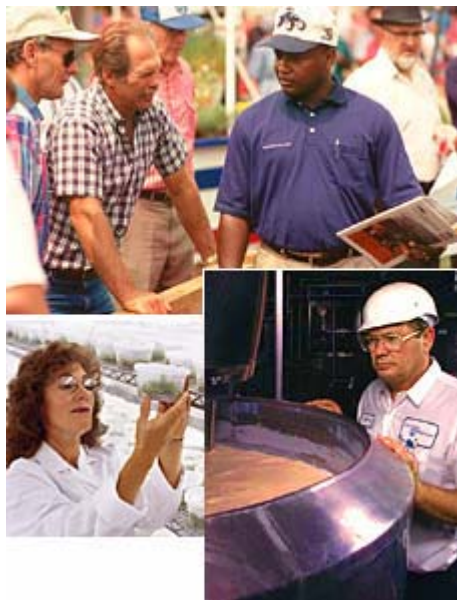


**Fresno County**

**Small Farm  
Resource Directory  
2007**

**A guide to agencies, organizations, and private industry groups  
where the Fresno County Small Farmer can go for help**



**A publication of the Small Farm Resource Network**

**\*\*The use of trade and agency/business names is for information purposes only.  
No endorsement is intended or implied by the authors or organizations of this directory. The directory is an  
evolving document and appropriate updates will be made as needed.**

**\*\*Please address comments/suggestions to:  
Richard Molinar, UC Cooperative Extension 1720 S. Maple Ave Fresno 93702 (559) 456-7285  
Or  
Russ Friend, USDA-FSA 4625 W. Jennifer Fresno, CA 93722 (559) 276-7494**

**The organizations below contributed to this guide for the  
“Small Farm Resource Network”**

Fresno County Economic Opportunities Commission (EOC)  
USDA Natural Resource Conservation Service (NRCS)  
Community Alliance With Family Farmers (CAFF)  
Fresno Mosquito and Vector Control District  
USDA Risk Management Agency (RMA)  
Hmong American Community Inc (HAC)  
Valley Small Business Development Corp  
San Joaquin Valley Air Pollution District  
National Hmong Farmers Inc (NHAF)  
USDA Farm Service Agency (FSA)  
USDA Rural Development (RD)  
African American Farmers Org  
Fresno County Ag Department  
UC Davis Small Farm Center  
Fresno County Farm Bureau  
UC Cooperative Extension  
Center for New Americans  
American Farmland Trust  
Fresno State University  
Reedley College



**April 2007**

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS  
U.S. Department of Agriculture, University of California and Fresno County Cooperating

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(510) 987-0096

## **Table of Contents**

Each section will contain both governmental and private industry/non profit assistance. While each and every business in the county could not be listed because of time and space, we will be happy to add entries with a written request.

Each section below is further subdivided at that section location (e.g. marketing will include enforcement, inspection, cooperatives, packing houses, and other kinds of marketing)

	<b><u>Page #</u></b>
<b>Fresno County Agriculture</b>	<b>4</b>
<b>Marketing</b>	<b>7</b>
<b>Technical Assistance- crop growing</b>	<b>12</b>
<b>Financial- loans, disaster assistance</b>	<b>20</b>
<b>Land- acquisition</b>	<b>23</b>
<b>Labor</b>	<b>24</b>
<b>Legal</b>	<b>25</b>
<b>Research</b>	<b>26</b>
<b>Compliance</b>	<b>26</b>
<b>Index</b>	<b>29</b>
<b><u>Informational Pages</u></b>	
<b>Internet Resources</b>	<b>31</b>
<b>Starting/Operating a Family Farm</b>	<b>34</b>
<b>Fresno Climate &amp; Soils</b>	<b>37</b>
<b>Marketing Vegetables</b>	<b>38-39</b>
<b>A Business Plan &amp; Legal Issues</b>	<b>40</b>
<b>California Commodity Boards</b>	<b>42</b>
<b>Bittermelon Cost Study (2005)</b>	<b>45</b>

# Fresno County Agriculture #1 for 52 years



The Central Valley’s largest commodity is agriculture. Eight of California’s 15 top producing agricultural counties are in the Central Valley. Monterey is the only county in the top eight that is not in the area between San Joaquin and Kern counties. Not only is this area the most productive in California, but it is considered to be the most productive in the *world*. This amount of productivity requires the combined

efforts of laborers, landowners, agricultural researchers, hydraulic engineers, and many others over generations. It also reflects a range of growing conditions (soil and local climates) conducive to specific crops.

The County of Fresno was formed 150 years ago in 1856 and included all of the present Madera County and parts of Tulare, Kings, and other counties. Irrigation was made possible in 1866 by diverting water from the Kings River, and irrigation canals were developed five years later by Moses Church. Within no time, farmers started taking advantage of the valleys’ rich soil and began harvesting crops. The first orange trees were planted in 1866 in Centerville. Raisins were “accidentally” discovered in 1875 when Frances Eisen inadvertently left some grapes to dry on the vine. More crops were introduced to the valley as more immigrants flooded into the area. A century and a half later, Fresno County continues to thrive. [the above information is from the Fresno Historical Society].

### Examples of Specialty Crops In Fresno County\*

<u>CROP</u>	<u>ACRES</u>	<u># FARMERS</u>
1) Artichoke	13.1	6
2) Bean Long	128.4	66
3) Bok Choy	82.4	33
4) Cilantro	85.9	12
5) Cucumber	557.7	56
6) Gai Lon	237.5	54
7) Lemon Grass	67.8	41
8) Moqua	49.7	38
9) Opo	34.6	35
10) Parsley	827.3	10
11) Sinqua	44.4	40
12) Summer Squash	616.2	80
13) Swiss Chard	30.6	5
14) Cherry Tomato	52.8	30
15) You Choy	58.5	21

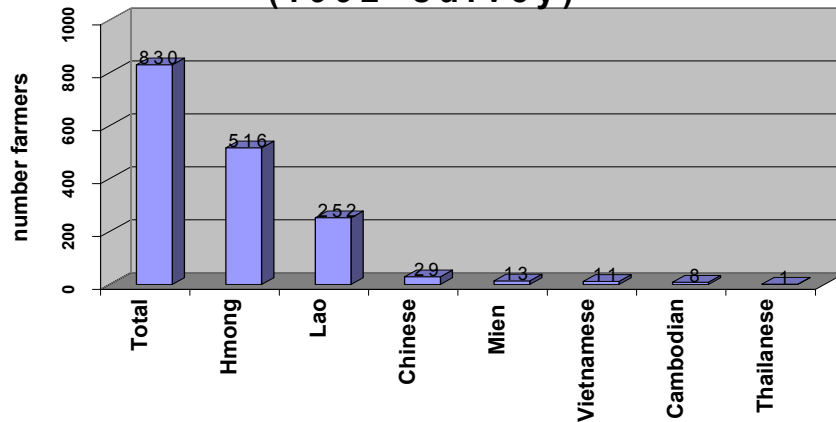
\*UCCE Fresno 2000



Fresno began in an era under Mexican rule, which accounts for the Hispanic influence. “Fresno” is actually Spanish for ‘Ash Tree’, a native specie to the area. Over the years, millions of immigrants from all over the world have migrated to California, creating a melting pot of cultures. This has caused a mixture of more than 90 different nationalities, which is a representation of the more than 250 different kinds of crops grown here.

Fresno County has over 6,000 farms growing crops on nearly 2 million irrigated acres (2002 Census of Agriculture). In 2004, Fresno county grossed \$4.7 billion in production revenue, making it the highest producing county in all of California (2005 Fresno Bee). It is still currently the number one agricultural county and has been for 52 years. Currently, 80% of farms are classified as small farms by the USDA. They gross less than \$250,000 and are family operated. According to the 2002 Census of Agriculture, about 40% of small farms are operated by minorities, with the largest groups being Asian and Hispanic. The Hmong from Loas are the largest single minority farmer in Fresno. The next largest minority farmer group would be Hispanics.

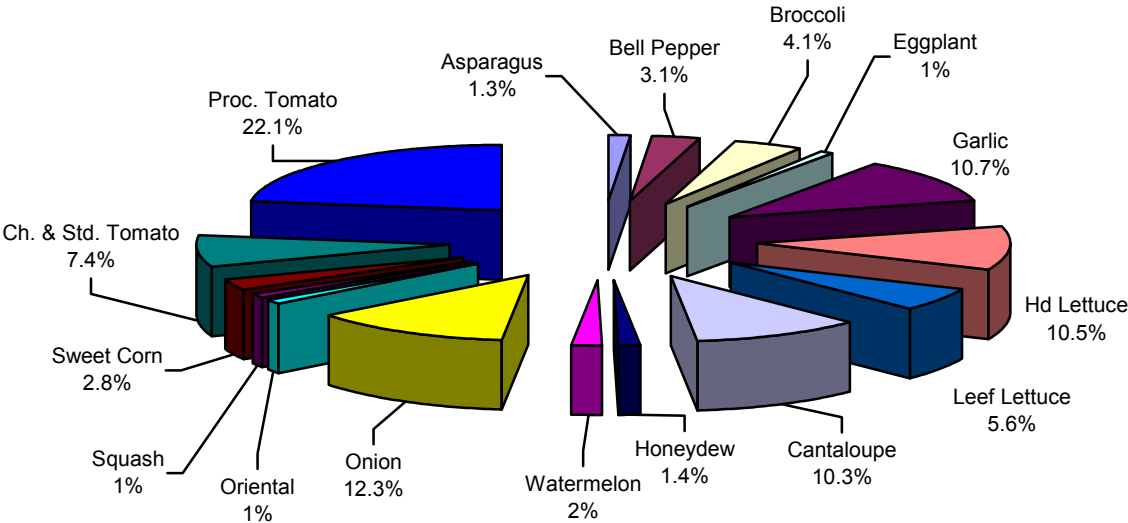
**SE Asian Farmers In Fresno County  
(1992 survey)**



In the 2002 Census of Agriculture, Fresno County was the number one producer in the United States for cotton, cottonseed, fruits, tree nuts, berries, cantaloupes, tomatoes and grapes. Fresno was also number two in production in California for nurseries and greenhouses, vegetables, melons, potatoes, sweet potatoes, cattle, chickens (meat), and turkeys. The following chart is a representation of the crops grown in Fresno county and their dollar value.

# Vegetable Crop Production (value) 2005

\* Fresno County Annual Crop Report



## 1) Marketing

This section includes:

- |                          |                       |
|--------------------------|-----------------------|
| A. Marketing Enforcement | F. Terminal Market    |
| B. Market Inspection     | G. Market Information |
| C. Market News           | H. Packing Houses     |
| D. Farmers Markets       | I. Cooperatives       |
| E. Wholesale Markets     | J. Commodity Boards   |

**A. Market Enforcement-** For help in resolving farmer/buyer marketing disagreements. Always try resolving problems one-on-one first before resorting to these drastic measures. Diplomacy goes a long way.

- Governmental

Market Enforcement – CDFA  
Sacramento (headquarters)  
560 J Street, Ste. 170A  
Sacramento, CA 95814  
(916) 341-6276 FAX (916)341-6551

Perishable Ag. Commodity Act  
PACA-USDA AMS  
Tucson Federal Bldg Room 7x  
300 W. Congress Street, box FB30  
Tucson, AZ 85701-1319  
(520) 670-4793  
[www.ams.usda.gov/fv/paca.htm](http://www.ams.usda.gov/fv/paca.htm)

- Other

Small Claims Court  
1100 Van Ness Ave  
Fresno, CA 93724  
(559)448-3450

CBS-TV Ch. 47 “On Your Side”  
4880 N. First Street  
Fresno, CA  
(559) 222-2411

Hmong American Community  
2904 North Blackstone Avenue  
Fresno, CA 93703  
(559) 229-3428

Fresno County Farm Bureau  
1274 W. Hedges Ave, Ste. 102  
Fresno, CA 93728  
(559) 237-0263

National Hmong American Farmers  
2904 North Blackstone Avenue  
Fresno, CA 93703  
559-225-5309

**B. Market Inspection-** The state and federal governments enforce fruits and vegetables to meet minimum grade standards. Private industries often have stricter standards than the government, and their standards must be followed in those cases.

