

CALIFORNIA FARMING — BEYOND OWNER AND TENANT

By
Don Villarejo, Jennifer Sherman and Judith Redmond

June 1998
CALIFORNIA INSTITUTE FOR RURAL STUDIES

Introduction

Since its early days as a country, America had clung to the belief that the ideal rural society is one settled by small-scale landowner farmers. This concept of the agrarian was popularized by Thomas Jefferson, who felt that the endurance of democracy, as well as of human morality, was achieved through the cultivation of self-owned farmland. While according to Jefferson, “the small land holders are the most precious part of a state,” those who live in cities “add just so much to the support of pure government as sores do to the strength of the human body,” (Boxley, p. 1; Padover, pp. 678-679). From Abraham Lincoln’s Homestead Act of 1862 to Theodore Roosevelt’s Reclamation Act in 1902, to Woodrow Wilson’s Federal Farm Loan Act of 1916, early U.S. policy regarding farmland ownership tried to uphold Jefferson’s ideal by encouraging small-scale land ownership (Maris, p. 1).

Although our country’s population demographics and economy have changed dramatically since Jefferson’s time, his agrarian ideal has endured, and continues to act as a model for agriculture and land tenure in the United States. Throughout this century much of the discourse on agricultural land tenure has bemoaned the real or feared loss of the small-scale agriculturist. A 1950 monograph by the U.S. Department of Agriculture worried that farm tenancy had “gradually increased like a creeping paralysis until a majority of the farms of the United States were operated by tenants” (Maris, p. iii). The loss of farm ownership to tenancy became a major concern after the depression era, to be addressed by programs such as the 1937 Farm Ownership program under the Bankhead-Jones Farm Tenant Act. Federal policy was to improve the viability of family farms and discourage tenancy.

The end of the depression dissipated many of the worst fears about the loss of land ownership, and the agrarian ideal continued to inform most land tenure debates and policies despite the changing economic realities of American society. Particularly influential was Walter Goldschmidt’s (1978) 1940s case study of two agricultural communities in California’s Central Valley, Arvin and Dinuba. While large industrial farms that relied on absentee landlords and hired labor dominated Arvin, Dinuba was

characterized by smaller family-operated farms. Economic and social differences between the communities were attributed to the differing levels of farmland concentration, with the conclusion that the larger industrial farm structure was responsible for a breakdown of economic and social well-being in Arvin.

Since the original study, numerous researchers have attempted to replicate Goldschmidt, with differing degrees of success. Although a few California studies done soon after Goldschmidt's (see Petterson and Fujimoto) found support for his hypothesis, others had difficulty in duplicating the findings. Goldschmidt's work was found to be even less generalizable to communities in regions outside the West (Swanson, p. 6). Results also differed depending on time periods chosen, well-being indicators, and models used (Lobao et al, p. 280). Possibly Goldschmidt's findings are influenced by confounding variables that are specific to California, where farms have historically been larger and more reliant on a large hired labor force. Another possible problem with Goldschmidt's work is that the two communities were founded at different times, and it is likely that Dinuba would have had more developed community structures simply because of its longer history. Nevertheless, despite receiving many criticisms, Goldschmidt was extremely influential and inspired a plethora of others to investigate the social consequences of land tenure issues.

The Goldschmidt study and its underlying assumptions still form the backbone of much of the current discourse on land tenure. Two hundred years after Jefferson, his agrarian ideal continues to be held up as the model for rural society, and researchers still question whether or not industrial agriculture is responsible for the deterioration of rural communities. Family farms are now considered to be "the last important economic activity not already concentrated in two or three international corporations whose board and management are neither representative of the general population nor accountable to it" (Swanson, p. 25). The concept of the "family farm" is the modern-day incarnation of the Jeffersonian ideal, and there continues to be a general consensus "that family farms are good while corporate farms are evil; and that corporate farms are more efficient, else why would they pose a threat to family farms?" (Strange, p. 31).

Large-scale farm ownership is hypothesized to contribute not only to social degradation, but environmental as well, under the assumption that non-farmer landowners

will place profits ahead of land conservation. This argument does not differ substantially from turn-of-the-century arguments against the increased popularity of tenant farming, which postulated that only landowner farmers have incentive to truly care for the land. Land ownership appears to be the one most important factor uniting all definitions of family farm, the central tenet upon which our concept of the family farmer is based (Strange; Loewen; Decater et al). While there is little agreement as to what other traits are necessary or sufficient to qualify one as a family farmer, clearly the question of land ownership is central to defining the agrarian ideal.

In recent years the discourse on land tenure has begun to include discussions that look past Jefferson and Goldschmidt — beyond the simple concept of owner versus tenant as the main concerns for rural and agricultural societies (Geisler and Salamon, p. 530; Geisler, p. 543). As our populations change and our economy becomes more complex, so too do the issues influencing land tenure in agriculture. According to Geisler and Salamon:

Land tenure research in the future inevitably will shift from classification of predominantly agricultural land ownership to a new range of issues. These will include emergent forms of ownership (shared by multiple interests, including public and private partnerships); changing ownership interests of minorities and women; contemporary relevance of common property regimes; implications of recent Supreme Court decisions on land use controls and regulations; social and environmental responsibilities (as opposed to rights) of ownership; tenurial niches and cultures of ownership; and the need for innovative tenure documentation in geographic information systems, the Census of Agriculture, and elsewhere.

The need to take the complexity of land tenure issues into account is also the main focus of Marty Strange's 1988 work, *Family Farming*. In California these newer issues are perhaps more relevant to the discussion than is the Jeffersonian ideal. Over time we have witnessed major changes in the structure and complexity of the agricultural industry in California, which now looks less like the historical family-run farm, and more like other large-scale industries and businesses in America.

In this paper we look at the emerging trends in land tenure among fruit and vegetable farms in California. The production of these high-value, labor-intensive crops has become more important in recent years, especially in California and the West. The regions where these crops predominate are today the major centers of growth of the U.S. agricultural industry. Land tenure in these farm sectors follows complex patterns based

more on economic concerns and risk management than on the traditional family farm ideal. Agriculture in California has emerged into a multi-billion dollar industry with all the sectorial differentiation that this implies. Hired workers have long since replaced the family as the major source of agricultural labor in California. Among the major land tenure issues we will touch upon are changes in the types of crops produced on agricultural land, the ever-increasing concentration of farm operators, growing average farm size, trends in farm land leasing, the role of farm management firms, and the emerging joint deal model in which the grower becomes an incentive-compensated manager who shares responsibility and economic risk with a larger shipping and marketing company.

In California, as in other major agricultural regions to varying degrees, it is becoming more and more difficult for the small-scale agriculturist to survive and make a profit from farming. California, as the country's largest agricultural producer, is also at the forefront of the changes in farm structure, particularly the trend toward large, concentrated farms reliant on hired labor. Salamon postulates that cultural issues contribute to land tenure decisions (Salamon, p. 581), which is found to be true in California, particularly with respect to the new ethnic groups taking up farming. However, it is also found that the majority of land tenure patterns are related to economic pressures and the demands of the market. Land ownership versus leasing is dependent less on cultural and quality of life issues and more on economic risks involved with each crop and crop type.

