WHERE DO CALIFORNIA FARM WORKERS LIVE AND WORK?

a report prepared for
California Rural Legal Assistance

by

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Where Do California Farm Workers Live and Work?

The determination of the location of places of work and of residency of agricultural employees is vital to the appropriate siting of farm worker service agencies. In California agriculture today about 80% of all of the labor is provided by hired workers. In 1950 just 60% of all farm work was performed by hired workers. We are more dependent today on hired workers, and on foreign-born hired workers, than we have been at any time in this century.

There is compelling evidence that the absolute number of persons employed in agriculture has actually increased somewhat over the past twenty years. Less obvious is the fact that changing crop patterns, and corresponding changes in local labor demand, have led to a significant redistribution of the regional location of areas with high labor demand.

Changes in crop patterns and in locations of production can also lead to fundamentally different seasonal employment patterns. Nursery crop production in California now requires as much hand labor as does all of our state's grape production, including all of raisin, table and wine grapes. However, most nursery crop production is conducted on a year-round basis which, in turn, is associated with more stable jobs than are typically the case in the grape industry. But most nursery crop jobs are paid on an hourly basis, usually starting at $4.25 per hour.

Our recent report Farm Worker Needs in California, prepared for California Rural Legal Assistance (November 12, 1992), demonstrated that the total seasonal labor demand in the twenty-five most important commodities had increased by 21% in the past 16 years. Survey evidence suggests that the number of weeks per year that individuals are able to find work in California agriculture has not changed nearly as much, if at all. Hence, we conclude that it is likely that most of the increased labor requirement is associated with more people working.

There are a substantial number of obvious changes in cropping patterns over the past twenty years that have now become obvious. First, large areas of the West Side of the San Joaquin Valley are now being utilized to produce vegetables. Whether lettuce, garlic or fresh market tomatoes, vast areas of that region have become centers of fresh produce production. Second, the Southern Kern County area has become an important center of grape and tree fruit production, most notably in the Arvin-Lamont area. Third, the enormous increase in fresh strawberry production in California has meant that some crop regions, such as Orange County, formerly thought to be on the decline, have again become important centers of production. Fourth, the vast expansion of the nursery industry in Southern California has meant that agricultural workers are needed in important urban centers, such as San Diego, Ventura and Riverside Counties.

The expansion of agricultural labor demand has been a subject of considerable discussion. For example, Prof. Juan Vicente Palerm has written extensively about the rapid growth of labor-intensive crop production in the South Central Coastal region of California in the past twenty years. He coined the term "re-laborization" of agriculture to describe this phenomenon. More specifically, strawberries, fresh vegetables, ornamental nursery crops and premium wine grapes are being produced in far greater amounts today in Santa Barbara, Ventura and San Luis Obispo counties than was the case a generation ago. The corresponding increases in the Latino/a population employed in agriculture in this region is associated with the new cropping pattern.

Accurate measures of today's pattern of employment in agriculture are difficult. However, there are two different types of measures of employment which are widely regarded by labor economists as being relatively reliable. One is based on a count of employed persons, the second is an estimate of labor demand based on the actual acreage of harvested crops and the observed per acre labor requirement for that production.

The first measure we shall utilize is employer-reported employment. The Form DE-3 is submitted by every California employer each calendar quarter to the California Department of Employment Development (EDD) together with their Unemployment Insurance tax payment. This report includes a count of the number of persons on the payroll in the pay period that includes the 12th day of the month for all three months of the calendar quarter. The count does not depend on whether the employees have Social Security numbers, micas, their actual name or other factors. It is used only to count employment. Its main limitation is that some employers may underreport their employees and corresponding payroll in order to reduce their employer tax obligation.

Form DE-3 employment counts are available for each month of the year, by county and by primary industry in which the employer is active. These counts make it possible to determine both number of persons reported employed in agriculture, by county or region, as well as the variation of employment by time of the year. We first focus on the size of these employment counts. Their variation over time, by county, are discussed later in this report.

Employer-Reported Farm Employment by County

We first determine the maximum number of persons employed in farm work, by county. This is termed "peak farm employment." In so doing we are careful to include reported employment by labor contractors, farm management companies, ornamental nurseries, dairies, field packers, custom harvesters and other non-farmer employers whose workers perform farm tasks. However, we exclude persons employed in gardening, landscaping or other work which does not result in the production of an agricultural commodity for sale.

