a small meat-processing facility in Placer County. This study too identifies the problem that small livestock businesses travel too far to process their meat, in one case over 100 miles for beef. And as generally observed, the report records the growing market for locally raised and processed meats around the country. Proposing that the facility's capacity would draw on Placer and neighboring counties for its likely customer-base, the report itemizes the CDFA's 2015 agricultural report for livestock numbers at over 100,000<sup>76</sup> for these counties. The report also itemizes the capital investment and cash-flow required to build a small meat-processing facility, which at 2 million in 2016 is likely higher with today's inflation<sup>77</sup>. Once operations begin, the study projects an operating loss in year 1, mainly due to the process of ramping up to full capacity, a modest operating profit in year 2, and a full operating profit by year 3. The report addresses the siting of the new facility for environmental safety and recommends moving forward on building the facility.

However, this facility has yet to be built. What is the cause of delay? Given the need to assess the economic benefits of a Yuba County meat-processing facility, are there 'lessons learned' from the Placer County project?

### Leadership and Organization

At least one perception from the livestock survey is that the leadership of such a facility needs to be pro-active, since scheduling for the facility needs to occur in the October before the next operating year (if a new facility were built within the optimum distance of the small livestock business surveyed, this respondent would see no problem in the facility being booked-out for the next 4 years). And leadership also needs to hold a firm line with small-size livestock businesses that process less than 10 animals a year and

'It's imperative to have good people,
good strong people to run an
operation like this'.
Jim Gates,
Nevada County Free Range Beef

might prove irregular in their scheduling. And as some livestock survey respondents commented, keeping the capacity of a new facility stable needs several committed mid-size livestock businesses. This means connecting with livestock farmers and ranchers in neighboring counties, which would provide an economy of scale, making this proposed new facility more viable. **Note**: The stability that a mid-size farmer can bring to the initial phase of production also applies to farmers and produce, as discussed on page 9.

However, as discussed here, additional factors in the delay of the Placer County project could impact other proposed projects.

#### Federal and State Regulatory Oversight

USDA oversight on meat-processing, which clearly intends to offset the risk of contaminated meat passing into the supply chain for both local and export markets, has no influence over the predominance of conglomerates: 6 US based companies control 80% of meat production in the country<sup>78</sup>, while the inspection process, both to qualify a new facility as meeting USDA standards, and subsequent regular USDA inspections for food-safety, is expensive, especially for a small business<sup>79</sup>. In response, many states develop inspection services to the level where the FSIS considers them 'at least equal to' federal standards, and accordingly reimburses a portion of the state's operating cost for the service, while keeping track of the state's standards with annual reviews.

But California has no cooperative agreement with the FSIS<sup>80</sup>, so inspection costs fall directly on large and small livestock businesses alike. However, there is impetus towards a 'fairer regulatory environment' for small producers, with one proposal to initiate a California Meat Inspection Program<sup>81</sup>.

### Supply Chain and Demand

The Covid pandemic has, and will, continue to impact the food supply chain, and reveals an inherent weakness in a supply system that consolidates<sup>82</sup> food, resulting in communities across the US reliant on imports rather than local produce. As reported in a John Hopkins Center study on Food System Resilience, the Covid pandemic 'brought to light many vulnerabilities in food supply chains and social systems in the United States'. But empirical data is somewhat difficult to establish with initial studies being too early, or too narrow in their approach (for example, focusing only on the restaurant industry), or where the quality of the data itself is poor<sup>83</sup>. However, there are substantive studies that identify the impact of Covid on the agri-food supply chain across the US, and especially in California. One recent study<sup>84</sup> published by the Public Library of Science (PLOS) states that in California, 'negative impacts were felt throughout the supply chain' and as a measure of supply chain failure, there was nearly a 37%<sup>85</sup> decline in sales revenue in the California agri-food industry across sectors of *Production agriculture*, Food processing, Grocery wholesale, Food and beverage retail and Restaurants.

However, rural communities with access to good agricultural land might be in a better position to become food self-reliant, even though achieving this kind of food-resilience could be challenging, since rural communities in general have a higher poverty level than urban areas<sup>86</sup>, and initiatives for self-reliant communities often means re-inventing, or improving, an existing system, for example, transportation. Locally produced food too is likely to be more expensive, and in general, routine grocery-shopping in large retail stores needs to change to a preference for local, nutrient-rich produce, local greengrocers and community retail. Favorably, this trend is already growing, and in a previously referenced Healthy Eating Research report (see Endnote 55): 'grocery store and other kinds of healthy food outlets appear to be reentering previously disinvested communities'. One factor for this is 'healthy food financing policy initiatives' while another concerns large retailers that return to underserved communities after noting 'the success of other retailers in these markets'. Aside from these factors, community perception is changing as well, as the trend toward local production, distribution, and consumption creates a 'diverse array of new ways by which families are shopping for food'. One study<sup>87</sup> envisions the kind of community spirit that would arise from a local food-system where 'producers, retailers, chefs, and consumers alike' experience an economy that 'brings them together rather than separates them'.