- Governmental

California Department of Food  
and Agriculture (CDFA)  
Agricultural Commissioner  
1730 S. Maple Ave  
Fresno, CA 93702  
(559)456-7510  
[www.co.fresno.ca.us](http://www.co.fresno.ca.us)

California Department of Food and  
Agriculture (CDFA)- Standarization  
1220 N Street  
Sacramento, CA 95814  
(916) 654-0462  
[www.cdfa.ca.gov](http://www.cdfa.ca.gov)

California Dept. Food & Agriculture  
Market Enforcement (CDFA)  
1683 N. Helm Ave.  
Fresno, CA  
(559) 452-9831

### C. Market News

- Governmental

USDA-Agricultural Marketing Service  
Market News (AMS)  
2202 Monterey Street, Ste. 104-A  
Fresno, CA  
(559) 487-5178  
[www.ams.usda.gov/marketnews.htm](http://www.ams.usda.gov/marketnews.htm)

**D. Farmers Markets-** More information can be found on the following websites:  
[www.cafarmersmarket.com](http://www.cafarmersmarket.com) or [www.ams.usda.gov](http://www.ams.usda.gov) or [www.sfc.ucdavis.edu](http://www.sfc.ucdavis.edu)



- Private Industry/Non-profit

**City:** Clovis  
**Location:** Pollasky & 5th  
**Day/Time:** Fri. 5:30P-9P May-Sept  
**Phone:** (559) 298-5774  
**Contact:** Sharon Jackson

**City:** Fresno  
**Location:** River Park & Nees  
**Day/Time:** Tues 5P-9P  
**Phone:** (559) 439-8389  
**Contact:** Peter De Young



**City:** Fresno  
**Location:** Bullard & West  
Pavillion W. Shopping Center  
**Day/Time:** Sat. 9A-12P  
**Phone:** (559) 439-8389  
**Contact:** Peter De Young

**City:** Reedley  
**Location:** G & 11th  
**Day/Time:** Wed. 4:30P-7:30P  
June-Sept.  
**Phone:** (559)683-5484  
**Contact:** Erica Hunter

**City:** Fresno  
**Location:** Fulton & Tulare  
Fulton Mall  
**Day/Time:** Thurs. 5P-9P May-Sept.  
**Phone:** (559) 490-9966  
**Contact:** Ruth Saludes

**City:** Fresno  
**Location:** Blackstone & Shaw  
Vineyards Farmers Market  
**Day/Time:** Wed. 3P-6P Sat. 7A-12P  
[www.vineyardfarmersmarket.com](http://www.vineyardfarmersmarket.com)

**City:** Sanger  
**Location:** 7<sup>th</sup> & N Street  
**Day/Time:** Sat. 6P-10P Seasonal  
**Phone:** (559) 875-4575  
**Contact:** Clarence Harvey

**City:** Parlier  
**Location:** City Park  
**Day/Time:** Sat. 4P-8P, May-July  
**Phone:** (559) 646-2761  
**Contact:** Joe Vasquez

**City:** Fresno  
**Location:** Fresno Kaiser CFM  
Fresno & Alluvial  
**Day/Time:** Wed. 8A-1:30P  
**Phone:** (559) 448-4367  
**Contact:** Jeanie Borba/ Meredith Muril

**City:** Fresno  
**Location:** Fresno Little Italy CFM  
Piazza del Fiore Shopping Center  
**Day/Time:** Thurs 4P-8P  
**Phone:** (559) 439-8389  
**Contact:** Jennifer Hurley

### **E. Wholesale Markets**

- Private Industry

Pacific Rim Produce  
202 Franklin Street  
Oakland, CA 94607  
(510) 832-8839  
[www.pacificrimproduce.com](http://www.pacificrimproduce.com)

San Francisco Wholesale  
Produce Market  
2095 Jerrold Ave.  
San Francisco, CA 94124  
(415) 550-4495  
[www.sfproduce.org](http://www.sfproduce.org)

San Francisco Wholesale  
Flower Market  
644 Brannon Street  
San Francisco, CA 94107  
(415) 781-8410

### **F. Terminal Market-**

- Private Industry

Golden Gate Produce Terminal  
131 Terminal Court  
S. San Francisco, CA 94080  
(415) 583-4887

LA Terminal Market  
1057 S. San Pedro Ave  
Los Angeles, CA 90015  
(213) 746-0646

### **G. Market Information-**

- Governmental

USDA-Agricultural Marketing Service  
2202 Monterey Street  
Fresno 93721  
487-5178

USDA-Foreign Ag Service  
917 7<sup>th</sup> Street  
Sacramento, CA 95714  
(916) 447-9827

California State Univ., Fresno  
Center for Agricultural Business  
2910 E. Barstow Ave  
Fresno, CA 93740  
(559) 278-4405

Fresno City College  
Export Center  
390 W. Fir  
Clovis, CA 93611  
(559) 323-4689

UC Cooperative Extension  
1720 S. Maple Ave  
Fresno, CA 93702  
(559) 456-7285

- Private Industry

The Packer  
PO Box 2939  
Shawnee Mission, KS 66201  
800-255-5113

Blue Book  
845 E. Geneva Rd  
Carol Stream, IL 60188  
(630) 668-3500  
[www.bluebookprco.com](http://www.bluebookprco.com)

### **H. Packing Houses (vegetable)-**

Cherta Farm  
8459 E. American  
Del Rey, CA 93616  
(559) 442-1705

Nat Feinn & Son  
920 S. Topeka Ave  
Fresno 93721  
(559) 268-7848

World Farms  
5118 E. Vine Ave  
Fresno, CA 93725  
(559) 268-8828

Baloian Farms  
324 N. Fruit Ave  
Fresno, CA 93772  
(559) 264-3427  
[www.baloianfarms.com](http://www.baloianfarms.com)

SSK Produce  
2481 N. Sunnyside Ave  
Fresno, CA 93727  
(559) 292-5675

OK Produce.  
1762 "G" Street  
Fresno, CA 93706  
(559) 445-8616

Sunnyside Packing Co.  
3200 S. Highland Ave  
PO Box 828  
Selma, CA 93662  
(559) 896-7200



Sarabian Farm Packing Co.  
2816 S. Leonard  
Sanger, CA 93657  
(559) 493-2900

### **I. Agriculture Marketing Cooperatives-**

- Governmental

Rural Cooperatives Center  
University of California  
Davis, CA 95616  
(530) 752-2408  
[www.coopervatives.ucdavis.edu](http://www.coopervatives.ucdavis.edu)

UC Cooperative Extension  
1720 S. Maple Ave  
Fresno, CA 93702  
(559) 456-7285

- Private Industry/Non-profit

Hmong American Cooperative  
1274 W. Hedges Ave  
Fresno, CA 93728  
(559) 237-0263

Community Alliance Family Farmer  
1274 W. Hedges Ave  
Fresno, CA 93728  
(559) 237-0263

## **2) Technical Assistance**

This section includes:

- A. Pest Controls/fertilizer
- B. Soil preparation
- C. Vegetable seeds
- D. Greenhouse nurseries
- E. Soil/plant testing
- F. Equipment
- G. Organic farming
- H. Irrigation
- I. Pest ID
- J. Crop growing
- K. Laws & policies
- L. Education
- M. Harvest/post-harvest

### **A. Pest Controls/fertilizers**

- Governmental

Fertilizer Research & Education  
1220 N Street  
Sacramento, CA 95814

UC Cooperative Extension  
1720 S. Maple Ave  
Fresno 93702  
456-7285

USDA-ARS Water Management  
Research Laboratory  
9611 S. Riverbend Ave  
Parlier, CA 93648  
[www.ars.usda.gov](http://www.ars.usda.gov)



- Private Industry/Non-profit

Cal Farm Fertilizer Inc.  
2611 E. Church Ave  
Fresno, CA 93706  
(559)497-0364

The Fertilizer Institute  
820 First Street, N.E. Ste. 430  
Washington, DC 20002  
(202) 962-0490

Central Supply Co.  
530 Van Ness Ave  
Fresno, CA 93721  
(559) 268-4764

Fresno Grape Stake  
2838 S. Elm Ave  
Fresno, CA 93706  
(559) 237-3922

Bio Ag Services  
4218 W. Muscat Ave  
Fresno, CA 93706  
(559)268-2835

Monterey Ag Resources  
3654 S. Willow Ave  
Fresno, CA 93725  
(559) 499-2100

Sanger Nursery

Western Farm Service

2720 Jensen Ave  
Sanger, CA 93657  
(559)875-5582

2749 E. Malaga Ave.  
Fresno, CA 93725  
(559) 233-0585

United Ag Products  
3173 S. Chestnut Ave.  
Fresno, CA 93725  
(559)487-1516

Britz Fertilizer Inc.  
3265 W. Figarden Dr.  
Fresno, CA 93711  
(559) 448-8000

Earthwise Organics  
6943 N. Golden State Blvd  
Fresno, CA 93722  
(559)275-3300

New Era Farm Service  
23004 Road 140  
Tulare, CA 93274  
(559) 686-3833

**B. Soil Preparation-** Includes advice from the government, and ripping/laser leveling from private industry.

- Governmental

USDA- Natural Resource  
Conservation Service (NRCS)  
4625 W. Jennifer #125  
Fresno, CA 93722  
(559) 276-7494 ext. 3

- Private Industry

Agristruction  
8135 E. Dinuba Ave  
Selma, CA 93662  
(559)896-7500



Anthony's Laser Leveling  
7258 W. Rialto Ave  
Fresno 93722  
(559) 276-1258

**C. Vegetable Seeds-**

- Private Industry/Non-profit

Germain's Seed Co.  
4782 E. Jensen  
Fresno, CA 93725  
(559)233-8823

Cal Farm  
2611 E. Church Ave  
Fresno, CA 93706  
(559) 497-0364

Central Valley Seeds  
1881 S. Leonard Ave.  
Sanger, CA 93657  
(559)233-9076

California Crop Improvement  
Association  
(530) 754-7283  
[www.ccia.ucdavis.edu](http://www.ccia.ucdavis.edu)

Lockhart Seed Co.  
3 N. Wilson Way  
Stockton, CA 95205  
(209) 466-4401

Gowan Seed Co.  
PO Box 1982  
Salinas, CA 93902  
(831) 422-2820  
Russ Brown

Corona Seed Co.  
59-RF Constitution Ave  
Camarillo, CA 93012  
(805) 388-2555  
Jefferson Lowe

Snow Seed Company  
21855 Rosehart Way  
Salinas, California 93908  
(831) 758-9869

TS&L Seed Company  
PO Box 359  
Woodland, CA 95695  
530 666 1239

#### **D. Greenhouse Nurseries-**

- Private Industry

L & P Nursery  
3636 N. Grantland Ave.  
Fresno, CA 93722  
(559) 275-2635

Salinas Nursery  
1770 W. North Ave.  
Fresno, CA 93706  
(559) 233-5600

Mazzei Nursery  
308 E. Jensen Ave.  
Fresno, CA 93706  
(559) 233-8952

Headstart Nursery Inc  
4860 Monterey Road  
Gilroy, CA 95020  
(408) 842-3030

Belmont Nursery  
7730 E. Belmont Ave  
Fresno, CA 93727  
(559) 255-6860

H & E Nursery  
160 W. Nees Ave  
Fresno, CA 93711  
(559) 435-6373

Westside Transplant Company  
15796 W Dorris Ave, Huron, CA  
Five Points, CA  
559-945-7584

#### **E. Soil/Plant Testing-**

- Governmental

UC Cooperative Extension  
1720 S. Maple Ave  
Fresno, CA 93702  
(559)456-7285

USDA- Ag Research Service  
2021 S. Peach Ave.  
Fresno, CA  
(559) 453-3107

CDFA- Research & Education  
Program  
1220 N Street  
Sacramento, CA 95814  
[www.cdfa.ca.gov](http://www.cdfa.ca.gov)

USDA- Natural Resource  
Conservation Service (NRCS)  
4625 W. Jennifer Ste. 125  
Fresno, CA 93722  
(559) 276-7494 ext. 3

- Private Industry

Dellavalle Laboratory Inc.  
1910 McKinley Ave. Ste. 110  
Fresno, CA 93728  
(559)233-6129

Calif. Growers Laboratory  
4630 W. Jennifer Ste. 104  
Fresno, CA 93722  
(559) 275-3377

ABC Organics  
Crop Research Foundation  
PO Pox 967  
Camarillo, CA 93011  
(805) 675-8747

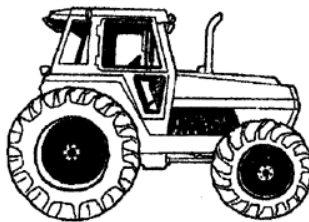
D & D Agricultural Labs  
5750 E Shields Ave  
Fresno, CA  
**(559) 348-1818**

## **F. Equipment-**

- Private Industry/Non-profit

Pioneer Equipment  
2545 S. Sarah Street  
Fresno, CA 93706  
(559) 486-7580

Pioneer Equipment Co.  
2545 S Sarah St,  
Fresno, CA 93727  
**(559) 486-7580**



Fresno Equipment Co.  
4288 S. Bagley  
Fresno, CA 93725  
(559) 486-7580

Kuckenbecker Tractor  
3040 S. Parkway Drive  
Fresno, CA 93725  
(559) 485-9090

Kings River Tractor  
1230 G St  
Reedley, CA 93654  
(559)638-2205

Pioneer Merchantile/equipment  
953 G S  
Reedley, CA 93654  
(559) 638-9201

### **G. Organic Information-**

- Governmental

UC Cooperative Extension  
1720 S. Maple Ave  
Fresno, CA 93702  
(559)456-7285

USDA-Ag Marketing Service (NOP)  
1400 Independence Ave SW  
Washington, DC 20250-0020  
(202) 720-3252

CDFA (Calif. Organic Program)  
1220 N Street  
Sacramento, CA 95814  
(916) 445-2180  
[www.cdfa.ca.gov](http://www.cdfa.ca.gov)

Fresno County Ag Department  
1730 S. Maple Ave  
Fresno, CA 93702  
(559) 456-7510

- Private Industry

Earthwise Organic  
6943 N. Golden State Blvd.  
Fresno, CA 93722  
(559) 275-3300

California Certified  
Organic Farmers (CCOF)  
1115 Mission St.  
Santa Cruz, CA 95060  
(831) 423-2263  
[www.ccof.org](http://www.ccof.org)

### **H. Irrigation-**

- Governmental

Small Farm Center  
University of California  
Davis, CA 95616-8699  
(530) 752-8136

UC Cooperative Extension  
1720 S. Maple Ave  
Fresno, CA 93702  
(559) 456-7285

- Private Industry

Rain For Rent Irrigation  
2474 W. White Bridge Ave  
Fresno, CA 93706  
(559)485-5610

Reedley Irrigation  
1260 S. Buttonwillow  
Reedley, CA 93654  
(559) 638-3583



Netafim Irrigation Inc.  
5470 E. Home Ave  
Fresno, CA 93727  
(559) 453-6800

Agri-Valley Irrigation  
3168 W. Belmont  
Fresno, CA 93722  
(559) 276-9512



## **I. Pest ID-**

- **Governmental**

UC Integrated Pest Management  
University of California  
Davis, CA 95616-8699  
(530) 752-8136  
[www.ipm.ucdavis.edu](http://www.ipm.ucdavis.edu)

UC Cooperative  
Extension  
1720 S. Maple Ave  
Fresno, CA 93702  
(559) 456-7285

Fresno County Ag Department  
1730 S. Maple Ave  
Fresno, CA 93702  
(559)456-7510

California State University, Fresno  
5201 N. Maple Ave  
Fresno, CA 93650  
(559) 278-2216

- **Private Industry**

Many chemical companies, ag consultants, pest control advisers, nurseries, etc.