On an annual (1991) statewide basis peak season employment was 450,619 (during September 1991). Since all farm employers report their September count as referring to the same pay period (the pay period including Sept. 12, 1991), there are only a relatively small number of cases of persons working for more than one employer on that date. Thus, the peak season count minimizes duplicate enumerations.

Careful examination of data for 1991, by county, shows that fifteen (15) counties have peaks of reported monthly farm employment which exceeds 10,000 persons. These counties and the corresponding employment figures are shown in Table I below. The most important point is that there are now fifteen counties where at least 10,000 persons are reported to be working on farms during the peak of the season. Fresno county has 84,010 workers at peak season, more than twice the count for Monterey county at its peak, and six times more than Madera, Merced or Santa Barbara counties. What also stands out is that Kern County now has half as many farm workers at peak season as does Fresno county. Tulare County has a peak employment which is 40% of the Fresno County peak; and Stanislaus and San Joaquin Counties each have peak employment numbers substantially exceeding those of better known areas, such as Madera.

Table I
Peak Season Reported Farm Employment, 1991, by County

County	Peak Employment	Month
Fresno	84,010	September
Kern	44,881	August
Monterey	38,508	August
Tulare	34,642	September
Riverside	29,784	June
Ventura	22,156	May
San Joaquin	21,934	September
Stanislaus	21,288	September
Imperial	17,148	February
Santa Cruz	16,819	July
Madera	14,433	September
Merced	14,105	September
Santa Barbara	14,049	May
San Diego	10,747	June
Orange	10,321	May

Source: Agricultural Employment, 1991, Report 882-A, Labor Market Information Division, Employment Development Department, State of California, April 1993.

Peak season employment figures tend to emphasize counties, such as Fresno, in which there is a very large seasonal labor demand, in that case largely attributable to the raisin harvest.

Other counties, such as San Diego, may have a much more steady labor demand, in that case largely attributable to the nursery crop industry. In interpreting these data we must be careful to note that even for industries with "year-round" work several workers may share a given "job."

The Form DE-3 data can also be used to determine annual average farm employment, literally the twelve monthly employment reports of farm employment for each county, averaged over the full year. This procedure "smooths over" the ups and downs over the year and provides a measure of the total number of farm jobs.

Table II shows the fifteen counties with the largest annual average farm employment using the procedure described above.

Table II
Annual Average Reported Farm Employment, 1991, by County

County	Annual Average Employment
Fresno	49,226
Kern	31,230
Monterey	30,191
Tulare	24,067
Riverside	18,327
Ventura	16,021
San Joaquin	15,828
Stanislaus	14,635
Imperial	11,921
Santa Barbara	11,662
Santa Cruz	11,224
Merced	10,018
San Diego	9,870
Orange	7,303
Madera	6,875

Source: Agricultural Employment, 1991, Report 882-A, Labor Market Information Division, Employment Development Department, State of California, April 1993.

Notice that the first nine counties are identical in both listings - peak farm employment or annual average farm employment. The remaining six counties in each list are also the same on both lists, only their ranking differs.

What this means is that whether one uses peak season farm employment or the annual average the most important counties in terms of numbers of agricultural employees or numbers of farm jobs are uniquely identified. It is possible to group counties into regions or, alternatively, to associate groups of counties into an identifiable service area. This point can be clarified later.

The entire list of all 42 counties where agricultural

employment is reported is shown in Table III for reference.

Table II
Reported Peak Season Farm Employment, 1991, by County

County	Peak Employment	Month
Alameda	1,403	August
Butte	3,940	October
Colusa	3,037	May
Contra Costa	1,667	August
El Dorado	483	October
Fresno	84,010	September
Glenn	1,875	October
Imperial	17,148	February
Kern	44,881	August
Kings	7,360	July
Lake	2,010	August
Los Angeles	9,614	August
Madera	14,433	September
Mendocino	2,538	October
Merced	14,105	September
Modoc	388	October
Monterey	38,508	August
Napa	5,973	October
Orange	10,321	May
Placer	622	June
Riverside	29,784	June
Sacramento	5,208	August
San Benito	5,025	August
San Bernardino	4,804	July
San Diego	10,747	June
San Joaquin	21,934	September
San Luis Obispo	3,376	October
San Mateo	3,122	October
Santa Barbara	14,049	May
Santa Clara	7,465	July
Santa Cruz	16,819	July
Shasta	3,074	October
Siskiyou	1,614	October
Solano	2,309	August
Sonoma	8,557	October
Stanislaus	21,288	September
Sutter	7,709	September
Tehama	2,298	October
Tulare	34,642	September
Ventura	22,156	May
Yolo	7,205	August
Yuba	3,892	August

Source: Agricultural Employment, 1991, Report 882-A, Labor Market Information Division, Employment Development Department, State of California, April 1993.