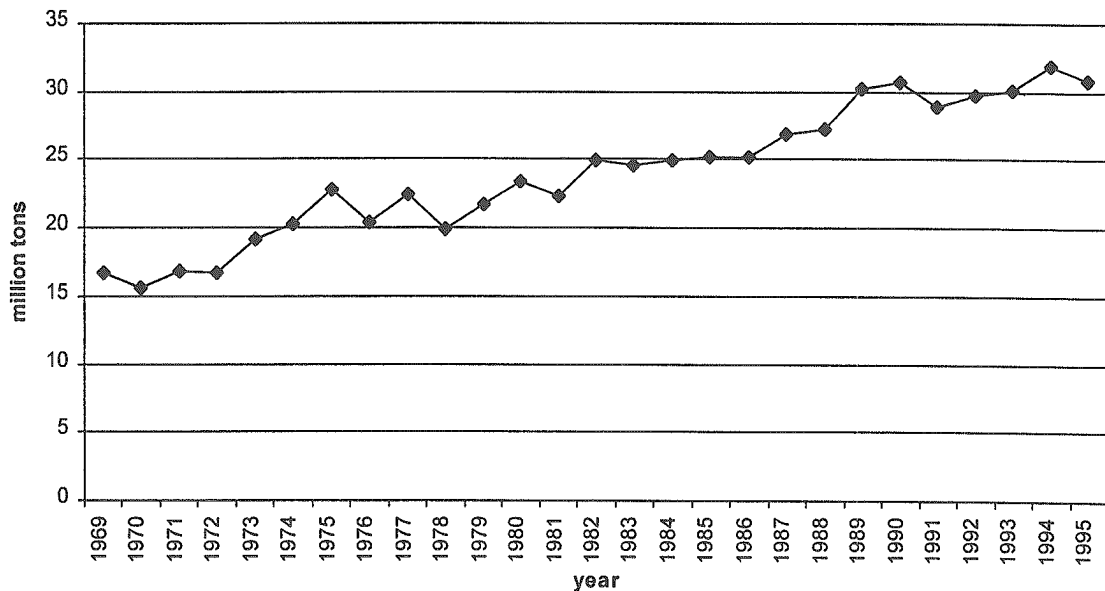
As Strange points out, "You can't get a farm bill through Congress without invoking the cause of the family farm" (Strange, p. 1), despite the large-scale interests that may be backing the bills. The family farmer has become a symbol that elicits the sympathy and interest necessary to inform policy decisions, despite no longer fully representing the current state of agriculture, especially in the West. Meanwhile, due to its large size and the persistence of representatives with agricultural constituencies, California has begun to exert a disproportionate influence over current farm policy and legislation. As agriculture in California and the West continues to follow trends toward larger concentration and business orientations, it is important that land tenure discourse, as well as public policy, be responsive to and reflective of the reality of farm structures

today. Although the agrarian ideal may encompass the greatest symbolic and cultural value for Americans, the realities of farming reflect a much more diverse set of needs and responses to modern market challenges.

Fruit and Vegetable Production and Land

Of major concern in California as well as other agricultural regions is the loss of farmland and small farms. In California this concern has been all too obvious in much of the Central Valley, where population growth and urban sprawl are turning rural areas into major population centers. Yet, for all the worries of the disappearance of agricultural land to development in California, in certain crop sectors production has been increasing strikingly over the past 20 years. Although some agricultural land is being taken out of production, it is also being used differently than in the past. The major loss of farmland is found in extensive crops such as barley, oats and sugar beets, as well as grazing land. Meanwhile, there has been a remarkable increase in production of labor-intensive, higher value fruit and vegetable crops. In some cases land once used for pasture or extensive crops is now being used for intensive crops.

**Figure 1:
Total Vegetable and Fruit Crop Production**



Vegetables, fruits, nuts and ornamental horticulture today represent more than three-quarters of annual crop value in California agriculture. They are clearly the sectors where California agricultural growth is focused, and are thus central to understanding the forces currently influencing land tenure in agriculture. These are intensive crops reliant on a large hired labor force to produce them, and are exactly the types of crops that are

most in conflict with the small scale agrarian ideal. In addition, the trend in these crops is toward larger, more concentrated farms, with fewer and fewer farms owning more and more of the land and production.

Figure 1 shows the growth of total combined vegetable, grape and fruit production. The chart illustrates a steady rise in production since 1969. Looked at together the importance of these two sectors becomes very clear: California has witnessed a near doubling of vegetable and fruit production, from 16.7 million tons in 1969 to 30.8 million tons in 1995. This is similar to trends found in Arizona, Washington, and Oregon. Clearly in the irrigated West vegetable and fruit production is a viable, and growing enterprise.

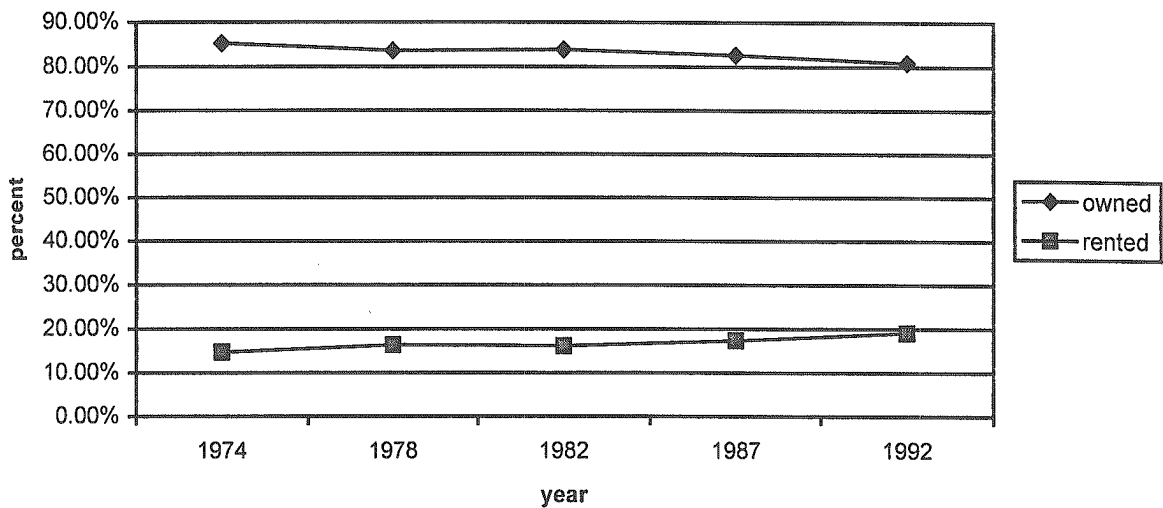
The growth in fruit and vegetable farming is responsible for the large increase in cash receipts for agricultural products in California. According to an August 1997 announcement of the Department of Food and Agriculture, California farms produced \$24.5 billion in 1996. Farm cash receipts from the sale of agricultural commodities jumped 10 percent over the previous year's results, achieving another record high for the third year in a row. The rate of growth of the state's farm sector exceeds the rate of growth of both the state and national economies. This growth is despite the fact that commodity prices, averaged over all types of crops, have remained relatively stable throughout the past several years.