## **J. Crop Growing-**

- **Governmental**

Small Farm Center  
University of California, Davis  
Davis, CA 95616  
(530) 752-2408  
[www.sfc.ucdavis.edu](http://www.sfc.ucdavis.edu)

UC Cooperative Extension  
1720 S. Maple Ave  
Fresno, CA 93702  
(559) 456-7285

Fresno County Ag Department  
1730 S. Maple Ave  
Fresno, CA 93702  
(559)456-7510

California Strawberry Commission  
PO Box 269  
Watsonville, CA 95077-0269  
(831) 724-1301

California State University, Fresno  
Agricultural Sciences  
2385 E. Barstow Ave  
Fresno, CA 93740  
(559)278-2061

Reedley College  
Agriculture Department  
995 N. Reed Ave  
Reedley, CA 93654  
(559) 638-3641

**K. Laws and Policy-** The Department of Agriculture (Agricultural Commissioner) is responsible for pesticide enforcement. They insure the farmer is using the properly labeled pesticide, that protective clothing is being used by the applicator, and insuring rates and residues are within legal limits.

- **Governmental**

State of California  
Division of Labor Standards  
770 E. Shaw Ste. 315  
Fresno, CA  
(559) 248-8410  
[www.dir.ca.gov](http://www.dir.ca.gov)

USDA- Natural Resource  
Conservation Service (NRCS)  
4625 W. Jennifer Ave #125  
Fresno, CA 93722  
(559) 276-7494 ext. 3

Endangered Species  
Calif. Dept. of Fish & Game  
1234 E. Shaw Ave  
Fresno, CA 93710  
(559) 243-4005  
[www.dfg.ca.org](http://www.dfg.ca.org)

Cal-OSHA Calif. Department  
of Industry Relations  
1901 N. Gateway Blvd. Ste. 102  
Fresno, CA  
(559) 454-1295

Fresno County Ag Department  
1730 S. Maple Ave  
Fresno, CA 93702  
(559)456-7510

UCCE- Personnel Management  
1720 S. Maple Ave  
Fresno, CA 93702  
(559) 456-7285

Ag Burning  
San Joaquin Valley Air Pollution Dist  
1999 Tuolumne St ste 200  
Fresno, CA 93721  
(559) 230-5998/1800-766-4463 (message)

CDPR- Calif. Department of  
Pesticide Regulations  
1001 "I" Street PO Box 4015  
Fresno, CA  
(916) 445-4300

**L. Education-**

- **Governmental**

California State University, Fresno  
Agricultural Sciences  
2385 E. Barstow Ave  
Fresno, CA 93740  
(559) 278-2061

UC Cooperative Extension  
1720 S. Maple Ave  
Fresno, CA 93702  
(559) 456-7285

Reedley College  
Agriculture Department  
995 N Reed Ave

Reedley, CA 93654  
(559) 638-3641

**M. Harvest/Post-harvest-**

Post-harvest Technology  
Department of Pomology  
University of California, Davis  
(530) 752-6941

**N. Food Safety Information**

Fresno County Ag Department (Ag Commissioner)

UC Cooperative Extension Fresno

Fresno County Department of Health

UC Davis -- <http://ucfoodsafety.ucdavis.edu/>



### 3. Financial

This section includes:

- A. Farm and Business Loans
- B. Disaster Assisting
- C. Crop Insurance
- D. Grants/Cost Sharing

**A. Loan/Resources-** Starting a business can be an expensive undertaking. It is critical to develop a sound financial business plan to estimate and forecast the level of sales and the cash flow for the business. For more information about a business plan, see the business plan section (page 36). Loans may be obtained from various sources. The Farm Service Agency has usually the lowest interest rates but can only offer a certain number of loans, only up to a certain amount, and only if you are unable to obtain loans from other sources. Other organizations, such as Economic Opportunities Commission, may have loans available but to certain groups, such as refugees. And other agencies may offer loans for equipment, buildings, no production business loans or farm worker housing (e.g. HUD, USDA-RD).

- Governmental

USDA- Farm Service Agency (FSA)  
4625 W. Jennifer Ave Ste. 109  
Fresno, CA 93722  
(559) 276-7494 ext. 2

USDA- Rural Development (RD)  
4625 W. Jennifer Ave Ste. 126  
Fresno, CA 93722  
(559) 276-7494 ext. 4

US Dept. Housing/Urban Developing  
2135 Fresno Street, Ste. 100  
Fresno, CA 93721  
(559) 487-5033  
[www.hud.gov](http://www.hud.gov)

- Private/Non-profit

Valley Small Business Development  
3417 W. Shaw Ave, Ste. 100  
Fresno, CA  
(559)271-9030

Multi Ethnic Small Farm Org.  
550 E. Shaw Ave 2<sup>nd</sup> floor  
Fresno, CA  
(559) 225-1294

Hmong American Community  
1044 Fulton Mall #207  
Fresno, CA 93721  
(559) 237-4919

Economic Opportunities  
Commission-EOC  
3120 W. Nielson Ave  
Fresno, CA 93706  
(559) 485-3733

Fresno Madera Farm Credit Service  
4635 W. Spruce Ave  
Fresno, CA 93722  
(559)277-7000

Union Bank of California  
7108 N. Fresno Street  
Fresno, CA 93720  
(559) 436-2700

Bank of the Sierra- Ag Credit Center  
636 E. Shaw Ave  
Fresno, CA 93722  
(559)248-2580

Bank of America  
3445 N. Cedar Ave  
Fresno, CA 93726  
(888) 852-5000 ext. 7226

American Farm Mortgage  
5100 N. 6<sup>th</sup> Street, Ste. 105  
Fresno, CA 93710  
Michelle Halgren, Broker  
(559) 243-1300

National Hmong American Farmers  
2904 N. Blackstone Ave  
Fresno, CA 93703  
559-225-5309

## **B. Disaster Assistance-**

- Governmental

USDA Farm Service Agency  
4625 W. Jennifer, Ave Ste. 109  
Fresno, CA 93722  
(559) 276-7494 ext. 2

FCEOC-Office of Emergency Services  
2550 Mariposa Mall  
Fresno, CA 93721  
(559) 445-5672

**C. Crop Insurance-** Insurance is now secured through various independent companies who are part of the USDA Risk Management Federal Crop Insurance program.

- Governmental

USDA Risk Management Agency  
430 G Street #4168  
Davis, CA 95616  
(530) 792-5870  
[www.rma.usda.gov](http://www.rma.usda.gov)

USDA- Farm Service Agency  
NAP Program  
4625 W. Jennifer, Ste. 109  
Fresno, CA 93722  
(559) 276-7494 ext. 2  
[www.fsa.usda.gov](http://www.fsa.usda.gov)

- Private/Non-profit

Fresno County Farm Bureau  
1274 W. Hedges, Ste. 102  
Fresno, CA 93728  
(559) 237-0263

National Ag  
4969 Clinton  
Fresno, CA 93727  
(559) 252-7400

Great American Insurance Co.  
575 East Locust Ave. ste 101  
Fresno, CA 93720  
(559)271-7770

Rain and Hail Insurance Service  
499 W. Shaw Ave  
Fresno, CA 93704  
(559) 224-2300

ARMTech  
2350 West Shaw  
Fresno 93711  
800-788-8318

Crop 1 Insurance Inc.  
4532 114<sup>th</sup> Street  
Des Moines, IA 50322  
866-765-0552

Rural Community Insurance Services  
7040 Marks, Suite 101  
Fresno 93711  
866-646-7247

Agro National, L.L.C.  
535 West Broadway, Suite 204  
Council Bluffs, IA 51503  
712-256-0968

John Deer Risk Protection, Inc.  
6400 N.W. 86<sup>th</sup> Street  
Johnston, IA 50131  
866-404-9057

Heartland Crop Insurance, Inc.  
235 S. Kansas Ave., 4<sup>th</sup> Floor  
Topeka, KS 66601  
888-789-5566

ProAG Management Inc. (Producers Ag)  
4910 Clinton Way, Suite 103  
Fresno 93727  
253-1009

**D. Grants/Cost Sharing-** The Natural Resource Conservation Service (NRCS) is the old Soil Conservation Service and provides both grants and cost sharing programs. For example, they may pay for one-half the costs for a farmer to convert to a more economical irrigation system such as drip irrigation.

- **Governmental**

California Energy Commission  
1516 9<sup>th</sup> Street, MS 29  
Sacramento, CA 95814-5512  
(916) 654-4287

USDA- Natural Resource  
Conservation Service (NRCS)  
4625 W. Jennifer Ste. 125  
Fresno, CA 93722  
(559) 276-7494 ext. 3

PG&E  
2600 Fresno Street  
Fresno, CA 93721  
(559) 621-8019  
800-743-5000 (free pump testing)

## 4. Land

This section includes:

Land Acquisition

- Private/Non-profit

Peelman Realty  
5021 S. Elm Ave  
Fresno, CA 93706  
(559)485-4430

Pearson Realty  
7480 N. Palm, Ste. 101  
Fresno, CA 93711  
(559) 432-6200

Schuil and Associates  
1234 Manning Ave  
Reedley, CA 93654  
(559)638-8282

Capital Agricultural Property  
7108 N. Fresno, Ste 401  
Fresno, CA 93720  
(559) 437-0190

Ron Silva Realty  
5021 S. Elm Avenue  
Fresno, CA 93706  
(559) 485-0759

## 5. Labor

All businesses with employees are required to comply with state and federal regulations regarding the protection of employees. OSHA outlines specific health and safety standards adopted by the US Department of Labor. The Federal Immigration Reform and Control Act of 1986 requires all employers to verify the employment eligibility of new employees. The law obligates an employer to process a Form I-9 that can be obtained from the local Immigration and Naturalization Service (INS) office. As an employer, you are also required to obtain an Employer Identification Number (EIN or FEIN). This can be obtained by filling out the Federal Form SS-4 from the Internal Revenue Service (IRS) and/or State EDD Tax Office. If your pay wages total more than \$100 in a calendar quarter, you are required to register with the Employment Development Department of California (EDD). Employers must pay the following four taxes- **Unemployment Insurance, Employment Training Tax, State Disability Insurance, State Personal Income Tax** on form DE-6 (Quarterly Wage and Withholding Report). The

Unemployment Insurance and Employment Training Tax are paid by the employer. State disability Insurance and State Personal Income Tax are withheld from the employees' wages.

Occupational Safety and Health Admin.  
2424 Arden Way Ste. 485  
Sacramento, CA 95825  
(916) 263-5765

Immigration & Naturalization  
Service (INS)  
865 Fulton Mall  
Fresno, CA 93721  
(559) 487-5091

US Department of Labor  
2202 Monterey  
Fresno, CA  
(559) 487-5317  
[www.dol.gov](http://www.dol.gov)

California State University, Fresno  
Center for Agriculture Business  
2910 E. Barstow Ave  
Fresno, CA 93740  
(559) 278-4405

Agricultural Personnel Mgmt Program  
University of California  
Berkeley, CA  
<http://apmp.berkeley.edu/>

Employment Development Dept.  
800 Capitol Mall, MIC 83  
Sacramento, CA 95814  
(916) 464-3400  
[www.edd.ca.gov](http://www.edd.ca.gov)

Dept Industrial Relations  
Labor Standards Enforcement  
770 E Shaw Ave rm 315  
Fresno, CA 93710

UC Cooperative Extension  
1720 Maple Ave  
Fresno, CA 93702  
(559) 456-7285

(559) (559) 244-5340



## **6. Legal**



Business Tax Information- If you have employees, but are not the sole proprietor or partner(s), you must make periodic payments, and/or file quarterly reports about payroll or other mandatory deductions. Contact the following appropriate agency for more information:

### **Employment Tax**

Employment Development Department  
[www.edd.ca.gov](http://www.edd.ca.gov)  
(626) 575-6751

### **State Income Tax**

State Franchise Board  
[www.ca.gov/s/business](http://www.ca.gov/s/business)  
800-852-5711



**Federal Income Tax** Internal Revenue Service  
800-829-1040

**Social Security** Social Security Administration  
800-772-1213

**Workman's Compensation Insurance** State Compensation Insurance  
(415) 974-8100

As a farmer, it is to your advantage to know your rights and be familiar with legal matters related to agricultural issues. The following offices may be able to answer any questions, help with problems related to your business, or refer you to someone if they can not.