For purposes of clarity we also show the data of Table III in the form of a county map of California, see Figure 1, with the density of the shading representing different levels of peak season farm employment. The darker the shading of the county the greater the number of peak season farm employees. For purposes of reference, we provide a second map, see Figure 2, which identifies all California counties by name.

An additional insight into the distribution of peak season employment is provided by a third chart, Figure 3, which shows regional aggregations. Obviously, the San Joaquin Valley region accounts for the largest share (55%) of peak season farm employment. Less obvious is that the South Coast, Central Coast and San Joaquin Valley together account for 80% of all peak season farm employment in California. The obvious question concerns whether a proportionate share of CRLA farm worker program resources are allocated along these same lines.

Employer-Reported Farm Employment by Month and County

The variation of reported farm employment by month within each county is of value in determining the extent of seasonal variation of employment. This "variability" of farm employment may be reflected in large fluctuations in legal service case load. For purposes of convenience in program planning we provide county by county reports of monthly employment for twenty-three of the most important agricultural counties within California for the entire year 1991. These are attached as Figures 4 - 26 at the end of this report, in alphabetical order.

Demand for Labor Estimates of Farm Employment

The second major method for estimating agricultural work patterns is the "seasonal labor demand" method. We will illustrate this method for determining the labor requirements for farms which have at least one crop field within the Arvin-Lamont (Kern County) zip code boundaries.

The crop list for this region is obtained from the CIRS electronic files of California farm operations. CIRS maintains data bases on farming operations throughout the state of California. We have 1990 data for all Kern County farms and can summarize this data by location of crop fields. Any farm which is represented in our data base having at least one crop field located within the boundaries of the Arvin-Lamont postal zip codes is designated an "Arvin-Lamont farm" in the discussion that follows.

By using reported harvested acreage for these "Arvin-Lamont farms" we can utilize known values of labor coefficients to estimate the number of hours of seasonal labor that were used to produce each crop. For example, about 330 hours of seasonal labor are required for each acre of peach orchard, about 81 hours of

labor are required for each acre of wine grapes, and so on. The resulting labor demand is expressed in total number of hours for all of the crops and all of the Arvin-Lamont farms.

We estimate that the Arvin-Lamont farms account for 11.687 million hours of seasonal labor demand in these crops. The tabulation for Arvin-Lamont farms is shown in Table IV below. This total for Arvin-Lamont compares with a statewide total of about 202 million hours of seasonal labor for the entire state.

By this method "Arvin-Lamont farms" alone account for about 5.8% of the entire seasonal labor demand of the state, or roughly one out of every twenty hours of seasonal labor. This method can be extended to any number of communities throughout the state

Table IV
Arvin-Lamont Seasonal Labor Demand

Crop	Acres	Labor Demand
almonds	10,486	0.143 million hours
apricots	195	0.028
grapes	51,069	7.008
lemons	159	0.019
nectarines	1,578	0.521
oranges	14,684	1.175
peaches	2,102	0.694
plums	2,878	1.013
walnuts	982	0.013
asparagus	160	0.010
carrots	14,826	0.140
lettuce	3,394	0.450
melons	2,227	0.296
tomatoes, fresh	1,184	0.075
cotton	27,069	0.071
sugar beets	1,306	0.031
		11.687 million hours

Source: CIRS data bases; Mamer & Wilkie, Labor Demand Coefficients

This type of analysis can be applied to other areas of the state. There are 120 communities for which CIRs is prepared to provide this type of detailed analysis.

When applied to Delano farms, we find the total estimated labor demand to be 10.432 million hours, about 10% smaller than the estimate for Arvin-Lamont farms. This result supports allocating resources to the Arvin-Lamont area of Southern Kern County.

This analysis can also be applied to county-wide harvested

crop acreage reports to obtain seasonal labor demand estimates for individual counties. One of the counties where seasonal labor demand has increased in the past twenty years is Merced County. When applied to Merced County, we find that the aggregate seasonal labor demand is 7.092 million hours, about 70% of the figure we found for Delano.

Additional Comments

Legal Service Program resources allocated for the purpose of providing legal services for migrant and/or seasonal farm workers are intended to be used for individuals who are "officially" determined to be within these categories. In the present context, this would require a determination of the portion of each enumeration who meet the criteria.