The high returns for vegetable and fruit farming have in turn encouraged the production growth in this sector. Although commodity prices have not been increasing, demand for fresh market fruits and vegetables has increased over the years. As Americans become more health conscious, their diets have changed to include more fresh produce, resulting in greater demand for these high-value crops. California's climate and long growing season gives it a comparative advantage over many other states in producing these commodities. Meanwhile, high land and water prices in California further influence farmers' decisions towards producing higher value crops in order to maximize returns per acre. When extensive cropland or pastureland is converted to intensive crops, farm cash receipts per acre can increase by as much as ten times.

Land Tenure in California

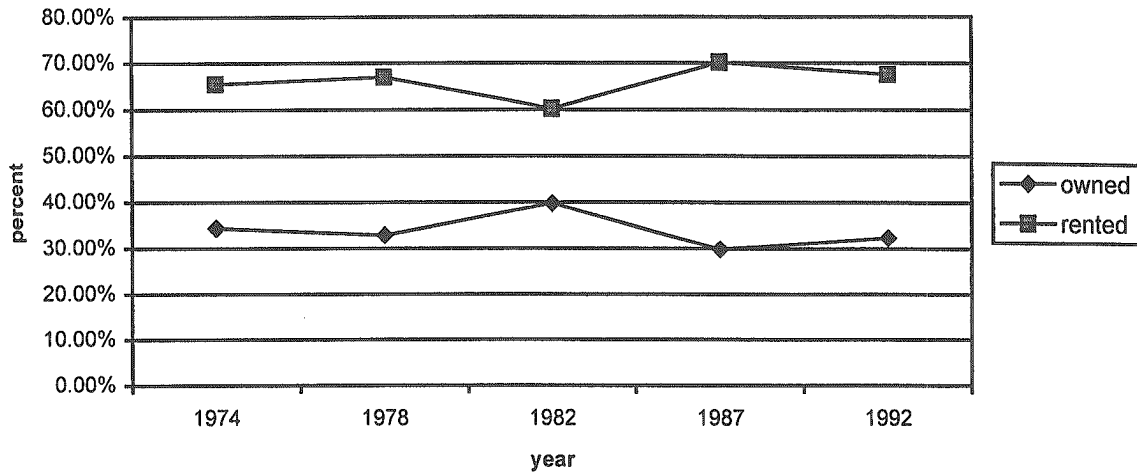
As mentioned in the introduction, California’s land tenure patterns differ from the U.S. as a whole, with a higher tendency toward tenancy than is common in other major agricultural regions. On a national basis, the operator owns about 3/5 of “Land in Farms,” and about 2/5 is leased or rented. Within California the split is more evenly divided, with about half of the land in farms being leased or rented and half owned by the farmer.

Figure 2: Land Tenure for Fruit and Nuts (Acres)



With regards to longitudinal trends in California farm land tenure, vegetable and fruit and nut crops have stayed consistent over the last 20 years, both sectors showing little change in land tenure patterns over time. However, these patterns differ significantly with the state and national patterns for all crops. As shown in Figure 2, among fruit and nut farmers there has been only a slight decline in ownership over the last 20 years, with the 1992 Census of Agriculture reporting still more than 80 percent ownership among fruit and nut farmers. Despite the increase of land in orchards, tenure patterns are not changing quickly, and the farmer continues to own his or her own land in the vast majority of cases.

Figure 3: Land Tenure for Vegetables and Melons, Acres



Vegetable and melon land tenure patterns are shown in Figure 3, and contrast sharply with fruit and nut patterns. Although once again there is little significant change in land tenure over time, among vegetable farmers nearly 70 percent rent or lease the land they farm. In this sector owner-operators are the minority, and have been for a long time.

There are few obvious explanations for these land tenure patterns beyond factors related to the crops themselves. Race and ethnicity are not sufficient to explain land tenure patterns in California, and according to Census of Agriculture data, few clear tenure trends exist by race. The great contrast between fruit and nut land tenure patterns, on the one hand, and those found among vegetable and melon farmers points to the crops themselves as being significant influences on land tenure decisions. For fruit and nut crops, trees or vines must be planted for the long-term. New orchards and vineyards take several years to mature and produce, but the same trees and vines will continue producing for many years if managed well. Thus to produce fruit and nut crops requires a longer-term investment and risk. In this situation it makes the most economic sense for the farmer to own the land. Considering the long-term investment of trees or vines and their necessary ties to a particular plot of land, it would be disastrous for fruit and nut farmers to lose access to the land on which their trees were planted.

In the case of vegetable and melon crops, the opposite is true. These are annual crops that must be replanted every year. In this case owning land is less of a necessity, as there is less need to be tied to a particular plot of land. In addition, unlike fruit prices,

which are relatively stable within a given season, vegetable prices are characterized by tremendous fluctuations, leading to much more uncertain returns for farmers. Annual fluctuations due to weather, seasonal factors and market supply conditions make vegetable farming a much less secure venture. Because of the higher likelihood of substantial economic loss, vegetable farmers are looking to minimize their economic risks, including the risk involved in land ownership. Tying up capital in land investments makes less sense in this case.

The fact that the trend is not changing over time indicates that this system is working satisfactorily for vegetable farmers, at least in an economic sense. What is clear in these crop sectors is that land tenure decisions are not attributable to farm size or cultural values, but to fundamental economic concerns. Agriculture in California has made the transition from a “way of life” to a large-scale industry dominated by market forces.

Land Owners and Tenants Among Fresh Vegetable and Fruit Farms of California

In order to explore the relationship of land ownership to farm operators among California fresh vegetable and fruit farms, the California Institute for Rural Studies undertook a comprehensive examination of the land tenure status of farm land actually used for broccoli, citrus, grape, lettuce and fresh tomato production in California. All crop land used to produce one or more of these commodities was identified in detail in six representative California counties: Fresno, Imperial, Merced, Monterey, Ventura and Yolo counties. These counties were carefully selected because of their prominence in producing one or more of these crops. Obviously, not all of the land used in the state to grow these crops was included. Altogether, more than one million acres of land was studied in detail.

This approach was used because it was found that the Census of Agriculture summaries of land tenure for vegetable and fruit crops are based exclusively on assignments of every farm to a single SIC code, such as 016 (Vegetable and Melon Farms), or 017 (Fruit and Nut Farms). Roughly speaking, the Census reports land tenure status for all land in farms, not just land used for the specific purpose suggested by the assigned SIC category.