But meantime some small farmers cannot afford to wait. Which overall underlines the need for a Yuba County food-system, since the business-model of a processing center or centers for locally-grown, aggregated food can reduce the work overhead for farmers and producers (including production, marketing and distribution), create jobs in an underserved area and stimulate the local economy.

For the Recommendations on building a Yuba County small- or medium-size facility, see 6 through 9 on page 28.



### **Needs Assessment Approach**

There were two inputs into Education:

- 1. Education Focus Group
- 2. Farmer & Producer Survey

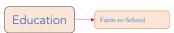
The **Education** Focus Group discussed forming an alliance with Sierra Harvest to learn about their education programs, and to take an initiative with the Farm2School program (see Farm2School below) as this will: a) raise awareness in the community on the relationship between good nutrition and learning in children, b) Positively impact the diet of children in a local school, and c) Provide an opportunity for a food-system to develop a consumer-partner with a school district (see Schools on page 13).

### Farm2School

The CDFA promotes Farm2School, and the National Farm to School Network<sup>88</sup> publishes the positive impact of the program on children, farmers and communities. The program for children results in, 'Enhanced overall academic achievement in K-12 settings, including grades and test scores'. For farmers, 'Each dollar invested in farm to school stimulates an additional \$0.60-\$2.16 of local economic activity'. And for communities, there's 'Improvement in household food security and food access'<sup>89</sup>.

### Education

This Focus Group invited the YES Charter



Academy, MJUSD and the <u>E Center</u> non-profit<sup>90</sup>. But with availability and scheduling conflicts, the Focus Group settled on members from YES and the Blue Zones Project.

#### Introduction: Education for Who?

As stated by the County's RFP, 'a resilient and productive local food system' requires an education program for 'food and farm entrepreneurs, interested community members and partners'. A model for this kind of program is run by Sierra Harvest in neighboring Nevada County, with courses on farmer training that include 'planning and projecting the financial side of a farming season'91.

### Findings and Recommendations

The Farmer & Producer Survey requested input on education programs that respondents would find useful. However, respondents showed little interest in business skills (27%) and famer training (38%) yet gave a high response to Survey questions on environmental challenges (Wildfires 67%, Drought 64%, Water Supply 53%). And given the weather conditions of this last winter (2022/23), flooding may become an issue as well. Therefore, an education program on farming given the current environmental challenges, for example recovery from wildfire, could be well received. Again, Sierra Harvest will be a good resource on how their education program changes according to need.

**Note:** The funding source for an education program would need to be independent of the food-system, at least during the initial phase of operation.

See the Recommendations for an Education program on page 31 and on Farm2School on page 29; and as both are prioritized in Table 3 beginning on page 31.

# Key Findings and Recommendations

### Key Findings

Since this study identifies a clear need for a food-system based in the Foothill region, a strategic and collaborative approach will help this system meet current conditions, sustain its operations and stimulate the region's economy. However, from the positive and instructive responses to the Needs Assessment —over 100 people contributed, as shown on on page 34— the first recommendation is to keep the momentum in a *planning phase* from the recommendations listed in Table 3 on page 31. (For example, one recommendation of the *planning phase* is submitting a grant application to the USDA for a subsequent *implementation phase*, perhaps October 2023.) The recommendations of the *implementation phase* follow in Table 4 on page 33. Note: It's likely that during planning, additional recommendations will be identified for the *implementation phase*.

### Prioritization of Recommendations

This section of the report presents Recommendations by Operational Area and Focus Group (the same organization as this report), followed by a Table prioritizing the Recommendations on page 31. Prioritization is established by Priority, Risk, Phase and Cost, defined as follows:

- 1. Priority Can the recommended activity wait for an implementations phase?
- 2. Risk If the Recommended activity does not happen, will the Food-system fail?
- 3. Phase Is this a Planning phase activity? (Considering that the following phase is for Implementation, in October 2023).
- 4. Cost Does the recommended activity need a funding source?

### Recommendations

### Agricultural Land (on page 8)

Good farming (and grazing) land will become an important asset for a Foothill food-system to develop. For this to happen, the following proposes to:

- 1. Engage the Bear Yuba Land Trust (BYLT) and Yuba's Resource Conservation District (YCRCD) in establishing a Foothill Land Trust. BYLT is the ideal partner for this, given their success in establishing Forever Farms.
- 2. Identify a tool or methodology for assessing the agriculture worth of small land parcels (commonly 5-acres).
- 3. Build a profile of agricultural land in the Oregon House/Dobbins area with baseline data from a 2012 Kennedy Jenks report commissioned by the North Yuba Water District (NYWD).