Reports of employment submitted from employers do not include any demographic information at all, let alone specific details to assist in determining whether a particular group of employees meet certain Federal criteria qualifying them as eligible for services. However, from the National Agricultural Workers Survey (NAWS) data we do know that roughly four in ten California perishable crop workers migrates during the year. Three of ten "shuttle" back to Mexico during the off season and one in ten "follows" the crops.

The only information which might inform a discussion of migrancy or seasonality is obtained through survey interviews, both random and ethnographic surveys. One of the most important findings of the NAWS is that about 90% of all seasonal farm work is performed by individuals who are in the labor market year-round. The notion of a "seasonal worker" is largely a myth: the work itself may be seasonal, or short-term, but farm workers are either working or seeking work, in the U.S. or in Mexico, most of the year.

The past six or so years have been especially productive years for farm worker survey research. It would be possible for CIRS staff to prepare summaries for CRLA of recently published material as well as of as yet unpublished surveys if that would be helpful.

Finally, there is an important point regarding under-served populations, in particular, indigenous immigrants. CIRS has conducted a census of Mixtec immigrants working in California agriculture. We have attempted to actually enumerate this population by location within California. CIRS is presently concluding its analysis of the Mixtec Census and expects to publish the results next year. However, we expect that the final data will be internally available by the end of this year.