While not unreasonable, there are some shortcomings to this classification scheme. First, farms growing a wide range of field and vegetable crops are normally assigned to SIC 019 (Crop Farms, Not Elsewhere Classified). In the course of our study we found that a number of very large vegetable producers, some with more than 2,000 acres of vegetable production, were classified as SIC 019. Similarly, those farm operators with substantial acreage of both grapes and fresh tomatoes were classified in a manner that may have led to distortions of reported land tenure for each of the categories 016 and 017. It is possible that this effect is more significant in California than in other states because of its unusual mix of commodities.

Another factor contributing to this research strategy was that even for farms classified as 016 and 017 in the Census, land used to produce crops other than those used for the SIC assignment is included in the land tenure summary. Thus, a large grape producer that also grows wheat is examined with regard to the land tenure status of the whole farm, not just its vineyard acreage. In order to clearly isolate and examine the role

of crop type on land tenure it was hypothesized that looking only at land utilized to produce that specific crop would be most helpful..

For each and every parcel of land used to produce one or more of the specified crops in any of the six counties, both the farm operator and land owner were identified, including name and mailing address. In the case of farm operators that are partnerships, corporations or other types of business entities, the names of owners, where available, or of managers were also identified.

The information regarding county, crop, acreage, operator and owner, together with certain other data, was incorporated into the CIRS Farm Operator database for analysis. Ultimately, a decision was made regarding whether or not the landowner was the same person or business entity as the farm operator. It is this assignment that ultimately affects the overall findings of this report. Fortunately, in most cases, the assignment was unambiguous. However, in a number of instances, further exploration was needed.

The single most important finding of the land tenure analysis of this study is that the Census of Agriculture reports for vegetable and fruit farms are qualitatively correct but, in both instances, overstate the extent of land ownership as compared to leasing. For example, we find that some 92 percent of all cropland actually used to produce fresh tomatoes is rented land. Similarly, about 85 percent of cropland used for growing fresh iceberg lettuce is leased by the farm operator from another party. The rented share of land used for broccoli production is nearly identical to the fraction found for iceberg lettuce.

In contrast, a strong majority of the cropland used for grape and citrus production was found to be owned by the farm operator, averaging 65 percent for all grapes and 76 percent for all citrus. Both figures are somewhat lower than reported for all fruit and nut farms (SIC 017) in the Census. The difference is quite a bit smaller than that found between broccoli, lettuce and fresh tomato land and the Census report for SIC 016.

One of the surprising findings was that for citrus farms, a farm manager was reported to be the primary contact business, or contact person, for a majority of the “owner operated” citrus farm acreage. That is, even though the farm operator owned the citrus acreage, and was thus able to report that the citrus acreage was owned and not

leased, a farm manager had primary responsibility for the day-to-day operations of the business. In some instances, the farm manager was an individual who operated his/her own citrus farm and was well known in the local area as someone who also managed small operations for others. However, some very large citrus management firms were also represented.

A lengthy interview with an executive with one of the more prominent citrus management companies provided some interesting details about why this approach is so important and may become even more significant in the future. According to this informant, many smaller orchard owners in the region are employed on a full-time basis in an occupation that is unrelated to agriculture, often in a nearby city. Thus, while such persons may own the property and are the risk takers and decision-makers, they may not have either the time or the inclination to moonlight at the farm. Citrus farming is a substantial responsibility, especially with respect to the harvest and marketing of the crop. Thus, placing full management authority in the hands of a professional manager makes good sense for a significant number of persons who may be farm operators but whose day jobs effectively preclude performing most on-farm tasks.

A second factor pointed out by the key informant is that decision-making regarding precisely when and what to harvest is made through the citrus packinghouse that handles the fruit for the farm operator. This system was, until recently, formally codified under marketing orders that allowed collusion among all packing houses to set weekly quotas for shipping fresh fruit. The purpose, of course, was to influence prices by restricting supply. Since citrus stores well on the tree, in some cases for several months, it is possible to defer harvest of some portion of the crop for this purpose.

Therefore, the packer, not the grower, makes the decision as to which specific orchard will be harvested on a given day and what grade of fruit will be picked. For this reason, a management firm or individual who has a daily relationship with the grower's packing house will be in a much better position to coordinate and direct the harvest.

In addition, this key informant was clear that Census of Agriculture enumerations do not indicate whether or not the farm is managed by another party. Thus, a farm operator who hires a manager will still report the farm as though he/she runs it, as will also be the case for accounting and tax purposes. Even the employment of workers for

the harvest under the manager's supervision and full authority to hire and fire will be reported as though the farm operator incurred the expense. Hence, direct-hire or contract labor expenses will be reported by each individual farm operator *even though the hiring, supervision and firing is done by the farm management firm.*

The “Joint Deal”: Does Land Tenure Matter in the Fresh Produce Industry?

Historically, most farming businesses in the U.S. could be described as either Operated by the Landowner, or Operated by a Tenant, the latter referring to instances where any portion of the farm is rented. For several decades agencies administering USDA farm programs classified every farm participant in either of just two categories: OO referred to farms for which all of the land was owned by the operator, OP referred to farms in which at least some portion was rented. This classification scheme was of great importance because on OP farms crop share rentals entitled a non-operator landlord to participate in USDA commodity support programs whereas cash rentals did not. Entitlement to farm program participation based on crop share rental agreements has its origin in the notion that the amount of a landlord’s actual rental income depended upon the amount of revenue actually generated from the sale of the commodity. Thus, similar in some respects to the operator, the landlord’s return depended upon farm prices and the quantity produced, and was thus based on placing capital at risk to produce an agricultural commodity for sale. In contrast, cash rentals require a fixed payment irrespective of any sale of commodity.

Central to this paper is the nature and extent of a relatively new form of business arrangement that is predominant today in the fresh market lettuce and broccoli industries within California and Arizona. Termed “joint deals,” or more simply, the “deal,” by industry insiders, these are annual written joint venture agreements between a packer-shipper and a farm operator. Some packer-shippers enter into dozens of such deals each year. A finding of this paper is that specific land tenure arrangements are relatively unimportant to these joint deals. Rather, it is the care and attention to each step in producing and marketing the commodity that is of paramount importance. A typical joint deal agreement in the lettuce industry specifies the following, among other items:

- the acreage of a particular commodity that is to be produced;
- the amount of pre-harvest growing costs on a per-acre basis;
- transfer of title to the crop from the farm operator to the packer-shipper at the point of harvest as a fixed-price purchase; and
- specific details of profit-sharing between the two parties.