Fresno County Bar Association  
1221 Van Ness Ave  
Fresno, CA 93721  
(559)264-2619

California Rural Legal Asst.  
2115 Kern Street  
Fresno, CA 93721  
(559) 441-8721

Legal Aid-Central California  
1999 Tuolumne Street Ste. 700  
Fresno 93721  
441-1611 or 800-675-8001

## **7. Research**

UC Cooperative Extension  
1720 S. Maple Ave  
Fresno, CA 93702  
(559)456-7285

California State University, Fresno  
Agricultural Sciences  
2385 E. Barstow Ave  
Fresno, CA 93740  
(559) 278-2061

USDA-Natural Resource Conservation  
Service (NRCS)  
4625 W. Jennifer Ave Ste.125  
Fresno, CA 93722  
(559) 276-7494 ext. 3

**USDA ARS**  
9611 South Riverbend Avenue  
Parlier, California 93648-9757  
(559) 596-2999  
<http://www.ars.usda.gov/>

# 8. Compliance

\*The following rules and regulations **must** be complied with or a fine will be issued\*

### **Family Farm Legal Compliance Issues-Fresno**

UC Cooperative Extension

Richard Molinar, Michael Yang, Chukou Thao, Dr. Loxing, Dr. Toulou Thoa  
UCCE, HAC,US-HUD, NHAFF

**PESTICIDES**- County Ag Department (Ag Commissioner) (559)456-7510

- a. Grower ID = For any pesticides used on a commercial farm\*
- b. Private Applicator License = Required for “restricted use” pesticides\*, a 24 hour ‘notice of intent’ must be given
- c. Organic Farm Registration = 3-year transition is needed. Farm must also be certified by another 3d party agency
- d. Certified Farmers markets = must register your farm and the individual crops you will be growing. Not required for Flea Markets.

\*Must file monthly use reports

**BURNING**- SJ Valley Air Pollution District (6A-11A) 1-800-665-2876

- a. For any ag burning, permits are required
- b. Must call before the day you intend to burn
- c. Do not burn plastic, nylon, rubber, etc.
- d. Fees = \$22.00 for 1 location, \$38.00 for 2 locations, and \$62.00 for 3 locations

**LABOR**- Deputy Inspector in Fresno (559) 244-5352

- a. **Worker’s Compensation Insurance**- required in all ag situations where employees or family members help.
  - only exception is the farmer and his partner(s)
  - available from State Fund Insurance Co. and a few other places
- b. **Minimum Wage**-
  - paid to all employees, even if paid on piece work
  - records must be kept, deductions taken for SS., federal/state taxes

**c. Child Labor**

- if less than 18, work permit from school is required; can not mix/load pesticide
- minors younger than 16 years can not work in a hazardous situation
- minors younger than 12 years can not work (exception = growers children)

**d. Misc.**

- must keep records on employees- gross wages, total hours, (# piece units), deductions, net wages, dates of pay periods, name and SS #, address
- rest periods- at least 10 minutes for every 4 hours worked
- pay days- within 7 days of the end of the pay period
- meals- at least 30 minutes for every 6 hours worked

**OSHA-** Cal/OSHA enforcement (559) 445-5302

**a. Field Sanitation**

- drinking water- cool, with faucet, disposable cups, 4 gallons/worker/8 hours
- hand washing- soap, single use towels, 15 gallons minimum, clearly marked 'water is for hand washing only'
- toilet- 1 male and 1 female/ 20 employees (exception, if less than 5 employees, then only 1 toilet is required. Must lock from inside)  
\*able to hold 40 gallons, supplied with toilet paper, located within ¼ mile or 5 minute walk, screened and sanitary

**b. Hazard Communication Program**

- written program that gives employees information about hazardous substances (MSDS sheets, DPR info.- A-8, A-9 forms displayed)

**c. Use of Short-Handled Hoes**

- prohibited while kneeling or squatting

**d. Medical Aid**

- First-aid kit at the farm
- one person trained in first-aid for every 20 employees
- exception = not needed if medical care facility is within 15 minutes
- CPR qualified person there to provide assistance within 4 minutes



**e. Injury and Illness Prevention Program (IIPP)**

- Must have a written program for employees that contains 8 parts below:
  - assignment of responsibilities: farmer/wife/employees
  - safety communication: communicate how? orientation? meet how often?
  - safe work practices compliance: employees helping each other
  - scheduled inspections: by whom? how often? who corrects?
  - accident investigations: by whom? interview workers
  - procedure for correcting safety: report serious to OSHA within 8 hours
  - safety training and instruction: topics? number of hours? language?
  - record keeping and documentation: how documented? keep one year

**Posting Requirements**

- 1) IWC order (wage order 14-80)
- 2) Minimum wage poster
- 3) Payday notice (DSLE 8)
- 4) Cal OSHA requirements
- 5) Cal OSHA for 200
- 6) Workers Compensation Insurance Coverage
- 7) Farm Labor Contractors name and license
- 8) Discrimination in employment
- 9) Equal employment opportunity
- 10) PSIS A-9 (Ag Commissioner)

## Index

Business tax info	25
Chemicals/fertilizers	12
Commodity Boards	42
Compliance	26
Cooperatives	11
Crop Growing	17
Crop Insurance	21
Disaster Assistance	21
Education	19
Email contact information	31-33
Equipment	15
Farmers Markets	8-9
Farm Loans	19
Fertilizers	12
Financial	19
Food Safety	19, 31 (UC)
Grants/Cost Sharing	21
Greenhouse Nurseries	14
Harvest/Post-harvest	19
Internet Resources	30
Irrigation	16
Labor	23
Land Acquisition	23
Laws and Policies	18
Legal	25
Loans	20
Market Enforcement	7
Market Information	10
Market Inspection	7-8
Market News	8
Organic Information	16
Packing Houses (vegetable)	10-11
Pest Controls	12
Pest ID	17
Research	26
Soil/Plant Testing	15
Soil Preparation	13
Starting a Farm	35
Technical Assistance	12
Terminal Market	10
Vegetable Seeds	13-14
Wholesale Markets	9

## **Internet Resources**

All Internet pages begin with http://

### **University of California**

Small Farm Center	<a href="http://www.sfc.ucdavis.edu">www.sfc.ucdavis.edu</a>
Integrated Pest Management	<a href="http://www.ipm.ucdavis.edu">www.ipm.ucdavis.edu</a>
Post-harvest	<a href="http://postharvest.ucdavis.edu">postharvest.ucdavis.edu</a>
Cooperatives	<a href="http://www.cooperatives.ucdavis.edu">www.cooperatives.ucdavis.edu</a>
Vegetable Crops Center	<a href="http://vric.ucdavis.edu">vric.ucdavis.edu</a>
Kearney Research Center	<a href="http://www.uckac.ucdavis.edu">www.uckac.ucdavis.edu</a>
Agricultural Issues Center	<a href="http://www.ucdavis.edu">www.ucdavis.edu</a>
Agricultural Personnel	<a href="http://are.berkeley.edu/apmp">are.berkeley.edu/apmp</a>
Fruit and Nut Center	<a href="http://fruitsandnuts.ucdavis.edu">fruitsandnuts.ucdavis.edu</a>
UC Directory	<a href="http://danr.ucop.edu">danr.ucop.edu</a>
Ornamental Horticulture	<a href="http://ohric.ucdavis.edu">ohric.ucdavis.edu</a>
Weed Research Center	<a href="http://wric.ucdavis.edu">wric.ucdavis.edu</a>
Aquaculture	<a href="http://aqua.ucdavis.edu">aqua.ucdavis.edu</a>
Ag Health and Safety	<a href="http://agcenter.ucdavis.edu">agcenter.ucdavis.edu</a>
Poultry home Page	<a href="http://ext.ucdavis.edu/avs/avsext.html">ext.ucdavis.edu/avs/avsext.html</a>
Poultry Web Page	<a href="http://animalscience.ucdavis.edu/extension/avian">animalscience.ucdavis.edu/extension/avian</a>
Sustainable Agriculture	<a href="http://www.sarep.ucdavis.edu">www.sarep.ucdavis.edu</a>
Food Safety	<a href="http://ucfoodsafety.ucdavis.edu/">ucfoodsafety.ucdavis.edu/</a>

### **USDA**

Rural Development	<a href="http://www.rurdev.usda.gov/rbs">www.rurdev.usda.gov/rbs</a>
USDA Home Page	<a href="http://www.usda.gov">www.usda.gov</a>
Farm Service Agency	<a href="http://www.fsa.usda.gov">www.fsa.usda.gov</a>
Natural Resource Conservation System	<a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>
Risk Management	<a href="http://www.rma.usda.gov">www.rma.usda.gov</a>
Economic and Statistics Statistic Service	<a href="http://usda.mannlib.cornell.edu/usda/">usda.mannlib.cornell.edu/usda/</a> <a href="http://www.usda.gov/nass">www.usda.gov/nass</a>
Ag Research Service	<a href="http://www.ars.usda.gov">www.ars.usda.gov</a>
Agriculture Marketing	<a href="http://www.ams.usda.gov">www.ams.usda.gov</a>

### **U.S.**

Small Business Admin. Commerce	<a href="http://www.sba.gov">www.sba.gov</a> <a href="http://www.doc.gov">www.doc.gov</a>
Minority Business	<a href="http://www.mbdba.gov">www.mbdba.gov</a>
Ag Census Bureau	<a href="http://www.census.gov">www.census.gov</a>

### **California State**

California Department of Food and Agriculture	<a href="http://www.cdffa.ca.gov">www.cdffa.ca.gov</a>
Pesticide Regulation	<a href="http://www.cdpr.ca.gov">www.cdpr.ca.gov</a>
Water Resources	<a href="http://www.dwr.water.ca.gov">www.dwr.water.ca.gov</a>

Cal EPA	<a href="http://www.calepa.ca.gov">www.calepa.ca.gov</a>
State Home Page	<a href="http://www.ca.gov">www.ca.gov</a>
California Law	<a href="http://www.legalinfo.ca/calaw.html">www.legalinfo.ca/calaw.html</a>
California Organic Program	<a href="http://www.cdffa.ca.gov/is/fveqc/organic.htm">www.cdffa.ca.gov/is/fveqc/organic.htm</a>

**Other**

CCOF	<a href="http://www.ccof.org">www.ccof.org</a>
Community Alliance Family Farmers	<a href="http://www.caff.org">www.caff.org</a>
Fresno Farm Bureau	<a href="http://www.fcfb.org">www.fcfb.org</a>
National Watermelon Bd.	<a href="http://www.lane-ag.org">www.lane-ag.org</a>
Sun World International	<a href="http://www.sun-world.com">www.sun-world.com</a>
Grocery Manufacturers	<a href="http://www.gmabrands.com">www.gmabrands.com</a>
Fresno Bee	<a href="http://www.fresnobee.com">www.fresnobee.com</a>

PEOPLE AND ORGANIZATIONS WORKING WITH SMALL FAMILY FARMS IN  
FRESNO COUNTY



1. California Dept. Industrial Relations – Labor Standards  
224-5340 or 248-8398
2. CAL-OSHA - Fresno  
Jerry Walker – [jwalker@dir.ca.gov](mailto:jwalker@dir.ca.gov)
3. Community Alliance with Family Farmers  
Anya Fernald – [anya@caff.org](mailto:anya@caff.org)
4. FACTS  
David Visher – [visher@comcast.net](mailto:visher@comcast.net)
5. Farm Bureau of Fresno County  
Ryan Jacobsen – [ryanj@fcfb.org](mailto:ryanj@fcfb.org)
6. Farmers – Industry - Banks  
Cherta Farm – [chertafarms@aol.com](mailto:chertafarms@aol.com)  
  
Sunnyside Farms - Joe Santellano – [sunnysp@psnw.com](mailto:sunnysp@psnw.com)  
  
Sun Ripe Fruit - Stephanie Johnson – [sunripefruit@yahoo.com](mailto:sunripefruit@yahoo.com)

Wells Fargo Bank - Tim Rios – [riostim@wellsfargo.com](mailto:riostim@wellsfargo.com)

African American Farmers of California  
Will Scott Jr. – [AaFarmers97@aol.com](mailto:AaFarmers97@aol.com)