- 4. Support the NYWD and the Yuba Water Agency (YWA) with land-type and irrigation data: this means capturing (and standardizing) data on local residents that are: a) Current irrigation customers b) With annex rights and will apply to become irrigation customers c) Without annex rights but want access to irrigation water d) Parcel owners who could provide property easements allowing access to irrigation water.
- 5. Identify Foothill grazing land to be included in Foothill Land Trust.

### Meat Processing Facility (on page 23)

Using the Feasibility Study for A Multi-Species Slaughter and Processing Facility (Placer County, 2016) as a reference:

- 6. Establish the location and operation for a Yuba County meat-processing facility and use IMPLAN to calculate the Economic Development multipliers, including specialization in livestock (for example, poultry).
- 7. Support and engage the initiative to set-up a California Meat Inspection Program (see on page 25).
- 8. Assess whether PMAs (both for meat-processing and dairy/creamery products) can be an interim phase towards a USDA-inspected facility, which the USDA will recognize, and depending on whether any local PMAs accept this idea.

### Farmers and Producers (on page 9)

Farmers and Producers need support in improving their profit margins from the sale of their produce and products. One way to assist in this is to encourage the participation in support programs and initiatives that can result in farmers and producers retaining more of their gross profit (see on page 9). This means to:

- 9. Promote and encourage participation in federal and state support programs for farmers (for example, the NRCS program of hoop-houses intended to boost productivity).
- 10. Develop use-cases for employees of a food-system from organizations that can provide labor, in this instance, the Health and Human Services CalWORKS program (perhaps an alternative with the World Wide Organization of Organic Farms or <u>WWOOF</u>).
- 11. Setup and stock a local greengrocer, featuring local produce and value-add products.
- 12. Identify a processing area for local produce (perhaps associated with a certified kitchen) for packaging ready for distribution, and the regulation amounts required in school meals.
- 13. Identify a range of value-add products from local farmers and producers.
- 14. Study examples of how other food-hubs establish a distribution network that promotes its produce, for example, the Tahoe Food Hub's direct-to-consumer Food Truck
- 15. Establish an organization with a vision, mission, objectives and 'brand' name to implement the Food-system.
- 16. Develop a relationship with a mid-size farm (e.g., SuperTuber) to help bring stability in produce volume to consumer-partners and also use <u>The Sacramento Valley Food</u>

  Hub Business Plan as a reference to plan volumes and lines of produce for small-farms to ramp up production.
- 17. Write a grant to the USDA to fund the implementation of a Food-system.

### Institutions (Schools, Hospitals, Foodbanks) (on page 13)

Schools

- 18. Implement the Farm2School program in select school-districts of Yuba County, with the objective to have a least 20% of children's meals sourced from local produce 92. The long-term aim is to have Yuba County as Farm2School county.
- 19. Obtain support from CDFA and the Blue Zones Project in promoting the Farm2School program, and look for funding to help with implementing Farm2School at school districts, perhaps for example from the California Department of Education (CDE) School Best Practice Funds.
- 20. Assist school districts in writing grants for CDFA Farm2School funding.
- 21. If the USDA's micro-purchasing agreements proves valuable, promote this to small farmers and producers.

#### Hospitals

As reported (see on page 14), Adventist Health and Rideout hospital staff generally command high salaries, especially in comparison with the salaries of other businesses and organizations in Marysville. The success of development plans for Marysville could be enabled by an assessment of the products, venues and events that would attract spending by hospital staff (and others). This means to:

- 22. Include in the category of *Institutions* under the operational area of **Food** not only Schools, Hospitals and Foodbanks but also Communities (e.g., <u>Camptonville</u>), Government (Yuba County government, etc.), and the Military (e.g., Beale AFB).
- 23. Run surveys on professional salary workers close to downtown Marysville for data on food and beverage preferences.
- 24. Report the results of these surveys to the City of Marysville and parties interested in developing downtown Marysville with a strong food culture.

#### Foodbanks

As discussed under Foodbanks (see on page 15), several organizations are involved in the distribution of food to communities and individuals threatened with food-insecurity. However, some relationship-building is needed so that these organizations will become aligned in serving communities close to the poverty level, and to distribute food from a Footbill food-system. The activities recommended here are to:

- 25. Document the process by which a food-system provides food to a food-bank (and other food distribution services) and its reimbursement by federal and state programs.
- 26. Widen the demography that could be served by the Foodbank (and similar organizations) to include 'Communities', by which is meant a community sufficiently organized to become a consumer-partner of a food-system. The <u>Camptonville Community Partnership</u> is a good example, which formed a community non-profit in 2001 and continues to promote programs for community development.
- 27. Create operational connections between the Yuba-Sutter Food Bank and other food-distribution services to underserved Foothill communities.