Most often profits are shared equally between the farm operator and packer-shipper, and this is termed a “50-50 deal”. However, some “25-75 deals” were found in the course of this study. In no case did we discover a joint deal in which the packer-shipper had less than a 50 percent share in the net return. Pre-harvest growing costs are shared according to the terms of the profit-sharing percentages, i.e., in a “50-50 deal” they are shared equally by the farm operator and the packer-shipper. Other terms set by written agreement include establishing the amount of the packing-shipping-marketing costs to be charged to the “deal” by the packer-shipper and giving the packer-shipper sole authority to decide whether and when to harvest and market the crop.

Joint deals are also predominant in the fresh cauliflower, fresh celery and a number of other fresh produce industries in the two states. This paper does not investigate whether this form of production agreement is in widespread use in the produce industries of other parts of the United States.

Table 1 – Responsibilities of Partners in Vegetable Joint Deals

Pre-harvest Growing	Farm Operator (sole)
Harvest, Pack, Ship, Market	Packer-Shipper (sole) Packer-Shipper #1 advances 100%
Profit/Loss Sharing	By agreement, most often 50-50
Pre-Harvest Growing Costs	Shared according to profit agreement Packer-Shipper #1 advances 100%
Harvest, Pack, Ship, Market Costs	Charged to the joint deal

The joint deal written agreement is usually described as a Custom Farming and Crop Purchase Agreement. As summarized in Table 1, the joint deal divides responsibilities for production of the commodity between the two parties, which are also neatly divided temporally. The growing of the commodity from planting up to the point of harvest is the sole responsibility of the farm operator. From harvest onward the packer-shipper has sole responsibility by explicitly transferring title to the crop from the farm operator to the packer-shipper at harvest time. The packer-shipper’s own

employees and equipment enter the fields at harvest time and all marketing decisions are handled by his/her staff as well. In virtually all cases for which we were able to obtain access to data, the packer-shipper also took responsibility for keeping financial records for the deal, and provided the farm operator with monthly printed summaries of progress together with payments of his/her share of the net income. Upon closeout of the deal, following receipt of all proceeds from sale of the commodity, a final statement and corresponding payment were provided to the farm operator.

For those commodities that may utilize transplanted seedlings instead of seeds, such as celery and cauliflower, the deal also specifies the name and costs of the supplier of the transplants. Transplant costs, if any, are also shared according to the terms of the profit-share percentages, just as the growing costs are shared.

Clearly, the “joint deal” differs in substantive ways from most contract farming agreements. Interestingly, contract farming is predominant in the processed vegetable industry in the Western states whereas joint deals are predominant in the fresh vegetable industry. Thus, broccoli destined for the commercial freezer is purchased from the farm operator under contract for a fixed price. Similarly, tomatoes for processing are sold by the farmer at a pre-determined price.

Joint deals also differ from sales by marketers who merely derive a commission from the transaction. In the joint deal the packer-shipper owns the crop from the point of harvest forward and retains sole authority concerning whether or not to harvest. And since the packer-shipper is obligated to pay a pre-determined share of growing costs, it is placing capital at risk to produce the commodity.

Case Study: Packer-Shipper #1

This firm is one of the largest marketers of fresh vegetables in the U.S. and is one of the relatively few businesses able to deliver fresh lettuce and broccoli every week of the year. The company is also active in other types of produce as well. It harvests, packs and ships about 26,000 acres of vegetables in Arizona and California each year and typically has about sixty farm operators with whom it enters into joint deals. Thus, on average, a farm operator grows about 430 acres of vegetables for Packer-Shipper #1 every year. Most of these farm operators produce two or more commodities for these

deals, typically lettuce and broccoli. Only a relatively few farm operators have celery joint deals with this firm.

The company devises its Marketing Plan well in advance of each calendar year, usually by late summer of the prior year. This plan explicitly sets sales targets, expressed in thousands of cartons of each commodity to be marketed for every week of the coming year.

Working backwards from the plan, field representatives then develop proposed joint deals with farm operators in various geographical regions of Arizona and California to meet the specific weekly shipment targets. Lettuce is harvested in the desert areas of southern California and southwestern Arizona in the winter months. Starting in late March, lettuce is harvested for about four weeks near Huron on the west side of California's San Joaquin Valley. From there the harvest moves to the Santa Maria area in western Santa Barbara County and to the Salinas Valley. The Salinas Valley harvest continues for about six months, leaving when the fall rains arrive and cool weather sets in. In mid-to-late October the harvest returns to Huron for another four-week stint, before going back to the southern deserts to complete the year.

Tables 2 & 3 summarize two representative case study examples of the actual production, proceeds from sales, packing costs and growing costs advanced for two different farm operators under joint deal agreements with Packer-Shipper #1. The farm operator's share of the net proceeds is also indicated (from which the farm operator's share of growing costs is to be subtracted). Of course, both the farm operator and the packer-shipper have additional operating expenses that are paid from these net returns.

Table 2 – Broccoli Deal Detail: Packer-Shipper #1 & Farm Operator #7

Acres	376.9
Cartons Sold	233,529
Total Proceeds	\$1,192,842.56
Packing Charges	\$764,212.06
Net Return	\$428,630.50
Net to Farm Operator #7 (50%)	\$214,315.25
Growing Costs Advanced	\$105,487.66

Table 3 – Lettuce Deal Detail: Packer-Shipper #1 & Farm Operator #6

Acres	377.9
Cartons sold	282,573
Total Proceeds	\$1,980,214.50
Packing Charges	\$1,103,571.12
Net Return	\$876,643.38
Net to Farm Operator #6 (50%)	\$438,321.69
Growing Costs Advanced	\$239,600.00

Clearly, the ability of Packer-Shipper #1 to harvest and market fresh vegetables on a year-round basis gives it a significant marketplace advantage. The firm has identified and matched specific geographic locations that enable it to harvest and ship fresh lettuce and certain other vegetables on a year-round basis. The Huron shipping point, for example, is the only place in the U.S. where lettuce is commercially harvested during two four-week “windows” each year: one in the early Spring and another in the mid-to-late Fall.

Farm operators in partnership with Packer-Shipper #1 like the joint deal arrangement for a number of reasons. First, they are farmers first, preferring to spend their time in the fields walking the rows in a manner required to grow a first-quality crop. Tending their crop is their first love. Many farm operators have relatively little interest in the nitty-gritty of marketing fresh produce which, today, means spending endless hours on the phone seeking to close a sale at an advantageous price. Everyone in farming knows that the commercial produce business is one of the most cutthroat, competitive businesses around. In contrast, Packer-Shipper #1 has a cadre of experienced and knowledgeable sales representatives who doggedly pursue sales throughout the U.S. and most of the industrialized world. The benefit of rationalization of both major aspects of farming, i.e., production and marketing, accrues to the farm operator in return for a share of farm profits.

Second, Packer-Shipper #1 shares the risk of loss with the farm operator in the same proportion as any profits will be shared, and even provides cash advances to cover

the growing costs for the crop. The farm operator's share of this advance is repaid to the deal later in a paper transaction by means of a deduction from proceeds of the sale of the commodity. In effect, the farm operator receives an interest-free crop loan that is carried on the books of the Packer-Shipper.