Figure 1

Peak Season Farm Employment in California, by County, 1991

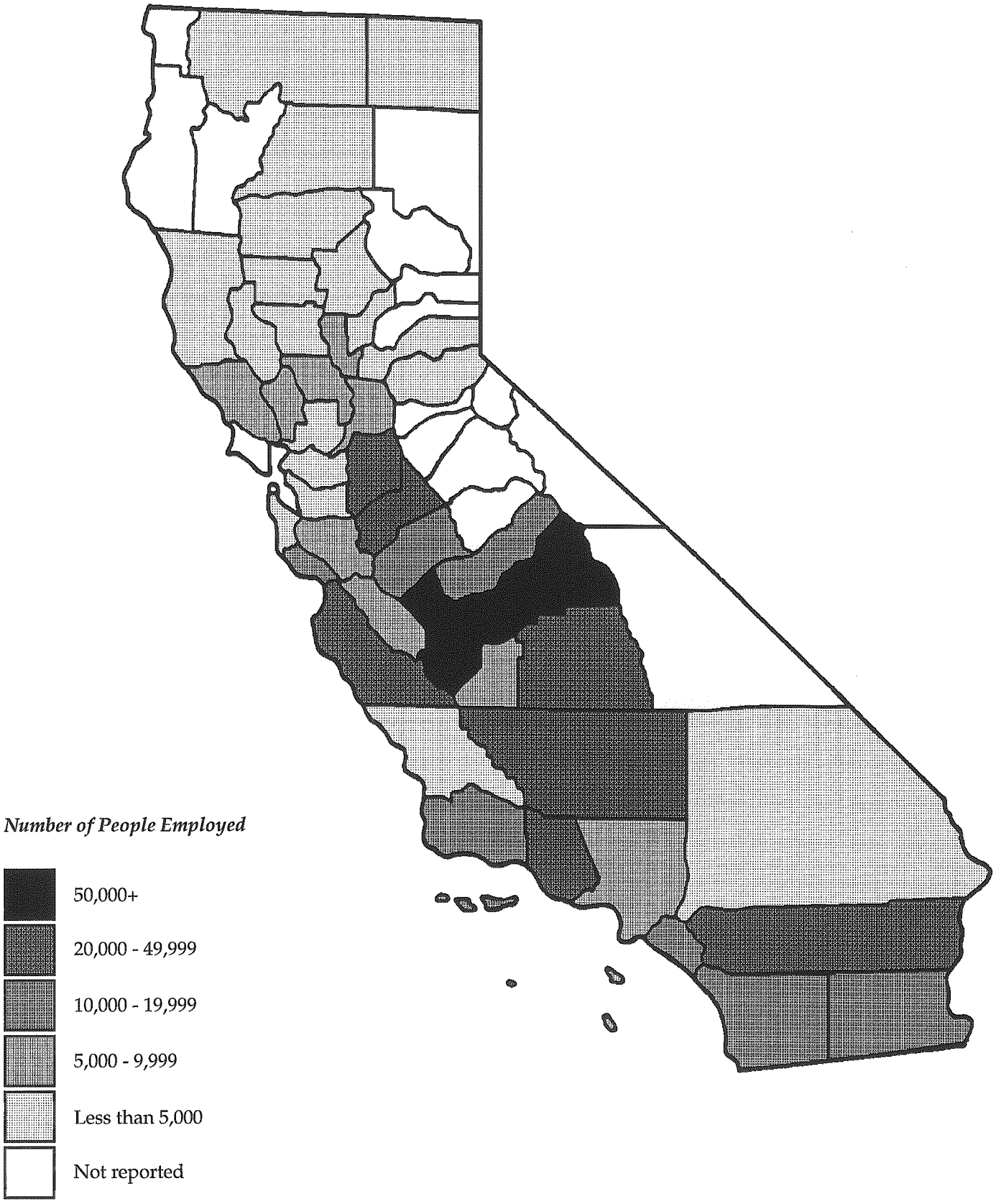

Figure 2

California Counties

Figure 3

California Peak Season Farm Employment by Region, 1991

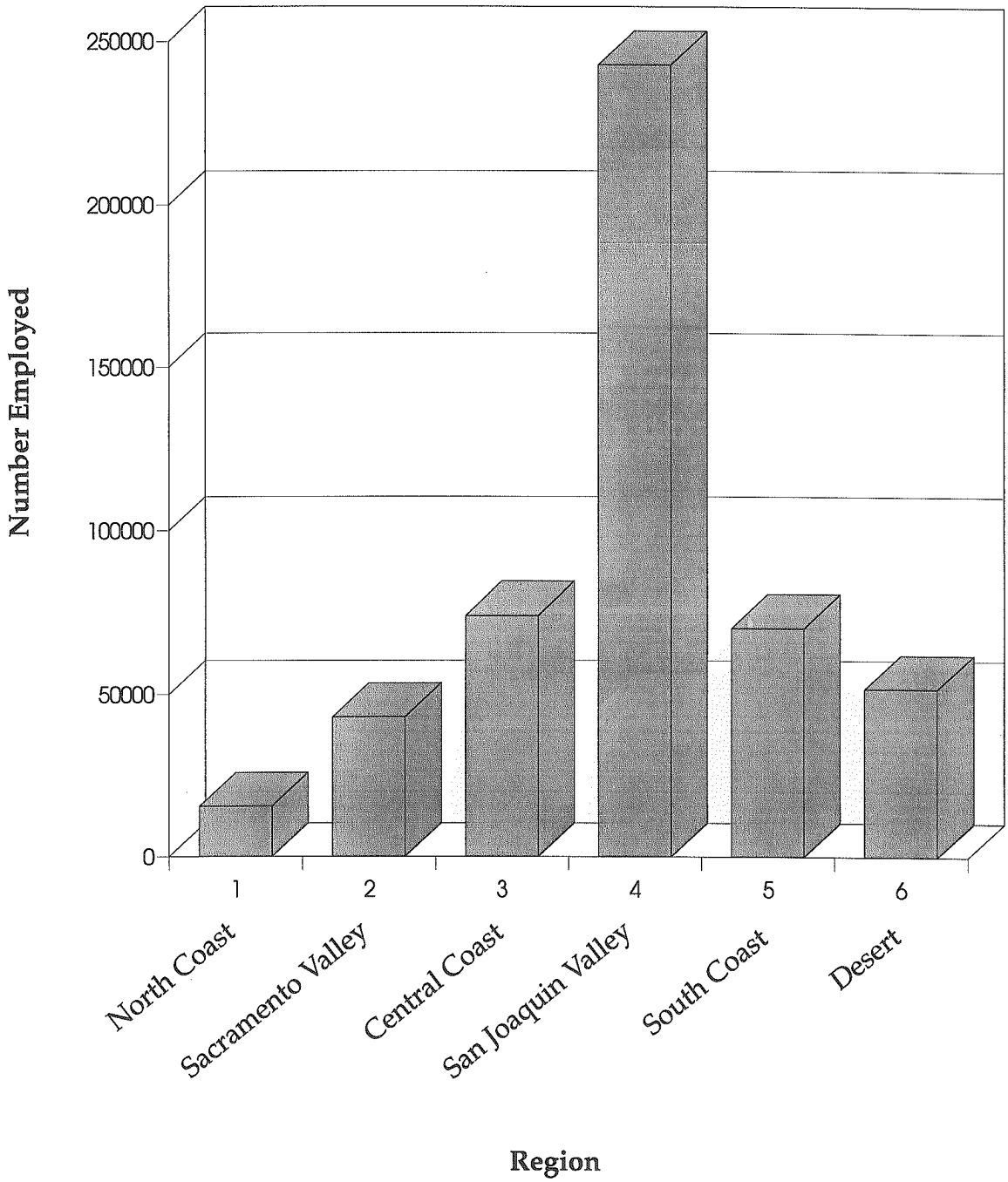

Figure 4


Fresno County Farm Employment, 1991
Farm Employment (Thousands)
90
80
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January