### Restaurants (on page 17)

As discussed (see on page 17), there are few local restaurants (including Marysville and Yuba City) highly-rated for their cuisine, while those restaurants that want to menu with local produce can probably only order limited amounts of local produce from a food-system, a difficult profit-margin to maintain unless there are other institutional consumers. However, Farm to Fork is a fully mature cultural trend, and one way to feature good local produce is to widen the customer-base for Farm to Fork events, both locally and downtown Marysville. Recommendations here are included under Ag-tourism local (see below) and Ag-tourism (downtown, food-hall) (see below).

### Retail (Groceries) (on page 17)

As discussed (see on page 17) most of the local retail outlets are part of large grocery chains, and negotiating their agreement to purchase from a local food-system will likely take time, executive approval, environmental testing, and so on. The same situation would be likely to the distributors that serve these retail outlets. However, the New Earth Market in Yuba City is willing to buy local produce (the produce managers actively search for small- and mid-size farmers in the Foothill region) and this suggests following the Forever Farms model (see on page 8), formed by a partnership of the Bear Yuba Land Trust (BYLT), Sierra Harvest, BriarPatch Food Co-op, Tahoe Food Hub, and the Mountain Bounty Farm. Recommendations to enable this (aside from those under Agricultural Land, see on page 27) would be to:

- 28. Make connections with distributors to Marysville and Yuba City grocery outlets (Bel Air, Grocery Outlet, etc.) as potential consumer-partners with the food-system, and in the meantime establish an operating agreement with New Earth Market which is interested in Foothill farmers and producers.
- 29. Establish whether the New Earth Market would be interested in becoming partners in a Foothill land trust.

### Ag-tourism local (on page 19)

The local Ag-tourism Survey had a high response rate, so to capitalize on this enthusiasm and the input of good ideas, the Recommendations would be to:

- 30. Develop a concept of an Ag-tourism network and present this for input from a Focus Group (many from the local Ag-tourism Focus Group would contribute).
- 31. Identify the requirements of an Ag-tourism network, for example, the method of communicating information on produce, products, events, etc.
- 32. Design a database of local Ag-tourism customers, contacts, associates, 'friends' of the community.
- 33. Add local Ag-tourism as a dimension of a Foothill food-system and integrate with the Foothill food-system 'brand' (see Recommendation 15 on page 28).

### Ag-tourism (downtown, food-hall) (on page 20)

As discussed under *Ag-Tourism, Downtown (Foodhall)* (see on page 20), survey data and analysis is needed to contribute towards the planned development of downtown Marysville. Gathering data from surveys and focus-groups and a following analysis will be valuable input for agencies and organizations working on downtown development.

### Dairy and/or Creamery (on page 21)

34. Assess the viability of having a Foothill PMA for dairy products, including the cost of building a clean-room, and make connections with dairy and creamery companies in northern California, and research resources in dairy farming.

### Meat-Processing Facility (on page 23)

See the Recommendations for a meat-processing facility on page 28.

### Type of Facility (on page 22)

As discussed under Emerging Locations on page 22, several buildings might be suitable as a start-up facility for food consolidation and preparation. The Recommendations here would be to:

- 35. Categorize these facilities suitable for a food-system by estimated purchase cost, square footage, suitability (e.g., kitchen area), accessibility (truck delivery and pickup), Use Classifications (per County Planning), and other information (building history, atmosphere, visibility, attractiveness, etc.).
- 36. Build use-cases for these facilities in consolidating, preparing and distributing produce, including type of customer (institution, etc.) and type of sale (wholesale, direct sale, etc.).
- 37. Build alternative use-cases for a food-system that runs through smaller facility nodes, located in a model distribution network outside the Oregon House/Dobbins area.

### Education (on page 26)

See the Recommendations covering food-education for children under 18 on page 29. For additional education programs to support farmers and producers, the Recommendations would be to:

- 38. Identify and promote educational programs on food-hubs with working examples, using the Sierra Harvest model.
- 39. Identify and promote educational programs on farming with the risk of environmental challenges.
- 40. Hold meetings with local farmers and producers to share farming experience, do's and don'ts, produce tastings, etc. (This could be combined with the Recommendations under Ag-tourism local on page 30).