Lastly, Packer-Shipper #1 takes sole responsibility for harvest labor, often one of the most expensive and difficult aspects of producing labor-intensive crops. The costs for this expense are advanced by Packer-Shipper #1 and, like the farm operator's share of the growing costs, subsequently charged against the proceeds from the deal in a paper transaction.

From the point of view of Packer-Shipper #1, the advantages of the joint deal arrangement are also significant. First, the downside risk of loss in producing and marketing a very large volume of fresh produce is shared among some sixty farm operator partners. In return, Packer-Shipper #1 has sweetened the deal with such arrangements as advancing all of the growing costs, and paying all of the harvest labor costs up front.

Second, and possibly even more important, Packer-Shipper #1 has effectively "hired" sixty incentive-compensated managers to run the farms where the crops it markets are grown (Chichilnisky, 1991). Some twenty years ago, Packer-Shipper #1 operated about 5,000 acres of California farm land, growing the same kinds of vegetables it produces today (Villarejo, 1980). But it found that employee-managers simply did not provide the attention to detail and care that is needed to grow very high quality produce (Johnston, 1991). In the early 1980s the company began to evolve the joint deal arrangement it uses today. The company found that profit-motivated farm operators were far more effective in caring for a growing crop than were wage or salary compensated employees. Similar conclusions were drawn earlier in the important paper from the Center for Rural Affairs, "Who Will Sit Up with the Corporate Sow?".

Third, Packer-Shipper #1 does exert, on balance, decisive control over the terms of the joint deal, as witnessed in the portion of the written agreement allowing it, and it alone, to decide whether or not to harvest and market the crop. The company also exercises sole authority regarding how to market the crop.

Finally, Packer-Shipper #1 controls a large share of the land on which its joint deal crops are grown. In all, about 12,715 acres of irrigated farm land are controlled by the firm and leased to its joint venture partners. Just over 1,230 acres of this land is owned, either directly or indirectly, by the firm while the balance, some 11,485 acres, is leased from third parties. In all cases, the terms of the leases or sub-leases of land to its joint venture partners are essentially dictated by Packer-Shipper #1. On the other hand, a majority of land on which its joint deal crops are grown is neither owned or controlled by Packer-Shipper #1. Among the sixty farm operator partners are found the full range of ownership/tenant arrangements: a few own all of the land they farm, others own a portion of their farms and rent the balance, and a large share own no land at all, leasing their entire farms from other parties.

Virtually all of the 1,230 acres of farm land owned by Packer-Shipper #1 is located in a prime area of one of the nation's most important vegetable growing regions. Portions of this tract are leased to each of its joint venture partners in the region. Similarly, the land that Packer-Shipper #1 leases from third parties is located in other crucial vegetable growing regions. Most notable are the large tracts of land near Huron that Packer-Shipper #1 leases from several third party owners, and then sub-leases as a single 2,200 acre farm to its only joint venture partner in the area. Since this region is the only place in the entire U.S. where commercial quantities of fresh lettuce are harvested in two four-week periods of the year, control of that critical piece of ground is central to the ability of Packer-Shipper #1 to ship and market lettuce year-round.

This case study illustrates several key aspects of successful, large-scale vegetable farming. Each partner in the joint deal shares the risks of vegetable farming with the other. For Packer-Shipper #1, ownership of land is secondary to finding joint-venture farm operator partners who are strongly motivated through profit incentive compensation to give careful attention to crop production. On the other hand, when Packer-Shipper #1 seeks to control farm land it does so primarily through short-term leases, and then sub-leases the land to its joint venture farming partners.

For Farm Operators who enter into joint deals with Packer-Shipper #1, the hassles of labor-intensive crop farming, most notably harvest and shipping, are handed over to their partner. Moreover, the risks of selling to a highly volatile vegetable market are

shared with a business with very deep pockets. In fact, the joint deal provides the farmer with needed capital in the form of 100percent of the growing expenses at no cost, and then repays this “loan” at a much later date out of the proceeds from sales.

Each joint deal partner specializes in what it does best. Land ownership is clearly a minor consideration for both partners.

Crop Farm Turnover in Fresno and Monterey Counties

In addition to tenancy, another way to describe the current trends in California agriculture is through farm operator turnover rates. We look at the turnover rate for a five-year period, 1990-1994, capturing both new farm ventures as well as farm closures during this period. Turnover rates were analyzed for two of the most productive California farm counties, Fresno and Monterey. The data came from the CIRS Farm Operator database, a source of longitudinal information on crop farm operators.

The large turnover rates found in both counties speak to the high risks involved in farming. In Fresno County, 38.5 percent of farm operators left farming in just five years, equivalent to 7.7 percent annual turnover rate. This implies a nominal 100 percent farm operator turnover in just 13 years, although of course there are a considerable number of farm operators who discontinued their businesses after just a few years, as well as a large number who have successfully operated their businesses for decades. In Monterey County farm operator turnover was even higher, 54 percent over the five year period, implying an annual turnover rate of 10.8 percent, and a nominal 100 percent farm operator turnover within ten years.

However, with regard to farm operator turnover rates, it should be remembered that the numbers include farm start-ups as well as closures. In Fresno County, 1,800 new farms started up during the five-year study period, and there were 410 new farms started in Monterey County during the period. These figures suggest that the economic growth of the agriculture industry acts as an incentive to encourage new farmers. However, as the turnover rates suggest, economic success can be very elusive.

Interestingly, farm operator attrition – different from turnover in that it does not include farm start-ups – appears to vary by crop in much the same way as do land ownership patterns. The differences are somewhat predictable from the earlier discussion of farmland tenure. Annual crop producers, such as fresh market green bean, tomato and strawberry farmers, were found to have higher turnover rates than do perennial crop farmers. Producers of permanent crops such as grapes or almonds exhibit much lower attrition rates. The explanation for these results is similar to the explanation for the higher tendency toward land ownership among fruit and nut producers; it is tied to the longer duration between the planting of vine or tree stock and the harvest of a

commercial crop. Such a long-term investment suggests a level of resources that might not be available to some producers of annual crops. In addition, the fluctuations in vegetable prices lead to greater risk and instability for these farmers. Tables 4 and 5 show the attrition rates for the various commodities used in this analysis.