7. Fresno Interdenominational Refugee Ministries  
Rev. Sharon Stanley – [soulhikr@aol.com](mailto:soulhikr@aol.com)
8. Fresno County Social Services  
Peter Vang – [pvang@co.fresno.ca.us](mailto:pvang@co.fresno.ca.us)
9. Fresno County Economic Opportunities Commission  
Blong Lee – [blong.lee@fresnoeoc.org](mailto:blong.lee@fresnoeoc.org)
10. Fresno State University  
Jim Farrar – [jfarrar@csufresno.edu](mailto:jfarrar@csufresno.edu)  
Ganesan Srinivasan – [gsrinivasan@csufresno.edu](mailto:gsrinivasan@csufresno.edu)  
Bruce Roberts - [baroberts@csufresno.edu](mailto:baroberts@csufresno.edu)
11. Fresno County Ag Commissioner  
Jerry Prieto – [jprieto@co.fresno.ca.us](mailto:jprieto@co.fresno.ca.us)  
Karen Francone – [kfrancone@co.fresno.ca.us](mailto:kfrancone@co.fresno.ca.us)
12. Hmong American Community  
Loxing Kiatoukaysi – [kloxing@cs.com](mailto:kloxing@cs.com)  
Kevin Lee – [Kevin\\_lee@yahoo.com](mailto:Kevin_lee@yahoo.com)
13. Lao Family  
Pao Fang – [pfang@laofamilyfresno.org](mailto:pfang@laofamilyfresno.org)  
Ge Thao – [gthao@laofamilyfresno.org](mailto:gthao@laofamilyfresno.org)
14. Media  
KQEQ Radio/ Dr. Daniel Moua (559) 499-1210  
Hmong Today/ Ben Vue – [bhvue@yahoo.com](mailto:bhvue@yahoo.com)
15. National Hmong American Farmers, Inc.  
Chukou Thao – [nhaf\\_ct@yahoo.com](mailto:nhaf_ct@yahoo.com)
16. Nisei Farmers League  
Manuel Cunha, Jr. – [niseifrm@pacbell.net](mailto:niseifrm@pacbell.net)
17. Opening Doors, Inc.  
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22. US-Housing and Urban Development (HUD)  
Rollie Smith – [rollie\\_smith@hud.gov](mailto:rollie_smith@hud.gov)
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Billy Lee – [blee@sfc.dol-esa.gov](mailto:blee@sfc.dol-esa.gov)
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26. USDA-Risk Management Agency (RMA)  
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Zandra Edwards – [zandra.pendarvis@rma.usda.gov](mailto:zandra.pendarvis@rma.usda.gov)
27. USDA-Rural Development (RD)  
Lee Takikawa – [lee.takikawa@ca.usda.gov](mailto:lee.takikawa@ca.usda.gov)  
Sally Trip – [sally.trip@ca.usda.gov](mailto:sally.trip@ca.usda.gov)
28. Other Groups:  
Khmer Society of Fresno - [www.khmersocietyoffresno.org](http://www.khmersocietyoffresno.org)

## Starting/Operating a Family Farm

By Richard Molinar\* & Karen Franconi\*\*

\*UC Cooperative Extension, \*\*County Agriculture Department

Revised August 2006

“What licenses do I need to start farming?” Older farmers will tell you “none, just start farming”. This is close to the truth, however, in reality there are certain rules or documents that may be required of you.

### PESTICIDE PERMITS

A grower of a commercial agricultural crop or product who uses pest controls (mitigates pests) is required to obtain a grower identification number (ID) from the county agricultural commissioner. This allows the grower to buy commercial formulations of pesticide from chemical dealers. The pest controls may be synthetic chemicals or organic controls. The grower must submit monthly pesticide “use reports” of the chemicals that were used on the crop. This protects the consumer, the farmer/farm workers, and the environment. A 24 hour ‘notice of intent’ must be given before use of pesticides.

If the grower is using “restricted pesticides”, a restricted materials permit must be obtained. These chemicals are deemed more hazardous to people and/or the environment. Paraquat, carbaryl, strychnine, methomyl, and other such chemicals are examples of restricted pesticides. A test must be passed in order to obtain the permit and 2 hours of continuing education each year is required to maintain the permit. Prior to using the restricted material, a “notice of intent” must be filed, and a use report filed immediately after.

### AG BURNING

A farmer in Fresno County can only burn crop residues on certain days or face fines. Enforcement of this law is by the San Joaquin Valley unified Air Pollution Control District. A permit must be obtained before any burning is allowed. Fees for permits are \$22.00 for one burn location, \$38.00 for two, and \$62.00 for three. No type of nylon/plastic/rubber can be mixed with the crop residue. (1-800-665-2876)

### LABOR

Please see the Labor section (page 19) and compliance section (page 22) of this directory for regulations and permits regarding labor.

### ORGANIC FARMERS

If a farmer wants to sell produce as ‘organic’ or ‘certified organic’, the farm must be registered with the California Department of Food and Agriculture through the agriculture commissioners office. As of 1992 the new NOP program requires that all organic farms also be certified with one of the certifying agencies approved by the state and follow their policies for pest control, fertilizers, compost, etc. There is also a three year transition period required before the farm can be considered organically certified.

### CERTIFIED FARMERS MARKETS

For a farmer to sell at any of the more than 200 farmers markets in California, a certification must be obtained from the county agriculture commissioner. This certifies that the farmer is the grower of the products being sold at the market. If a product is sold by weight, the Department of Agriculture Weights and Measures must certify the scale. (Usually at the agriculture commissioners office).

Thus, if a farmer can avoid the use of any pesticides, does not burn crop residue, does not hire outside labor, is not officially organic, or does not sell at certified farmers markets, then he/she can indeed do as they say and “just start farming”.

## Fresno Climate and Soils

The weather and the soil composition of Fresno County contributes to its success in agriculture. Fresno is sunny and dry in the summer months and wet and cool in the winter months. Even though we have had our share of over 100 degree days in the summer, they usually do not last long and a gentle breeze sometimes helps to push the dry, hot air out of the valley. In contrast, winter months bring their share of rain and occasional frost. However, there are about 215-230 frost-free days in Fresno County yearly. Rain fall typically begins in October and ends in April, and averages about 10.6 inches yearly. While the weather can be above or below what is considered normal, the average generally stays consistent.



### **Fresno Air Terminal, Fresno County, California USA**

Located at about 36.78 degrees North, 119.71 degrees West. Height about 334 feet above sea level.

#### Average Maximum Temperature

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
degrees F	54	91.7	66.6	75	84.2	92.7	98.6	96.6	90	79.7	64.6	53.6	76.5

#### Average Temperature

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
degrees F	45.7	51.1	55	61.2	68.9	76.5	81.9	80.2	74.5	65.1	53.6	45.3	63.1

#### Average Minimum Temperature

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
degrees F	37.4	40.5	43.3	47.3	53.6	60.3	64.9	63.7	58.6	50.5	42.4	37	50.0

#### Average Rainfall (30 year average)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
inches	2.0	1.8	1.9	1.0	0.3	0.1	0.0	0.0	0.2	0.5	1.4	1.4	10.6

**Soils:**

It can be helpful to farmers if they know what the soil is like on a certain pieces of land. This can suggest what kinds of crops will grow there, what yields might be expected, and what soil management practices are required. All of the below information can be obtained from the soils maps; “Soils of Western Fresno County” (University of California, 1950) and “Soil Survey Eastern Fresno Area” (Soil Conservation Service, 1971). Soils are classified into “Series” and “Types” (textures) according to characteristics such as horizons, soil profile, and parent material. The Storie index rating grades a soils’ ability to produce crops. It considers factors such as soil profile, surface texture, slope, and other factors such as drainage, alkali, nutrients, acidity, erosion, and microrelief. Soils with a rating of 80-100% are considered excellent and given a grade 1.

**West Fresno soils** are the result of recent alluvial fans. The valley, as a whole, is a great structural trough or basin that previously contained a large body of water. Marine deposits were covered with other deposits laid down in succeeding bodies of water forming the alluvial fans. Much of the west side is in the Panoche soil series, with significant acreage also in Oxalis and Lethent series. Predominant soil textures are silty clay loams and clay loams.

Panoche (574,000 acres)	Recent alluvial fan. Light brown to gray. Some alkali. Good drainage. Good drainage, nutrient levels.
Oxalis (115,000 acres)	Basin rim soil. Slightly compacted subsoil. Gray-brown. Some alkali...imperfect drainage.
Lethent (15,000 acres)	Basin soil. Fair amount of alkali. Grayish-brown. Poor drainage.

**East Fresno soils** consist of three main sources of parent material: 1) young alluvium, mostly granitic 2) consolidated old alluvial sediment 3) hard bedrock. The largest areas were developed from alluvial material washed from the Sierra Nevada. Almost all of the soils in Selma, Fowler, Kingsburg, Sanger, and west of highway 99 are recent and young alluvial soils. North of Fresno/Clovis and areas around Reedley/Orange Cove are large areas of old granite alluvium. Below are some of the main soil series in the above areas:

	<b><u>Soil Series and Type:</u></b>	<b><u>Storie Index:</u></b>	<b><u>%Acres in E. Fresno</u></b>
Selma:	Hesperia fine sandy loam, moderately deep	95%	1.8%
	Hanford fine sandy loam	100	2.7
Kingsburg:	Delhi loamy sand, 0-3% slope	72	3.5
	Delhi sand, 0-3% slope	51	0.2
Fowler:	Hanford sandy loam	95	2.6
	Hesperia fine sandy loam	100	
Fresno: W. of 99	Atwater loamy sand. 0-3%	70	0.5
	Greenfield sandy loam, 0-3%	90	0.8
E. of 99	Delhi loamy sand, 0-3%	72	
Reedley:	Hanford fine sandy loam	100	

# Marketing Vegetables

UC COOPERATIVE EXTENSION IN FRESNO

By Richard Molinar & Michael Yang



## Where Can I Sell?

**1. Roadside Stands:** Three very important keys to success are location, location, location. A busy or frequently traveled street or intersection will help considerably. It may also help to have a variety of produce, and of course, very good quality. Advertising will let people know about you.

Anything you can do to make yours “different” will make it more attractive and inviting to customers—consider “**organic**”, or “**pick-your-own**”. And don’t be afraid about contacting the media (newspaper, etc.) to let them know about a possible story. Some stands are only seasonal, but others may try operating year-round.

Other things to consider:

- ~ ~ signage- nice signs out in front letting people know what you have consider a name for your stand – “Yang’s Specialty Produce”
- ~ ~ fresh paint- a clean looking stand is more attractive
- ~ ~ clean surroundings- keep weeds down, settle dust if water is available
- ~ ~ parking- making it easy for people to pull off the road

**2. Processor Contracts:** Selling to a processor might involve a very strict legal contract, or may be somewhat loose. Prices paid to the farmer are usually preset, so growers know ahead of time what they will be getting for their crop. The temptation is there to shop around for better prices, but in doing so, grower dependability and reputation may suffer and bridges burned with the processor.

Wawona Frozen Foods - strawberries and fruits

JR Wood, Inc. - strawberries, fruits, and certain other vegetables

**3. Terminal Markets/ Wholesale Markets:** Worldwide, these central distributing points are close to ocean ports and/or railroad lines. Some of the larger wholesales are located at these markets where large volume purchases and sales are made. 34 cities worldwide are listed including New York, Boston, Chicago, Paris, Mexico, and Tokyo. Current terminal market prices are given for that day based on supply and demand. Produce prices for South San Francisco and Los Angeles are listed for California. The Internet site address is [[www.ams.usda.gov/fv/mncs/termveg](http://www.ams.usda.gov/fv/mncs/termveg)]. These prices will give you a close approximation what various fruits and vegetables are selling for.

There are other wholesale market places in California- one in Oakland and the other in Central San Francisco. Various wholesalers are also located in these market places. The San Francisco Wholesale Produce Market has 30 different wholesalers located at their facility – some specializing in ethnic foods or certain kinds of produce. Check out their web site at [[www.sfproduce.org](http://www.sfproduce.org)].

**4. Local Vegetable Shipping Houses:** These may be strictly shippers, or a combination of growers, packers, and/or shippers. They provide the service of buying farm produce and then shipping it to their customers. There is usually a commission involved for this service but the businesses operate strictly on a consignment basis, whereby an approximate price is given to the farmer but not until it is actually sold is the final price known. There may also be a reduction in the number of boxes paid for if quality is marginal or oversupply demands that a better quality be required – boxes may have to be repackaged or reduced price paid based on a certain percent of lower grade in each box. The farmer has much less control over his/her produce in this situation. Some of the information below was obtained from the industries “Blue Book”.