### Recommendations Rated by Priority, Risk, Phase and Cost

Recommendations from the Needs Assessment report (Planning phase)	#	Priority	Funding source
15. Establish an organization with a vision, mission, objectives and 'brand' name to implement the Food-system	on page 28	9	No cost
16. Develop a relationship with a mid-size farm; plan volumes and lines of produce for small farms to ramp up production	on page 28	9	No cost
17. Write a grant to the USDA to fund the implementation of a Food-system	on page 28	9	No cost
33. Add local Ag-tourism as a dimension of a Foothill food-system and integrate with the Foothill food-system 'brand' (see 15)	on page 30	9	No cost
9. Promote and encourage participation in federal and state support programs for farmers	on page 28	8	No cost
10. Develop use-cases for employees of a food-system from organizations that can provide labor, in this instance, the Health and Human Services CalWORKS program	on page 28	8	No cost

13. Identify a range of value-add products from local farmers and producers	on page 28	8	No cost
30. Develop a concept of an Ag-tourism network and present this for input from a Focus Group	on page 30	8	No cost
31. Identify the requirements of an Ag-tourism network	on page 30	8	No cost
38. Identify and promote educational programs on food-hubs with working examples	on page 31	8	No cost
39. Identify and promote educational programs on farming with the risk of environmental challenges	on page 31	8	No cost
40. Hold meetings with local farmers and producers to share farming experience, do's and don'ts, produce tastings, etc. (see Recommendations 30, 31, 32, 33)	on page 31	8	No cost
3. Build a profile of agricultural land in the Oregon House/Dobbins area based on data from the 2012 Kennedy Jenks report	on page 3	8	Requires a Funding source
4. Support the NYWD and the Yuba Water Agency (YWA) with land-type and irrigation data	on page 28	8	Requires a Funding source
11. Setup and stock a local greengrocer featuring local produce and value-add products	on page 28	8	Requires a Funding source
12. Identify a processing area for local produce (perhaps associated with a certified kitchen) for packaging ready for distribution, and the regulation amounts required in school meals	on page 28	8	Requires a Funding source
14. Study examples of how other food-hubs establish a distribution network that promotes its produce, for example, the Tahoe Food Hub's direct-to-consumer Food Truck	on page 28	8	Requires a Funding source
18. Implement the Farm2School program in select school-districts of Yuba County	on page 29	8	Requires a Funding source
19. Obtain support from CDFA and the Blue Zones Project in promoting the Farm2School program, and look for funding to help with implementing Farm2School at school districts, perhaps for example from the California Department of Education (CDE) School Best Practice Funds	on page 29	8	Requires a Funding source
22. Include in the category of <i>Institutions</i> under the operational area of <b>Food</b> not only Schools, Hospitals and Foodbanks but also Communities (e.g., <u>Camptonville</u> ), Government (Yuba County government, etc.), and the Military (e.g., Beale AFB)	on page 29	8	Requires a Funding source
23. Run surveys on professional salary workers close to downtown Marysville for data on food and beverage preferences	on page 29	8	Requires a Funding source
24. Report the results of these surveys to the City of Marysville and parties interested in developing downtown Marysville	on page 29	8	Requires a Funding source
25. Document the process by which a food-system provides food to a food-bank (and other food distribution services) and its reimbursement by federal and state programs	on page 29	8	Requires a Funding source
26. Widen the demography that could be served by the Foodbank (and similar organizations) to include 'Communities', by which is meant a community sufficiently organized to become a consumer-partner of a food-system	on page 29	8	Requires a Funding source
27. Create operational connections between the Yuba-Sutter Food Bank and other food-distribution services to underserved Foothill communities	on page 29	8	Requires a Funding source
28. Make connections with distributors to Marysville and Yuba City grocery outlets (Bel Air, Grocery Outlet, etc.) as potential consumer-partners with the food-system	on page 30	8	Requires a Funding source
35. Categorize these facilities suitable for a food-system by estimated purchase cost, square footage, suitability, etc.	on page 31	8	Requires a Funding source
36. Build use-cases for these facilities in consolidating preparing and distributing produce	on page 31	8	Requires a Funding source
37. Build alternative use-cases for a food-system that runs through smaller facility nodes	on page 31	8	Requires a Funding source
2. Identify a tool or methodology for assessing the agriculture worth of small land parcels (commonly 5-acres)	on page 27	7	Requires a Funding source
		4	

6. Establish the location and operation for a Yuba County meat-processing facility and use IMPLAN to calculate the Economic on Development multipliers	1 page 28	7	Requires a Funding source
20. Assist school districts in writing grants for CDFA Farm2School funding on	1 page 29	7	Requires a Funding source
29. Establish whether the New Earth Market would be interested in becoming partners in a Foothill land trust	1 page 30	7	Requires a Funding source
32. Design a database of local Ag-tourism customers, contacts, associates, 'friends' of the community, etc.	n page 30	7	Requires a Funding source
21. If the USDA's micro-purchasing agreements seems valuable, promote this to small farmers and producers	n page 29	6	Requires a Funding source