Table 4 – Commodity-Specific Fresno County Producer Attrition

Commodity	Number of Producers (1990)	Discontinued (1994)	Attrition Rate
Alfalfa	481	99	21%
Cotton	734	147	20%
Lettuce	40	9	22%
Green Beans	135	92	68%
Cherry Tomato	105	83	79%
Fresh Tomato	163	85	53%
Process Tomato	193	52	27%
Almond	459	88	19%
Grape	3,088	643	21%
Stone Fruit	1,014	353	35%
Nursery	27	11	41%
Dairy	97	31	32%

Table 5 – Commodity-Specific Monterey County Producer Attrition

Commodity	Number of Producers (1990)	Discontinued (1994)	Attrition Rate
Broccoli	182	32	18%
Celery	101	12	12%
Lettuce	173	22	13%
Strawberry	178	65	37%
Other Berries	93	53	57%
Grape	43	6	14%
Nursery Crops	146	10	7%
Dairy	5	1	20%

Clearly high turnover rates can be linked to annual vegetable production in these counties, with its high risks and lower likelihood of land ownership. In both Fresno and Monterey counties land planted in vegetable crops has increased substantially since 1969, perhaps at too rapid a pace. Overproduction, and the decline in farm prices that follows, may be a primary cause of instability among vegetable producers. On the other hand, slower growth in land in orchards may contribute to great stability in commodity prices for these crops, in turn resulting in less farm operator turnover.

It is found that farm operator turnover also varies according to farm size, with small farms being more vulnerable than larger. Between 1987 and 1992, the number of small farms (those with annual farm cash receipts less than \$100,000) declined sharply. In Fresno County the number of small farms fell by one-seventh during this time period, while the number of medium-sized farms increased slightly, and the number of large farms (annual farm cash receipts larger than \$500,000) increased by one-third. In Monterey County small farms declined by one-sixth, medium-sized farms declined by one-fourth and large farms increased by slightly more than one-third.

In addition to the complete loss of many small farms, those that remained in business saw their share of all farm cash receipts fall sharply. Over the ten-year period between 1982 and 1992, the small farm share of all Fresno County farm cash receipts declined some 30 percent, to just 5.7 percent of the total. In Monterey County in the same period, the small farm share of countywide cash receipts from the sale of agricultural commodities fell by 44 percent, to just 1 percent of the county total. Table 6 summarizes the share of farm cash receipts accounted for by differing sizes of farm operators.

Table 6 – Farm Cash Receipts by Size of Farm

Farm Size	County	1982	1992
Small-Size Farms			
	Fresno	8.1%	5.7%
	Monterey	1.8%	1.0%
Medium-Size Farms			

	Fresno	18.5%	14.3%
	Monterey	9.5%	4.7%
Large-Size Farms			
	Fresno	73.4%	80.0%
	Monterey	88.7%	94.3%

The trends in farm operator turnover have interesting implications with regard to farmland tenure. While it is clear that land ownership is linked to greater stability than is leasing or other forms of tenancy, it is also clear that bigger operations fare better than smaller. As the defenders of the Jeffersonian ideal fear, the larger, industrial farms appear to be more economically viable than the smaller farms that are more traditionally associated with the "family farm" ideal. However, as will be discussed in the following section, despite the risks of failure, farming is still appealing to many newcomers, particularly those of certain ethnic groups.

New Farmers, New Settlers

An unanticipated finding of the detailed examination of farm operator turnover in Fresno and Monterey Counties was the discovery of that ethnic minority farmers tended to be predominant in certain types of crops with higher than average rates of operator turnover. In Monterey County, strawberry and other berry producers with Hispanic surnames today constitute about 60 percent of the farm operators, although their combined acreage of berries is only about one-fifth of the county total. However, the average rate of farm operator turnover among these Hispanic berry farmers was higher than for non-Hispanic operators. Even for farm operators of the same berry farm size, Hispanic farm operators had a higher turnover rate that did non-Hispanic farmers.

Nevertheless, more Hispanic berry farm operators are entering the business, on average, each year than leave. So even though the farm operator turnover rate is quite high, berry farming is seen as a great opportunity for entering the business. New settlers, most often of Mexican origin, view berry farming with its large labor requirement as an entry point to begin to seek business success in the U.S. (Wells, 1996).

In part, this high rate of business entrants is due to the enormous expansion of berry production in the past twenty or so years. In the mid-1970s, fresh strawberry shipments from California fields average about 250 million pounds per year. By the mid-1990s production had reached about 1.25 billion pounds per year. It is likely that an expanding industry presents more opportunities to newcomers than does a stagnant one.

In Fresno County, a parallel development was noted among producers of strawberries and Asian specialty vegetables. However, Southeast Asian refugee farmers are the dominant growers in this case. In fact, about 700 of Fresno County's roughly 7,000 farms are not operated by Hmong, Laotian, Cambodian or Vietnamese farm operators. Once again, the rate of farm operator turnover among these small-scale operators was found to be quite high, much higher than among the larger-scale, more established farmers. But, as in the case of Hispanic berry farmers in Monterey County, the opportunities presented by an expanding vegetable industry provides the needed opening for the Southeast Asian refugee farmers. New settlers bring with them energy and enthusiasm for trying new business ventures.

Anecdotal information indicates that the new Fresno County settlers have developed markets that had previously been served by other suppliers. Most notable are the Asian restaurant trade and direct sales in the form of roadside stands and "U-Pick" operations.

In California, the very high rate of turnover is both sad and happy. Many farms have gone out of business for economic reasons: inability to compete with their larger neighbors. But nearly as many newcomers see opportunity in certain expanding markets, such as fruit and vegetables, and have leaped into the fields. That such a large fraction of the new farmers are ethnic minority farmers presents special challenges to farm advisors and to the industry as a whole.

With respect to land tenure, relatively little is known about the pattern of land tenure among the new settlers. Thus, an interesting research question is the examination of land tenure among these new farmers.

Conclusions

This paper examines the land tenure in the context of the agrarian ideal. The single most important finding is that land ownership is far less important in major fresh vegetable crops than has been previously reported. In addition, it appears that interpretations of land tenure data reported by the Census of Agriculture may inadvertently misstate the relative importance of crop land leasing for these crops. That is, while Census data suggest that leasing accounts for about two-thirds of Land in Farms reported by those classified as Vegetable & Melon Farms (SIC 016), actual review of cropland used only for growing broccoli, fresh iceberg lettuce and fresh tomatoes indicates that leasing accounts for between 85 percent and 92 percent of this land.

This finding is interpreted by us as reflecting the fact that commercial vegetable producers choose to rent land instead of purchasing it because they prefer not to tie up valuable capital in land purchases. Instead, they appear to find it more sensible to use whatever limited capital they may have as a shield against the wild price fluctuations of the fresh produce market. To illustrate, lettuce costs about \$5 per carton to produce, pack and ship (one carton usually contains twenty-four heads of lettuce). But the market price (wholesale) is often as low as \$4 per carton and may be as high as \$18 per carton, all in a single season. Thus, a producer may lose money for several weeks in a row, but then make good money shortly thereafter. The problem for the farmer, of course, is that the market conditions are not known at planting time.

The importance of shielding against downside risks is also reflected in the emergence of the joint deal in the fresh market lettuce and broccoli industries. Here, a farm operator partners with a much larger firm, the packer-shipper, and enters into an annual agreement for sharing both costs and profits. In effect, the risk is spread more widely among several parties. Moreover, each party can specialize in what it does best: the farmer in growing, the packer-shipper in marketing. Land tenure is a relatively minor consideration in the joint deal. Even a very large firm, such as Packer-Shipper #1, chooses to rent on a short-term basis nearly all of the land it seeks to control.