<b>Baloian Packing</b>	<b>264-3427</b>	<b>tom,sq,ck.Pp,O,gno,fv,bc,ep,jal,mexfv,nappa</b>
<b>Central Valley Food</b>	<b>456-3464</b>	<b>orientfv</b>
<b>Cherta Farms</b>	<b>442-1705</b>	<b>pea,chtom,orientfv,zu</b>
<b>Nat Feinn &amp; Son</b>	<b>268-7848</b>	<b>orientfv,bc,greenhouse</b>
<b>Jungle King</b>	<b>486-3560</b>	<b>O,ep</b>
<b>New World Farms</b>	<b>268-8828</b>	<b>orientfv,sugp,btterm,moqua,longb,sinqua,gail,ep,fruits</b>
<b>OK Produce</b>	<b>445-8616</b>	<b>tom,let,o,sq,ep,pp,fv</b>
<b>Sunnyside Inc</b>	<b>896-7200</b>	<b>chtom,pp,sq,ck,pom,gno</b>
<b>Sarabian Farms</b>	<b>264-3427</b>	

**5. (Certified) Farmers Markets:** California has over 240 certified farmers markets located throughout the state. Farmers can load their produce onto a truck and set up a stand at these locations to sell for close to retail prices. Certified markets means they are registered by the state (county ag commissioner) and must follow certain guidelines and policies... You can only sell what you produce, you can not buy and resell. A complete list of markets can be found on the Internet [[www.ams.usda.gov](http://www.ams.usda.gov)] or [[www.ca.farmersmarket.com](http://www.ca.farmersmarket.com)]. There are also some markets located in rural communities that are not certified (e.g. Kingsburg). Some farmers are visiting one or two markets a week, while other farmers may be driving to 10-15 markets a week.

Disadvantages are:

Some markets have a waiting list of farmers wanting to sell there

Only a limited volume can be sold in this manner (to general public)

Traveling is required of the farmer, taking away valuable time on the farm

City Market Name

Clovis Clovis Old Town CFM

Fresno “Vineyard” Sat. CFM

Fresno “Vineyard” Wed. CFM

Reedley CFM

**6. Other:**

CSA- Community Supported Agriculture. Consumer-paid monthly or yearly subscriptions whereby the farmer provides a basket or bag of in-season produce/fruit to homeowners, usually on a weekly basis. See “Small Farm Newsletter” articles.

Cooperatives- can be formed to either help market products or to improve buying power of ag products.

## **A Business Plan & Legal Issues**

**Question:** I've just purchased a house with 20 acres of pomegranates. What can I do with them?

While this isn't an everyday occurrence, it does happen. All too often, not a lot of thought goes into the business aspects of farming. A business plan puts your ideas down on paper and is required for almost any type of loan you might apply for. It is one of the first things a lender wants to see. In addition, it is a great management tool that helps managers explore alternatives and/or opportunities before committing resources, and also forces them to think, set goals and objectives.

### **Writing a Business or Farm Plan**

**A. COVER LETTER** (optional) Dollar amount requested, terms and timing, purpose of the loan.

#### **1. Introduction**

- Give a detailed description of the business- name, location, product
- Discuss the advantages you and your business and legal structure
- List skills and experience you bring to the business
- Discuss the advantages you and your business have over the competition

#### **2. Marketing**

- Discuss the products and services offered
- Identify the customer demand for your product(s)
- Identify your market, its size and locations
- Explain how you product will be advertised and marketed
- Explain the pricing strategy

#### **3. Financial Management**

- Copies of the most recent Federal Tax Return, five years
- Provide production records of previous five years of farming (or for years you have)
- Explain the source and amount of initial equity capital
- Develop a monthly operating budget for the first year
- Project an expected return on investment and monthly cash flow for first year
- Provide projected income statement, balance sheets for two-year period
- Explain your personal balance sheet and method of compensation
- Discuss who will maintain you accounting records
- Provide "what if" statements in the event a problem arises

#### **4. Operation**

- Explain how the farm will be managed day-to-day
- Discuss hiring, personal procedures, start-up costs



- Discuss insurance, lease/rent agreements
- Account for equipment necessary to produce your products
- Account for production and delivery of products (copies of crop contracts)

## 5. Concluding Statements

Summarize your business goals and objectives and express your commitment to the success of your business. Review it with a friend, business associate, or a Service Corps of Retired Executives counselor (SCORE). Make an appointment to review the business plan with your lender. The Farm Service Agency may refer to this as a Farm and Home Plan, but the contents are similar. The more information that you can provide, the better the chance of getting the loan.

You may need to consult with some of the legal entities below for help:

Business Certificates  
(If doing business inside city limits)

Fresno City Hall  
Permit assistance  
2600 Fresno Street  
Fresno, CA 93721  
498-1343

Articles of Incorporation  
(Tax, liability, ownership transfer)

Secretary of State  
1315 Van Ness, Ste. 203  
445-6900  
Fresno, CA 93721-1729  
www.ss.ca.gov

Fictitious Business Name  
(If business is any other name other than yours)

City Clerk's Office  
2221 Kern Street  
Fresno, CA 93728  
488-3637

Sellers Permit  
(If selling taxable merchandise-processed foods, ornamental plants)  
State Board of Equalization  
1234 E. Shaw Ave  
Fresno, CA 93710  
243-4156

Business/Personal Property Tax  
(Where land ownership is concerned)

County of Fresno Assessor's Office  
2281 Tulare Street  
Fresno, CA 93650  
488-3534

State Income Tax  
(Normally filed on a quarterly basis)

Franchise Tax Board  
1-800-338-0505

Federal Income Tax  
(For everyone who owns a business)

U.S. Internal Revenue Service  
5105 N. Blythe Ave.  
Fresno, CA 93722  
452-3201

\*This information compiled from various sources including:  
Farm Service Agency Direct Loan Application Letter  
Small Business Resources Guide Magazine  
San Diego Ag Directory & Guidelines for Agricultural Enterprises

## California Commodity Boards/ Commissions

(<http://cdfa.ca.gov>)



CA Apple Commission  
770 E. Shaw Ave  
Fresno, CA 93710  
255-3000

CA Cherry Advisory Board  
PO Box 877  
Lodi, CA 95240  
209/368-0685

CA Artichoke Advisory Board  
PO Box 747  
Castroville, CA 9501  
831/633-4411

CA Citrus Research Board  
323 W. Oak Street  
Visalia, CA 93291  
738-0246 FAX 738-0607

CA Asparagus Commission  
4565 Quail Lakes Dr, Ste. A-1  
Stockton, CA 95207  
209/474-7581 FAX 209/474-9105

Dairy Council of California  
1101 National Drive, Ste. B  
Sacramento, CA 95834-1901  
916/263-3560

CA Dry Bean Advisory Board  
531 N. Alta Ave, Ste. D  
Dinuba, CA 93618  
591-4866

CA Date Commission  
PO Box 1736  
Indio, CA 92201  
760/347-4510 FAX 760/347-6374

CA Beef Council  
4640 Northgate Blvd, Ste.115  
Sacramento, CA 95834  
916/925-2333 FAX 916/925-8155

CA Fig Advisory Board  
7395 N. Palm Bluffs Ave  
Fresno, CA 93711  
440-5400 FAX 438-5405

CA Cantaloupe Advisory Board  
531 N. Alta Ave, Ste. D  
Dinuba, CA 93618  
591-5715

CA Cut Flower Commission  
820 Bay Ave, Ste. 109  
Capitola, CA 95010  
831/462-8035 FAX 831/462-8040

CA Fresh Carrot Advisory Board  
531 N. Alta Ave, Ste. D  
Dinuba, CA 93618  
591-5675

CA Garlic & Onion  
Dehydrator Advisory  
PO Box 470  
Stockton, CA 95201  
209/466-8247



CA Celery Research Advisory Board  
531 N. Alta Ave, Ste. D  
Dinuba, CA 93618  
591-434

CA Grape Rootstock Improvement  
1521 I Street  
Sacramento, CA 95814  
916/362-7490 FAX 916/362-7993

CA Kiwifruit Commission  
1183 Manning Drive  
El Dorado Hills, CA 95762  
916/933-3477

Calif. Lettuce Research Board  
512 Pajaro Street  
Salinas, CA 93901  
831/424-3782 FAX 831/424-3785

CA Melon Research Advisory Board  
531 N. Alta Ave, Ste. D  
Dinuba, CA 93618  
591-0435 FAX 591-5744

CA Milk Producers Advisory Board  
400 Oyster Point Blvd, Ste 220  
S. San Francisco, CA 94080  
650/871-6455 FAX 650/583-7328

CA Manufacturing Milk Advisory Bd.  
3800 Cornucopia Way, Ste. D  
Modesto, CA 95358  
209/525-6875 FAX 209/525-6899

CA Cling Peach Growers Advisory Bd.  
531 N. Alta Ave, Ste. D  
Dinuba, CA 93618  
595-1425 FAX 591-5744

CA Pear Advisory Board  
1521 I Street  
Sacramento, CA 95814  
916/441-0432 FAX 916/446-1063

CA Pepper Commission  
531 N. Alta Ave, Ste. D  
Dinuba, CA 93618  
591-3925 FAX 591-5744

CA Pistachio Commission  
1318 E. Shaw Ave, Ste 420  
Fresno, CA 93710  
221-8294 FAX 221-8044

CA Plum Marketing Board  
975 I Street  
Reedley, CA 93654-0968  
638-8260 FAX 638-8842

CA Potato Research Advisory Board  
531 N. Alta Ave, Ste.  
Dinuba, CA 93618  
591-0436 FAX 591-5744

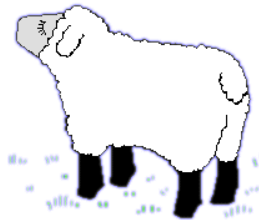
CA Raisin Marketing Board  
PO Box 5195, 3445 N. First St.  
Fresno, CA 93755  
248-0287 FAX 224-7016

CA Rice Commission  
8801 Folsom Blvd, Ste. 172  
Sacramento, CA 95826  
916/387-2264 FAX 916/387-2265

CA Rice Research Advisory Board  
PO Box 507  
Yuba City, CA 95992  
530/673-6247 FAX 530/674-0426

CA Wild Rice Board  
3539 Bradshaw Rd, Ste. B 212  
Sacramento, CA 95827  
916/638-8980 FAX 916/638-8993

CA Sheep Commission  
Folsom, CA 95630  
916/933-7667 FAX 916/654-1250



CA Strawberry Commission  
PO Box 269  
Watsonville, CA 95077-0269  
831/724-1301 FAX 831/724-5973

Processing Tomato Advisory Board  
PO Box 1800  
Davis, CA 95617  
530/759-7501 FAX 530/759-7504

Processing Strawberry Advisory Board  
741 E. Lake Ave  
Watsonville, CA 95077-0929  
831/724-5454 FAX 831/724-0295

CA Walnut Commission  
1540 River Park Drive, Ste. 203  
Sacramento, CA 95815  
916/646-3807 FAX 916/923-2548

CA Table Grape Commission  
392 W. Fallbrook #101  
Fresno, CA 93711-6150  
447-8350 FAX 447-9184

CA Wheat Commission  
1240 Commerce Ave, Ste. A  
Woodland, CA 95776  
530/661-1292 FAX 530/661-1332

CA Tomato Commission  
1625 E. Shaw, Ste. 106  
Fresno, CA 93710  
230-0116 FAX 230-0635



**UNIVERSITY OF CALIFORNIA COOPERATIVE  
EXTENSION**

**2005**

**SAMPLE COSTS TO PRODUCE  
BITTERMELON**

**ASIAN VEGETABLES**



**SAN JOAQUIN VALLEY - SOUTH**  
**Small Farm**

Prepared by:

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**UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION  
SAMPLE COSTS TO PRODUCE  
BITTERMELON  
San Joaquin Valley - 2005  
STUDY CONTENTS**

ASSUMPTIONS.....	3
Production Operating Costs.....	3
Cash Overhead.....	5
Non-Cash Overhead .....	6
REFERENCES .....	7
Table 1. COSTS PER ACRE to PRODUCE BITTERMELON .....	8
Table 2. COSTS AND RETURNS PER ACRE to PRODUCE BITTERMELON .....	9
Table 3. MONTHLY CASH COSTS PER ACRE to PRODUCE BITTERMELON .....	10
Table 4. RANGING ANALYSIS .....	11
Table 5. WHOLE FARM ANNUAL EQUIPMENT, INVESTMENT and OVERHEAD COSTS. ....	12
Table 6. HOURLY EQUIPMENT COSTS .....	12
Table 7. OPERATIONS WITH EQUIPMENT .....	13

**ASSUMPTIONS**

The assumptions refer to Tables 1 to 7 and pertain to sample costs to produce bittermelon in the San Joaquin Valley. The cultural practices described represent production operations and materials considered typical for a small farm in the region. Costs, materials, and practices in this study will not apply to all farms. Timing of and types of cultural practices will vary among growers within the region and from season to season due to variables such as weather, soil, and insect and disease pressure. **The use of trade names and cultural practices in this report does not constitute an endorsement or recommendation by the University of California nor is any criticism implied by omission of other similar products or cultural practices.**

**Farm.** This report is based on a 10 contiguous acre farm. The land is rented and planted to Asian vegetables. In this study two acres are planted to bittermelon and the remaining acres to other Asian vegetables. The grower and family do the majority of the labor for the operations, but a labor cost (opportunity cost) is shown for each operation.