Table 3: Recommendations for a Planning Phase

Recommendations from the Needs Assessment report (Implementation phase)	#	Priority	Funding source
34. Assess the viability of having a Foothill PMA for dairy products	on page 30	5	Implementation Workplan
7. Support and engage the initiative to set-up a California Meat Inspection Program	on page 28	5	Requires a Funding source
8. Assess whether PMAs (both for meat-processing and dairy/creamery products) can be an interim phase towards a USDA-inspected facility	on page 28	5	Requires a Funding source
1. Engage the Bear Yuba Land Trust (BYLT) and Yuba's Resource Conservation District (YCRCD) in establishing a Foothill Land Trust	on page 27	4	Implementation Workplan
5. Identify Foothill grazing land to be included in Foothill Land Trust	on page 28	4	Implementation Workplan

Table 4: Recommendations for an Implementation Phase

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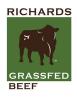


















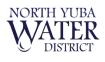






















YUBA SUTTER





































#### **Endnotes:**

- 1 The concept of four operational areas in a food-system comes from a grant application submitted to the USDA by Foothill residents in the summer of 2021. By using this approach, the applicants aimed to test the feasibility of a regional food-hub by these operational areas in order 'to bring equitable profits to farmers and producers, to provide nutrient-rich produce to the community, to plan a facility for packing, marketing and distributing produce and to encourage sustainable farming practices (including soil-regeneration and wildfire remediation)'.
- A copy of this study is available on the Yes to Yuba website.
- Population figures taken from the Census Bureau (2010-19).
- <sup>4</sup> As reported in this National Geographic <u>article</u>.
- 5 'Yupu, or Yuba' 'also written in American spelling Yubum, was a Northwestern Maidu village near the mouth of the Yuba into the Feather River.' Handbook of American Indians II, p. 1012.
- 6 See the Federal Register, July 1985.
- 7 From the BYLT's 2020-2024 Strategic Plan.
- 8 Average cost of school meals taken from the School Nutrition Association (SNA) School Nutrition Trends Report, 2023.
- On the federal/state reimbursement for school meals, see the USDA's Food Nutritional Service (FNS) Notice and the California Senate Bill 499.
- Taken from the Yuba-Sutter Economic Development Corporation (<u>YSEDC</u>) <u>prosperity study</u> (2020-2025), Appendix I, p.4.
- 11 Taken from the Sutter Buttes Regional Land Trust (SBRLT) FAQs.
- 12 Arranged courtesy of Lisa Lindman, Executive Director of <u>SBRLT</u>, and Board President of the Yuba County Rural Conservation District (YCRCD).
- <sup>13</sup> See the <u>California Agricultural Statistics Review</u>, 2020-2021, p.9.
- 14 ibid, p.24.
- 15 ibid, p.91.
- <sup>16</sup> See <u>Slaughter and Processing Options and Issues for Locally Sourced Meat (USDA, LDP-M-216-01, 2012)</u>, p.9.
- 17 In 1967, there were over 10,000 processing facilities in the USA when today there are less than 3,000. See <u>A New Era For Meat Processing in California?</u>, UC Davis, 2021, p.10.
- 18 See Endnote 16.
- 19 See The Sacramento Valley Food Hub Business Plan, Table 2 on p.9.
- 20 See Economic Impact of Local Food Producers in the Sacramento Region, 2016.
- 21 After considering the multiplier effects of local purchases within the region. Modelling this would be a good use of the IMPLAN software (see IMPLAN on page 21).
- <sup>22</sup> The Welfare-to-Work Act of 1997, and Assembly Bill (AB) 1542.
- <sup>23</sup> From the Yuba County Human Services Agency CalWORKs Plan, 1997, p.1.
- 24 See the 2022 Yuba County Community Health Assessment Survey, p. 65.
- 25 The difference in these numbers is because some residents cannot work due to health, or pregnancy, or other reasons.
- Stanford Center on Poverty within California Counties and Demographic Groups, Stanford Center on Poverty and Inequality, 2013. **Note**: In partnership with Stanford, the Public Policy Institute of California (<u>PPIC</u>) claims that the poverty-level is worse by 2 million more than officially reported (the official poverty measure was devised in the early 1960s) and proposes using a different method to measure the state's poverty (see the PPIC article <a href="here">here</a>). This method 'incorporates the changes in costs and