Recent data on land prices in the single most important vegetable production area of California (Salinas Valley) indicates that this strategy makes sense. Salinas area

vegetable land sells for \$10,000 to \$32,000 per acre, surely a very high price by any measure. On the other hand, land rentals are in the range of \$800 to \$2,000 per acre.

Another indicator of the seriousness of downside risks are the very high rates of farm operator turnover discovered when we examine farm operator continuity. Both Fresno and Monterey County farms exhibit very high rates of farm operator turnover, and the rates are highest for the smaller-size farms. The turnover rates average seven percent per year in Fresno County and more than ten percent per year in Monterey County.

The good news is that despite the significant risks of loss, the substantial expansion of the vegetable industry has presented new opportunities for those willing to try their hands at farming. New settlers, especially many recent immigrants from Mexico and Southeast Asia, have seized this opportunity and have committed their lives to farming. In a sense, these new settlers are regenerating rural life. At the same time, relatively little is known about land tenure among the new farmers. This remains an interesting and important issue for land tenure research.

With respect to fruit farming, land tenure presents a very different pattern. First, the vast majority of land used for growing grapes and citrus is owned by the farm operator. Relatively little land is leased. The large investment in developing land for a longer-term purpose is a likely explanation for this type of financial commitment. For a period of time, tax law even favored this type of investment, allowing depreciation of asset that was actually maturing.

However, we find that farm management firms are now quite important players, handling the nitty-gritty details for many small-scale growers who hold full-time non-agricultural jobs. It is likely that this pattern of separation of “farm operator” from manager will persist, given the complexity of managing a citrus farm. As more and more farm labor is foreign-born and does not speak English, recruitment, training and supervision becomes more problematic. Those with the most experience and knowledge will end up handling the job.

Both the joint deal in the fresh vegetable industry and the farm management arrangements of the citrus industry are developments that are conceptually beyond the capacity of the agrarian model. In both cases, land tenure is important but not nearly as important as addressing issues of risk and management. Contemporary commercial

vegetable and citrus farming is about rapid delivery of a very high quality product to global markets. The agrarian may be able to find niche markets – Asian vegetables, organic produce, local delivery of fresh produce – but may not be able to compete with the joint deals and professional citrus managers.

A set of issues that have not been addressed in this paper are worthy of reflection. First, is the California experience different than what is occurring in other parts of the nation? Second, how are these patterns of land tenure changing over time? Recently, salad mix is replacing head lettuce in both the grocery shelf and the salad bar. Has this development been reflected in land tenure? What about land tenure and farm size? Are the largest fresh vegetable or citrus producers more or less likely than farms of other sizes to rent or own?

References

Boxley, Robert F.

1977 "Landownership Issues in Rural America." Washington D.C.: Department of Agriculture, Economic Research Service, p. 1.

Bureau of the Census.

1977 *1974 Census of Agriculture: California State and County Data*, Vol. 1 Part 5, Washington, D.C.: U.S. Department of Commerce.

Bureau of the Census.

1981 *1978 Census of Agriculture: California State and County Data*, Vol. 1 Part 5, Washington, D.C.: U.S. Department of Commerce.

Bureau of the Census.

1984 *1982 Census of Agriculture: California State and County Data*, Vol. 1 Part 5, Washington, D.C.: U.S. Department of Commerce.

Bureau of the Census.

1989 *1987 Census of Agriculture: California State and County Data*, Vol. 1 Part 5, Washington, D.C.: U.S. Department of Commerce.

Bureau of the Census.

1994 *1992 Census of Agriculture: California State and County Data*, Vol. 1 Part 5, Washington, D.C.: U.S. Department of Commerce.

Center for Rural Affairs.

1979(?) "Who Will Sit Up with the Corporate Sow?" Walthill, NE.

Chichilnisky, Graciela.

1991 Department of Economics, Columbia University, private communication with Don Villarejo. The authors are grateful to Professor Chichilnisky for pointing out this analogy.

Decater, Stephen & Gloria, Bruce Lundberg, and Paul & Ruth Buxman.

1998 "Family-Scale Farming... What is it, really?" *Agrarian Advocate*, Vol. 20, No. 2, Spring, pp. 12-13.

Fujimoto, Isao.

1977 "The Communities of the San Joaquin Valley," in U.S. Congress, Senate, *Priorities in Agricultural Research of the U.S. Department of Agriculture*.

Geisler, Charles.

1993 "Ownership: An Overview," *Rural Sociology*, Vol. 58, No. 4, Winter, p. 543.

Geisler, Charles and Sonya Salamon.

1993 "Returning Land Tenure to the Forefront of Rural Sociology," *Rural Sociology*, Vol. 58, No. 4, Winter, p. 530.

Goldschmidt, Walter.

1978 *As You Sow*, Montclair, N.J.: Allanheld, Osmun and Company.

Johnston, Mike.

1991 Teamsters Local 890, Salinas, CA, private communication with Don Villarejo. The authors are grateful to Mr. Johnston for sharing his wealth of vegetable farm labor knowledge.

Lobao, Linda, Michael D. Schulman, and Louis E. Swanson.

1993 "Still Going: Recent Debates on the Goldschmidt Hypothesis," *Rural Sociology*, Vol. 58, No. 2, Summer, p. 280.

Loewen, Ted.

1998 "What is a Family Farm Anyway?" *Agrarian Advocate*, Vol. 20, No. 2, Spring, p. 1.

Maris, Paul V.

1950 "The Land is Mine: From Tenancy to Family Farm Ownership," Washington D.C.: U.S. Department of Agriculture, U.S. Government Printing Office, pp. 1, iii.

Padover, Saul K.

1943 *The Complete Jefferson*, New York: Duell Sloan & Pearce, Inc., pp. 678-679.

Petterson, Steve.

1977 *The Family Farm: A California Small Farm Viability Project*, Technology Task Force Report.

Salamon, Sonya.

1993 "Culture and Agricultural Land Tenure," *Rural Sociology*, Vol. 58, No. 4, Winter, p. 581.

Strange, Marty.

1988 *Family Farming: A New Economic Vision*, San Francisco: Institute for Food and Development Policy, pp. 1, 31.

Swanson, Louis E.

1988 *Agriculture and Community Change in the U.S.: The Congressional Research Reports*, Boulder: Westview Press, pp.6, 25.

Villarejo, Don.

1980 *Getting Bigger: Large-Scale Farming in California Agriculture*, Davis: California Institute for Rural Studies.

Villarejo, Don.

1996 *On Shaky Ground: Farm Operator Turnover in California Agriculture*, Davis: California Institute for Rural Studies.

Wells, Miriam.

1996 *Strawberry Fields*, Ithaca, NY: Cornell University Press.