**Production Operating Costs**

**Land Preparation.** A custom operator plows the land one time, discs two times and lists the beds in January. After listing, the bed peaks are flattened with a nine-foot pipe (3 rows) towed behind the grower’s tractor. Black plastic is then laid by hand (2 persons) on alternate beds.

**Plant.** A cost is not shown for seed or transplants, because the bittermelon seed is saved from the previous year’s crop and is planted in the grower’s greenhouse sometime during December to January. The plant trays hold 50 plants per tray and take about 20 minutes per tray to plant. The germinated plants are transplanted in the field in mid-February to mid-March. The grower transplants 1,200 plants per acre at a six-foot in-row spacing. Holes for the plants are burned or punched in the plastic as the planter person plants. Rows are usually 250 to 300 feet long. Two people (16 man hours) plant one acre per day.

**Irrigation.** Irrigation includes the water costs and irrigation labor. Lay-flat poly vinyl pipe is laid at the end of the rows and the water is run down the furrows. Irrigation begins in March two to three days after planting. The field is irrigated every five days during March, April, and May, every three days during July, August, and September and once a week during early-October. Water at \$2.50 per irrigation is assumed to be a typical cost. Water costs were provided from the growers pumping charges for the summer months. Assuming the crop uses approximately 30

acre-inches per season, this equates to a cost of \$4.83 per acre-inch. Irrigation labor is calculated as one-half hour per acre per irrigation.

**Fertilization.** The crop is fertilized at planting with soluble 20-20-20 fertilizer dissolved in water at three ounces of liquid fertilizer per plant or one 25-pound bag per two to three acres. (10 pounds per acre in this study). The fertilizer is placed in the planting hole at planting. Labor costs for applying the fertilizer are included in the planting labor. One or two more fertilizations with UN32 at five gallons per acre per application is typical in May and July. Labor costs for the UN32 fertilization are included in the irrigation labor.

**Crop Protection.** The grower builds tunnels over the new transplants. Wire hoops (reusable) are spaced down the row every six-feet. Three-foot wide plastic is laid over each side of the hoop and attached to each other at the top with a clothespin. They are opened as needed to allow the plants to grow through and to vent on warm days to prevent burning. It takes one person per day per acre to set out the hoops and two persons per day per acre to stretch the plastic over the hoops. The tunnels are removed in mid-April or May and it takes two-hours per acre with two persons. Some growers use hot caps instead of tunnels. (If the grower plants after any danger of frost the tunnel cost (\$1,200) can be omitted.)

**Trellis System.** Six-foot stakes (reusable) are pounded in the ground at six-foot spacing; netting is attached to the stakes to form a trellis that the plants will grow up. It takes two persons one day (8 hours) per acre to pound the stakes and an equal amount of time to install the net. The trellis is removed at the end-of-the season. See Field Cleanup.

**Pest Management.** Pesticides for insects and diseases are not currently recommended for bittermelon. If insects or diseases appear, contact your local farm advisor or pest control adviser.

*Weeds.* The furrows are hand sprayed using a backpack sprayer with Roundup in April or May and in August. It takes about 1.5 hours per acre per spray. Black plastic provides weed control on the beds. The field is hand-weeded in March and again in May to control the weeds in the area where weeds were not controlled by the spray and black plastic. Hand weeding time will vary according to the weed population, but an average of three hours per acre is used in this study.

*Insects.* Nematodes can be a problem but are usually not treated.

*Diseases.* None

**Harvest.** The crop is harvested twice a week from June 15 through October 15. The vegetables are packed in 30-pound boxes and hauled to a packinghouse. According to the growers, one person can pick approximately 2.5 boxes per hour. At the end of each picking day, the grower delivers the product to the packinghouse or to a farmers market using the pickup and trailer.

*Yields.* For this study, the crop yields an average of 62.5 boxes per week (31.25 per picking) per acre or 1,000 thirty-pound boxes per acre per season. A range of yields over various prices is shown in Table 4.

*Returns.* Based on grower information, the crop returns average \$15 per 30-pound box. According to the 2004 USDA Wholesale Reports for June to October, the price ranged from \$7.50 to \$22.50 per box. Assuming that 70% of the wholesale price is the net return to the grower, the grower range is \$5.25 to \$15.75 per box.

**Field Cleanup.** In October after the last harvest, the plants are chopped by hand, and the stakes, netting, and mulch are removed. One person can chop the plants and remove the mulch at the rate of three 250-foot rows per eight-hour day (approximately 80 hours per acre).

**Pickup/ATV.** Costs for a 1/2-ton pickup is included in the study. The pickup and a trailer are used for hauling the harvested bittermelon to the packing shed and is included in that cost. The pickup and trailer are used to haul the removed tunnels, mulch and netting to the landfill and the costs are included in the respective operations. In addition, the grower drives another 250 miles per acre for farming purposes or to sell his crop at a farmers market.

**Labor.** Labor rates of \$12.42 per hour for machine operators and \$9.32 for general labor includes payroll overhead of 38%. The basic hourly wages are \$9.00 for machine operators and \$6.75 for general labor. The overhead includes the employers' share of federal and California state payroll taxes, workers' compensation insurance for truck crops (code 0172), and a percentage for other possible benefits. Workers' compensation costs will vary among growers, but for this study the cost is based upon the average industry final rate as of January 1, 2005 (California Department of Insurance). Labor for operations involving machinery are 20% higher than the operation time given in Table 1 to account for the extra labor involved in equipment set up, moving, maintenance, work breaks, and field repair.

**Equipment Operating Costs.** Repair costs are based on purchase price, annual hours of use, total hours of life, and repair coefficients formulated by American Society of Agricultural Engineers (ASAE). Fuel and lubrication costs are also determined by ASAE equations based on maximum Power Take Off (PTO) horsepower, and fuel type. Prices for on-farm delivery of diesel and gasoline are \$1.51 and \$2.05 per gallon, respectively. The cost includes a 2% local sales tax on diesel fuel and 8% sales tax on gasoline. Gasoline also includes federal and state excise tax, which are refundable for on-farm use when filing your income tax. The fuel, lube, and repair cost per acre for each operation in Table 1 is determined by multiplying the total hourly operating cost in Table 6 for each piece of equipment used for the selected operation by the hours per acre. Tractor time is 10% higher than implement time for a given operation to account for setup, travel and down time.

**Interest On Operating Capital.** Interest on operating capital is based on cash operating costs and is calculated monthly until harvest at a nominal rate of 7.65% per year. A nominal interest rate is the typical market cost of borrowed funds. The interest cost of post harvest operations is discounted back to the last harvest month using a negative interest charge.

**Risk.** Production risks should not be minimized. While this study makes every effort to model a production system based on typical, real world practices, it cannot fully represent financial, agronomic and market risks, which affect the profitability and economic viability.

### **Cash Overhead**

Cash overhead consists of various cash expenses paid out during the year that are assigned to the whole farm and not to a particular operation. These costs include property taxes, interest on operating capital, office expense, liability and property insurance, and investment repairs.

**Property Taxes.** Counties charge a base property tax rate of 1% on the assessed value of the property. In some counties special assessment districts exist and charge additional taxes on property including equipment, buildings, and improvements. For this study, county taxes are calculated as 1% of the average value of the property. Average value equals new cost plus salvage value divided by 2 on a per acre basis.

**Insurance.** Insurance for farm investments varies depending on the assets included and the amount of coverage. Property insurance provides coverage for property loss and is charged at 0.69% of the average value of the assets over their useful life. Liability insurance covers accidents on the farm and costs \$429 for the entire farm.



**Office Expense.** Office and business expenses are estimated at \$10 per acre. These expenses include office supplies, telephones, bookkeeping, accounting, and legal fees. The cost is a general estimate and not based on any actual data.

**Land Rent.** The 10 acres are rented for cash at \$300 per acre. The rented land includes the irrigation system that is maintained by the landlord. The landowner also pays the property tax on the rented land. Land rents range from \$250 to \$350 per acre.

**Investment Repairs.** Annual maintenance except for the greenhouse, which is 20%, is calculated as two percent of the purchase price.

### **Non-cash Overhead**

Non-cash overhead is calculated as the capital recovery cost for equipment and other farm investments.

**Capital Recovery Costs.** Capital recovery cost is the annual depreciation and interest costs for a capital investment. It is the amount of money required each year to recover the difference between the purchase price and salvage value (unrecovered capital). It is equivalent to the annual payment on a loan for the investment with the down payment equal to the discounted salvage value. This is a more complex method of calculating ownership costs than straight-line depreciation and opportunity costs, but more accurately represents the annual costs of ownership because it takes the time value of money into account (Boehlje and Eidman). The formula for the calculation of the annual capital recovery costs is  $((\text{Purchase Price} - \text{Salvage Value}) \times \text{Capital Recovery Factor}) + (\text{Salvage Value} \times \text{Interest Rate})$ .

**Salvage Value.** Salvage value is an estimate of the remaining value of an investment at the end of its useful life. For farm machinery (tractors and implements) the remaining value is a percentage of the new cost of the investment (Boehlje and Eidman). The percent remaining value is calculated from equations developed by the American Society of Agricultural Engineers (ASAE) based on equipment type and years of life. The life in years is estimated by dividing the wear out life, as given by ASAE by the annual hours of use in this operation. For other investments including irrigation systems, buildings, and miscellaneous equipment, the value at the end of its useful life is zero. The salvage value for land is the purchase price because land does not depreciate. The purchase price and salvage value for equipment and investments are shown in the tables.

**Capital Recovery Factor.** Capital recovery factor is the amortization factor or annual payment whose present value at compound interest is 1. The amortization factor is a table value that corresponds to the interest rate used and the life of the machine.

**Interest Rate.** The interest rate of 6.01% used to calculate capital recovery cost is the USDA-ERSs ten-year average of California's agricultural sector long-run rate of return to production assets from current income. It is used to reflect the long-term realized rate of return to these specialized resources used effectively in the agricultural sector.

**Tools.** This includes shop tools, hand tools, and miscellaneous field tools. The tools are an estimated value and not taken from any specific data.

**Irrigation.** The grower owns 1,732 feet of vinyl flat pipe to deliver the water to the furrows. The pipe was purchased for the farm and the cost is allocated among the various crops.

**Greenhouse.** The grower builds a greenhouse of PVC pipe and plastic to start the plants and for some plant storage. The greenhouse is 20 feet x 20 feet. The plastic cover may need to be replaced in one or two years. The greenhouse is assumed to be used for other crops on the farm and the cost is allocated accordingly.

**Equipment.** Farm equipment is purchased new or used, but the study shows the current purchase price for new equipment. The new purchase price is adjusted to 60% to indicate a mix of new and used equipment. Annual ownership costs for equipment and other investments are shown in the Whole Farm Annual Equipment, Investment, and Business Overhead Costs table. Equipment costs are composed of three parts: non-cash overhead, cash overhead, and operating costs. Both of the overhead factors have been discussed in previous sections. The operating costs consist of repairs, fuel, and lubrication and are discussed under operating costs.

**Table Values.** Due to rounding, the totals may be slightly different from the sum of the components.

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UC COOPERATIVE EXTENSION  
**Table 1. COST PER ACRE TO PRODUCE BITTERMELON**  
 SAN JOAQUIN VALLEY 2005

Operation	Operation Time (Hrs/A)	Field Labor (Hrs/A)	Cash and Labor Costs per Acre					Total Cost	Your Cost
			Labor Cost	Fuel, Lube & Repairs	Material Cost	Custom/Rent			
<b>Cultural:</b>									
Plant: Greenhouse (seed saved from previous crop)	0.00	8.00	75	0	25	0	100		
Land Prep: Plow, Disc, List	0.00	0.00	0	0	0	100	100		
Land Prep: Flatten Bed Tops	0.33	0.00	5	1	0	0	6		
Land Prep: Lay Black Plastic on Alternate Beds	0.00	8.00	75	0	116	0	191		
Plant: Transplants (from Greenhouse). Fertilize: (20-20-20)	0.00	16.00	149	0	6	0	155		
Crop Protection: Install Tunnels	0.00	24.00	224	0	458	0	681		
Irrigate: (water & labor)	0.00	30.00	280	0	150	0	430		
Trellis: Install	0.00	32.00	298	0	1,326	0	1,624		
Weed: Hand	0.00	6.00	56	0	0	0	56		
Weed: Hand Spray Furrow (Roundup)	0.00	3.00	28	0	16	0	44		
Fertilize: In irrigation water (UN32)	0.00	0.00	0	0	14	0	14		
Crop Protection: Remove Tunnels	0.50	4.00	45	6	0	5	56		
Field Cleanup: Chop Plants, Trellis, Mulch	0.50	80.00	753	6	0	7	766		
Miscellaneous Pickup Use	5.00	0.00	75	59	0	0	134		
<b>TOTAL CULTURAL COSTS</b>	<b>6.33</b>	<b>211.00</b>	<b>2,061</b>	<b>73</b>	<b>2,110</b>	<b>111</b>	<b>4,355</b>		
<b>Harvest:</b>									
Hand Pick	0.00	400.00	3,728	0	1,000	0	4,728		
Haul	16.00	0.00	238	201	0	0	439		
<b>TOTAL HARVEST COSTS</b>	<b>16.00</b>	<b>400.00</b>	<b>3,966</b>	<b>201</b>	<b>1,000</b>	<b>0</b>	<b>5,167</b>		
Interest on operating capital							211		
<b>TOTAL OPERATING COSTS/ACRE</b>			<b>6,027</b>	<b>274</b>	<b>3,110</b>	<b>111</b>	<b>9,734</b>		
<b>CASH OVERHEAD:</b>									
Liability Insurance							43		
Office Expense							10		
Land Rent							300		
Property Taxes							11		
Property Insurance							8		
Investment Repairs							10		
<b>TOTAL CASH OVERHEAD COSTS</b>							<b>381</b>		
<b>TOTAL CASH COSTS/ACRE</b>								<b>10,115</b>	
<b>Non-Cash Overhead (Capital Recovery)</b>			<b>Per Producing Acre</b>	<b>Annual Cost Capital Recovery</b>					
Plastic Greenhouse 20x20'			35		8		8		
Flat Irrigation Pipe			46		25		25		
Miscellaneous Field Tools			100		24		24		
Equipment			1,543		221		221		
<b>TOTAL NON-CASH OVERHEAD COSTS</b>			<b>1,724</b>		<b>278</b>		<b>278</b>		
<b>TOTAL COSTS/ACRE</b>								<b>10,393</b>	