- standards of living', accounts for geographic differences in the cost of living across the state, and 'factors in tax credits and in-kind assistance'. It's article relating to the Stanford report states that CalWORKs (along with EITC and CalFresh) helps 'keep nearly 2.8 million Californians —or nearly 8 percent of the population— out of deep poverty.'
- <sup>27</sup> Along with CalFresh and tax credits.
- 28 Developed by <u>Dr Mark Hyman</u> of the <u>Cleveland Clinic</u> into an influential movement: a recent <u>article</u> describes a 'new partnership between the US Department of Veteran Affairs and the Rockefeller Foundation' which 'could help build the business case for more health care systems and insurers nationwide to integrate and cover the cost of food as medicine'.
- 29 See the National Library of Medicine (NLM) article on <u>Delving the role of nutritional psychiatry to mitigate the COVID-19 pandemic induced stress, anxiety and depression.</u>
- 30 See the National Library of Medicine (NLM) article <u>Relationship between</u> <u>Mental Health and Emotional Eating during the COVID-19 Pandemic</u>, p.5.
- 31 From <u>Nutritional Aspects of Depression in Adolescents</u>, International Journal of Preventive Medicine (IJPM), 2019, p.5.
- 32 Academic studies find that the quality of diet positively influences academic achievement in children. For studies, see: <u>Diet Quality and Academic Performance</u>, Michelle D Florence, Mark Asbridge, Paul J Veugelers, 2008; <u>Associations between Dietary Intake and Academic Achievement in College Students: A Systematic Review</u>, Tracy L. Burrows, Megan C. Whatnall, Amanda J. Patterson, Melinda J. Hutchesson, 2017; <u>Dietary Behaviors and Academic Grades</u>, CDC Healthy Schools, 2019.
- 33 Numbers courtesy of Amber Watson, MJUSD's Nutrition Services Director.
- 34 Louise Miller, the principal of YESCA, works actively on community development, including the initiative to building a local food-system.
- 35 As stimulated by Alice Waters' pioneering work The Edible Schoolyard.
- 36 ACT promotes the coalition of cities and communities to improve child and youth wellbeing in California through community action.
- 37 As reported in this <u>infographic</u> from the National Farm to School Network.
- 38 News release <u>here</u>.
- <sup>39</sup> Published by the National Library of Medicine (NLM), 2016.
- 40 YSFB distributes food to over 14,000 people every month, the Foothill Food Pantry, 200 per month.
- 41 From a 2021 Census Bureau report.
- 42 Camptonville Community Health Action Plan, 2007.
- 43 From the transportation study Yuba Foothills Mobility Strategies, commissioned by CCP by transportation consultants LSC.
- 44 The first food bank in the US started in Arizona in 1967.
- 45 Data from three of the largest food bank networks, Feeding America, European Food Banks Federation (FEBA) and GFN.
- 46 Via food decomposition as reported by GFBN report on <u>Reducing Food</u> <u>Loss and Waste</u>.
- $^{47}$  From the <u>FNS infographic</u>, this is 10% of households in District 1.
- 48 California provides free EBT equipment to Farmers, Farmer's Markets, Food Cooperatives and Community Services approved for SNAP.
- 49 'At least \$2.5 billion in monthly emergency food benefits are expiring nationwide, leaving millions of people facing a sudden financial cliff. Enrolled families with children will lose an average of \$223 in monthly Supplemental Nutrition Assistance Program (SNAP) benefits, and