UC COOPERATIVE EXTENSION  
**Table 2. COST PER ACRE TO PRODUCE BITTERMELON**  
 SAN JOAQUIN VALLEY 2005

	Quantity Acre	Unit	Price or Cost/Unit	Value or Cost/Acre	Your Cost
<b>GROSS RETURNS</b>					
Bittermelon	1,000.00	box	15.00	15,000	
<b>OPERATING COSTS</b>					
<b>Carton:</b>					
Trays – Planting 50 Cell	25.00	each	1.00	25	
Boxes 30 lbs.	1,000.00	each	1.00	1,000	
<b>Seed:</b>					
Seed – Saved from previous year (no costs)	0.00	lb	0.00	0	
Transplants (seed germinated by grower) (no costs)	1,250.00	ea	0.00	0	
<b>Custom:</b>					
Land Preparation	1.00	acre	100.00	100	
Landfill Fee	555.00	lb	0.02	11	
<b>Crop Protect:</b>					
Plastic Black 3 ft x 2000 ft/roll. 1 mil	7,250.00	foot	0.02	116	
Plastic Clear 3 ft x 2000 ft/roll	14,500.00	foot	0.02	218	
Wire Hoops (reusable)	1,200.00	each	0.20	240	
Stakes – 5 ft (reusable)	1,200.00	each	0.99	1,188	
Netting for Trellis 320 ft/roll	7,250.00	foot	0.02	138	
<b>Fertilizer:</b>					
20-20-20	10.00	lb	0.57	6	
UN 32 (11 lbs/gal)	110.00	lb	0.13	14	
<b>Irrigation:</b>					
Water	60.00	each	2.50	150	
<b>Herbicide:</b>					
Roundup Ultra Max	32.00	fl oz	0.49	16	
Labor (machine)	26.80	hrs	12.42	333	
Labor (non-machine)	611.00	hrs	9.32	5,695	
Fuel - Gas	91.65	gal	2.05	188	
Fuel – Diesel	0.63	gal	1.51	1	
Lube				28	
Machinery repair				57	
Interest on operating capital @ 7.65%				211	
<b>TOTAL OPERATING COSTS/ACRE</b>				<b>9,734</b>	
<b>NET RETURNS ABOVE OPERATING COSTS</b>				<b>5,266</b>	
<b>CASH OVERHEAD COSTS:</b>					
Liability Insurance				43	
Office Expenses				10	
Land Rent				300	
Property Taxes				11	
Property Insurance				8	
Investment Repairs				10	
<b>TOTAL CASH OVERHEAD COSTS/ACRE</b>				<b>381</b>	
<b>TOTAL CASH COSTS/ACRE</b>				<b>10,115</b>	
<b>NON-CASH OVERHEAD COSTS (Capital Recovery)</b>					
Plastic Greenhouse 20 x 20'				8	
Flat Irrigation Pipe				25	
Miscellaneous Field Tools				24	
Equipment				221	
<b>TOTAL NON-CASH OVERHEAD COSTS/ACRE</b>				<b>278</b>	
<b>TOTAL COSTS/ACRE</b>				<b>10,393</b>	
<b>NET RETURNS ABOVE TOTAL COSTS</b>				<b>4,607</b>	

UC COOPERATIVE EXTENSION  
**Table 3. COST PER ACRE TO PRODUCE BITTERMELON**  
 SAN JOAQUIN VALLEY 2005

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Beginning JAN 05	05	05	05	05	05	05	05	05	05	05	05	05	
Ending DEC 05													
Cultural:													
Plant: Greenhouse (seed saved from previous crop)	100												100
Land Prep: Plow, Disc, List	100												100
Land Prep: Flatten Bed Tops		6											6
Land Prep: Lay Black Plastic alternate beds.		191											191
Plant: Transplants (from greenhouse) Fertilize (20-20-20)		155											155
Crop Protection: Install Tunnels		681											681
Irrigate: (water & labor)			43	43	43	72	72	72	72	14			430
Trellis: Install			1,624										1,624
Weed: Hand			28		28								56
Weed: Hand Spray Furrow (roundup)				22				22					44
Fertilize: In irrigation water (UN32)					7		7						14
Crop Protection: Remove Tunnels					56								56
Field Cleanup: Chop Plants, Trellis, Mulch										766			766
Miscellaneous Pickup Use	11	11	11	11	11	11	11	11	11	11	11	11	134
<b>TOTAL CULTURAL COSTS</b>	<b>211</b>	<b>1,044</b>	<b>1,706</b>	<b>76</b>	<b>145</b>	<b>83</b>	<b>90</b>	<b>105</b>	<b>83</b>	<b>791</b>	<b>11</b>	<b>11</b>	<b>4,355</b>
Harvest:													
Hand Pick						591	1,182	1,182	1,182	591			4,728
Haul						55	110	110	110	55			439
<b>TOTAL HARVEST COSTS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>646</b>	<b>1,292</b>	<b>1,292</b>	<b>1,292</b>	<b>646</b>	<b>0</b>	<b>0</b>	<b>5,167</b>
Interest on operating capital @ 7.65%	1	8	19	19	20	25	34	43	51	-9	0	0	211
<b>TOTAL OPERATING COSTS/ACRE</b>	<b>212</b>	<b>1,052</b>	<b>1,725</b>	<b>95</b>	<b>165</b>	<b>754</b>	<b>1,416</b>	<b>1,439</b>	<b>1,426</b>	<b>1,428</b>	<b>11</b>	<b>11</b>	<b>9,734</b>
OVERHEAD:													
Liability Insurance			43										43
Office Expense	1	1	1	1	1	1	1	1	1	1	1	1	10
Land Rent												300	300
Property Taxes	11												11
Property Insurance	8												8
Investment Repairs	1	1	1	1	1	1	1	1	1	1			10
<b>TOTAL CASH OVERHEAD COSTS</b>	<b>20</b>	<b>2</b>	<b>45</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>301</b>	<b>381</b>
<b>TOTAL CASH COSTS/ACRE</b>	<b>232</b>	<b>1,054</b>	<b>1,770</b>	<b>97</b>	<b>167</b>	<b>755</b>	<b>1,417</b>	<b>1,441</b>	<b>1,428</b>	<b>1,430</b>	<b>12</b>	<b>312</b>	<b>10,115</b>

UC COOPERATIVE EXTENSION  
**Table 4. RANGING ANALYSIS FOR BITTERMELON**  
 SAN JOAQUIN VALLEY – 2005

COSTS PER ACRE VARYING YIELD TO PRODUCE BITTERMELON

	YIELD (30 lb boxes/acre)						
	400	600	800	1,000	1,200	1,400	1,600
<b>OPERATING COSTS/ACRE:</b>							
Cultural Cost	4,355	4,355	4,355	4,355	4,355	4,355	4,355
Harvest Cost (Pick & Haul)	2,067	3,100	4,134	5,167	6,201	7,234	8,268
Interest on operating capital	174	186	199	211	223	236	248
<i>TOTAL OPERATING COSTS/ACRE</i>	6,596	7,641	8,688	9,733	10,779	11,825	12,871
<i>TOTAL OPERATING COSTS/cwt</i>	16.49	12.74	10.86	9.73	8.98	8.45	8.04
<b>CASH OVERHEAD COSTS/ACRE</b>							
<i>TOTAL CASH COSTS/ACRE</i>	6,970	8,018	9,067	10,114	11,163	12,211	13,259
<i>TOTAL CASH COSTS/cwt</i>	17.43	13.36	11.33	10.11	9.30	8.72	8.29
<b>NON-CASH OVERHEAD COSTS/ACRE</b>							
<i>TOTAL COSTS/ACRE</i>	7,158	8,237	9,317	10,392	11,469	12,543	13,616
<i>TOTAL COSTS/cwt</i>	17.90	13.73	11.65	10.39	9.56	8.96	8.51

UC COOPERATIVE EXTENSION  
**Table 5. WHOLE FARM ANNUAL EQUIPMENT, INVESTMENT, AND BUSINESS OVERHEAD COSTS**  
 SAN JOAQUIN VALLEY – 2005

ANNUAL EQUIPMENT COSTS

Yr	Description	Price	Yrs Life	Salvage Value	Capital Recovery	Cash Overhead		Total
						Insur- ance	Taxes	
05	35HP 2WD Tractor	15,265	20	1,959	1,279	59	86	1,424
05	Bed Shaper (pipe 9')	150	10	27	18	1	1	20
05	Pickup ½ Ton	28,000	5	12,549	4,423	140	203	4,766
05	Trailer 12' x 16'	4,500	20	235	386	16	24	426
	<b>TOTAL</b>	47,915		14,770	6,107	216	313	6,636
	60% of New Costs*	28,749		8,862	3,664	130	188	3,982

\*Used to reflect a mix of new and used equipment

ANNUAL INVESTMENT COSTS

Description	Price	Yrs Life	Salvage Value	Capital Recovery	Cash Overhead			Total
					Insur- ance	Taxes	Repairs	
Irrigation Flat Pipe	455	2		248	0	0	9	257
Miscellaneous Field Tools	1,000	5		237	3	0	20	261
Plastic Greenhouse 20' x 20'	350	5		84	1	2	70	157
<b>TOTAL INVESTMENT</b>	1,805		0	569	5	2	99	675

ANNUAL BUSINESS OVERHEAD COSTS

Description	Units/ Farm	Unit	Price/ Unit	Total Cost
Land Rent	10	acre	300.00	3,000
Liability Insurance	10	acre	42.90	429
Office Expense	10	acre	10.00	100

UC COOPERATIVE EXTENTION  
**Table 7. OPERATIONS WITH EQUIPMENT**  
 SAN JOAQUIN VALLEY – 2005

Operation	Operation Month	Tractor	Implement	Non-Machine	Material	Broadcast Rate/acre	Unit
Cultural:							
Plant: Greenhouse	January			8.00	Planting trays Grower saved Seed	25.00	ea
Land Prep: (plow, disc, list)	February	Custom					
Land Prep: Flatten Bed Tops	February	35 HP 2 WD	Pipe				
Land Prep: Lay black plastic (alternate rows)	February			8.00	Black plastic	7,250.00	ft
Plant: Transplants. Fertilize 20-20-20	February			16.00	20-20-20 Greenhouse	10.00 1,200	lb ea
Crop Protect: Install Tunnels	February			24.00	Seeding Hoops Clear Plastic	1,200.00 14,500.00	ea ft
Trellis: Install	March			32.00	Stakes Netting	1,200.00 7,250.00	ea ft
Irrigate 6X	March			3.00	Water	6.00	ea
Irrigate 6X	April			3.00	Water	6.00	ea
Irrigate 6X	May			3.00	Water	6.00	ea
Irrigate 10X	June			5.00	Water	10.00	ea
Irrigate 10X	July			5.00	Water	10.00	ea
Irrigate 10X	August			5.00	Water	10.00	ea
Irrigate 10X	September			5.00	Water	10.00	ea
Irrigate 2X	October			1.00	Water	2.00	ea
Fertilize	May				UN32	55.00	lb
	July				UN32	55.00	lb
Weed: Hand	March			3.00			
	May			3.00			
Weed: Hand Spray Furrows	April			1.50	Roundup	16.00	floz
	August			1.50	Roundup	16.00	floz
Crop Protection: Remove Tunnels	May			4.00	Landfill	230.00	lb
Field Cleanup: plants, Netting, mulch	October			80.00	Landfill	325.00	lb
Harvest	June			50.00	Boxes	125.00	ea
	July			100.00	Boxes	250.00	ea
	August			100.00	Boxes	250.00	ea
	September			100.00	Boxes	250.00	ea
	October			50.00	Boxes	125.00	ea
Haul	June	Pickup	Trailer				
	July	Pickup	Trailer				
	August	Pickup	Trailer				
	September	Pickup	Trailer				
	October	Pickup	Trailer				