- households with seniors will lose an average of \$168.' From Feeding America.
- 50 From FNS report on the economic impact of SNAP on California.
- 51 A good example could be the non-profit <u>Camptonville Community Partnership (CCP)</u>, a Foothill community close to Oregon House/Dobbins that serves as 'rural people working together for a safe sustainable and healthy community'.
- 52 Appendix I of the report is available here.
- $^{53}$  And a little more than 10% of the top employment workforce.
- 54 From Military Installations, a Department of Defense (DOD) website.
- 55 For example, <u>OK Produce</u> based in Fresno with a distribution area that covers at least 200 miles (the distance from Fresno to the Bel Air market in Yuba City).
- 56 See Research Analysis of Food Hub Trends and Characteristics, 2014, p.4.
- 57 See The Sacramento Valley Food Hub Business Plan.
- <sup>58</sup> A report commissioned by the <u>Healthy Eating Research</u> program, 2013. The quote is from p.13.
- 59 See page 19 of the <u>2019 National Food Hub Survey Report</u>, run by the Michigan State University, Center for Regional Food Systems.
- <sup>60</sup> Based on input into glassdoor.
- 61 Appeal Democrat, Nov 16, 2022, reporting on updates to the Marysville City 2050 general plan.
- 62 The medical arts district is included on the current planning guide as shown <u>here</u> on the City of Marysville <u>Community Development</u> webpage.
- 63 See the YWA Economic Development Plan, p. 24.
- 64 See <u>General Characteristics and Treatment Possibilities of Dairy Wastewater</u>, 2017, p.14: 'dairy effluents are distinguished by their relatively increased temperature, high organic content and a wide pH range, which requires special purification in order to eliminate or reduce environmental damage'.
- 65 See <u>The Economic Impact of Food and Beverage Processing in California and Its Cities and Counties</u>, 2015, p. ii.
- 66 An event on <u>connecting small and local farms to wholesale buyers</u>, March 9, 2023, Woodland, California.
- 67 From the <u>2019 National Food Hub Surrey Report</u> run by the Michigan State University, Center for Regional Food Systems.
- 68 ibid, p. 19.
- <sup>69</sup> Texas A&M Department of Animal Sciences article, <u>So you want to build a slaughter plan?</u>, 2020.
- From page 11 of the USDA report <u>Slaughter and Processing Options and Issues for Locally Sourced Meat (USDA, LDP-M-216-01, 2012)</u> where capacity is defined as follows: 'small slaughter establishments are considered to be those that process fewer than 10,000 head of livestock annually, medium ones process 10,000-999,999 head annually'.
- 71 'Medium-sized plants, in the range of 1000 head to 2000 head per day, can usually better achieve some level of specialization in specific products'. From the article <u>Some beef packers retbink expansion plans</u>, Lee Schulz, 2022.
- 'As estimated by Lewis and Peters (2012), a factor of 3.77 hogs or 4.18 lambs per head of cattle is used when converting slaughter capacity while a factor of 5.22 hogs or 5.17 lambs per head of cattle is used when estimating processing capacity.' From <u>A capacity assessment of New England's large animal slaughter facilities</u>, 2012.

- 73 The Niche Meat Processor Assistance Network (NMPAN) provides a study (2016) on a <u>plant-in-a-box (PIB)</u>, a 'turnkey answer for those looking to process chickens, turkeys and other poultry under USDAinspection'.
- 74 Lon Hatamiya, a member of the Needs Assessment team (see on page 31), has successfully used IMPLAN on many projects, including the YWA's <u>Strategic Plan for Economic Growth in Yuba County</u>.
- 75 See Development of a Multi-Species Slaughter and Processing Facility in Placer County, CA, 2016.
- Nevada, Placer, Sierra and Sutter, reducing the total number of cattle to a little over 60,000.
- 77 The DGS <u>California Construction Cost Index</u> trends inflation at 4.4% in 2016 to 9.3% in 2022.
- <sup>78</sup> See <u>A New Era For Meat Processing in California?</u>, UC Davis, 2021, p.10.
- 79 The number of USDA inspectors has also been reduced, which means that some must travel far to inspect a facility, an additional expense.
- 60 'As of September 2015, 27 States maintain cooperative agreements with FSIS' and 'FSIS reimburses a portion of the State's operating costs.' From the infographic <u>Summary of Federal Inspection Requirements for Meat Products</u>, 2015.
- 81 See A New Era For Meat Processing in California?, UC Davis, 2021, p.3.
- 82 In 2021, the world's largest meat processor, based in the US, was subject to a ransomware attack, closing all its beef plants until the company paid \$11M in ransom. See New York Times, June 9, 2021.
- From the Frontiers research article, Optimization Based Modeling for the Food Supply Chain's Resilience to Outbreaks which states that 'data on supply chains at the subnational level are limited by proprietary data from private food companies and their supply chains, lack of data collection, and issues of data quality'.
- 84 See the research study <u>Impacts of COVID-19 on US agri-food supply chain businesses</u>, 2023.
- 85 ibid. This study states that in California, 'decline in sales revenue was statistically significant in all supply chain segments starting in the second quarter of 2020'. The figure of 37% is calculated from Figure 1, Quarterly changes to business sales revenue relative to pre-pandemic levels, 2020.
- 86 The USDA Economic Research Service (ERS) reports US 'poverty rates in 2019 higher in rural areas than in urban' at 15.4% compared to urban areas at 11.9%.
- From <u>Toward an Associative Economy in the Sustainable Food and Farming Movement</u>, Robert Karp, 2007, p.29.
- 88 The following quotes come from <u>The Benefits of Farm to School</u> fact sheet, published by the National Farm to School Network.
- 89 The <u>Sierra Harvest Farm to School</u> program 'provides fresh produce to 96% of K-8 students in Western Nevada County'.
- 90 The E Center's mission is to build 'healthy communities through education, employment and environmental awareness' for Yuba County.
- 91 Sierra Harvest runs a full <u>education program</u> for farmers and growers, including a 15-hour course on 'planning and projecting the financial side of a farming season, predicting yields, setting prices, projecting sales, calculating expenses educational programs'.
- 92 The Sierra Harvest Farm to School program provides fresh produce to 96% of K-8 students in Western Nevada County.