February
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April
May
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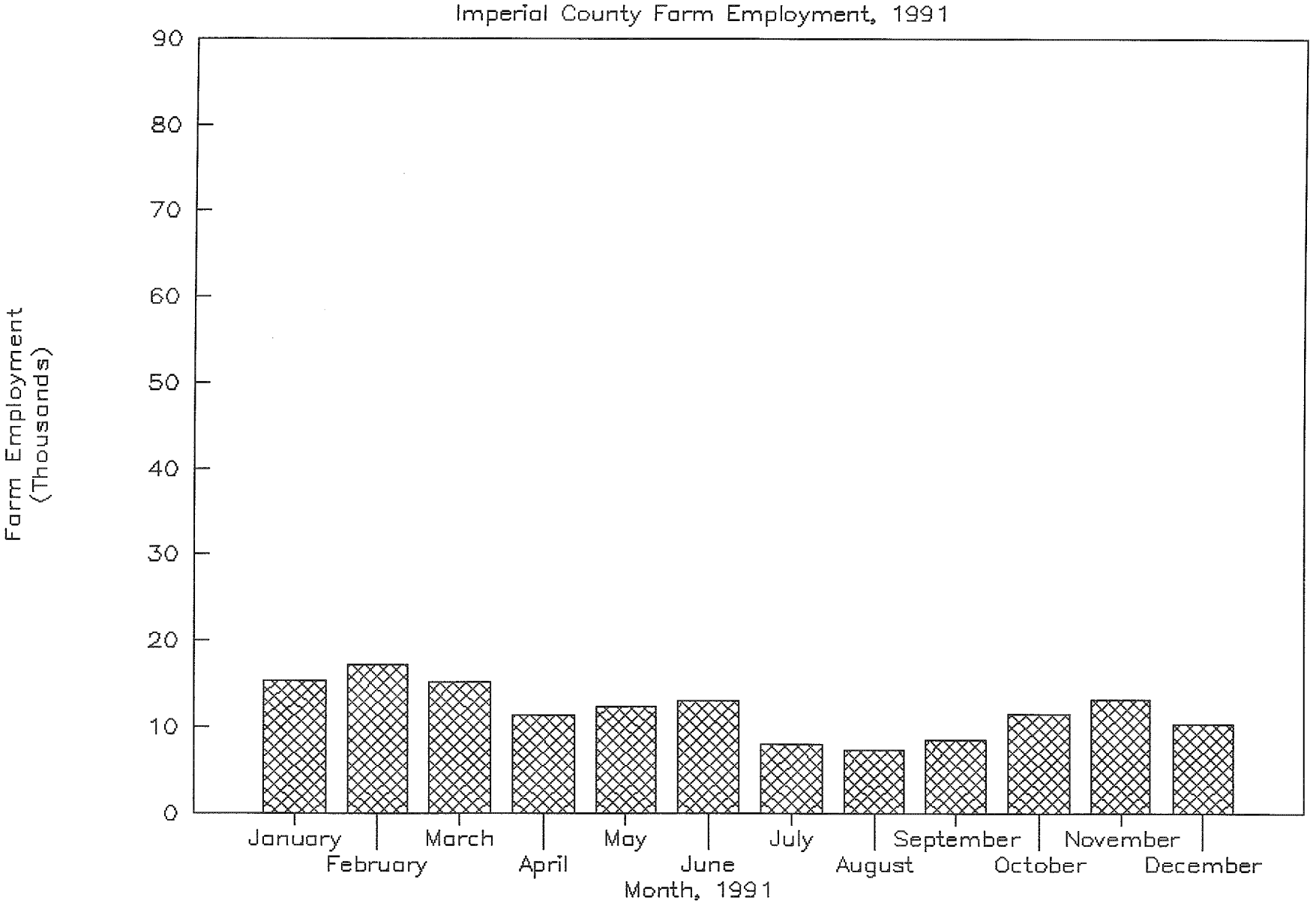
November
December
Month, 1991

Figure 5


Imperial County Farm Employment, 1991
Farm Employment (Thousands)
90
80
70
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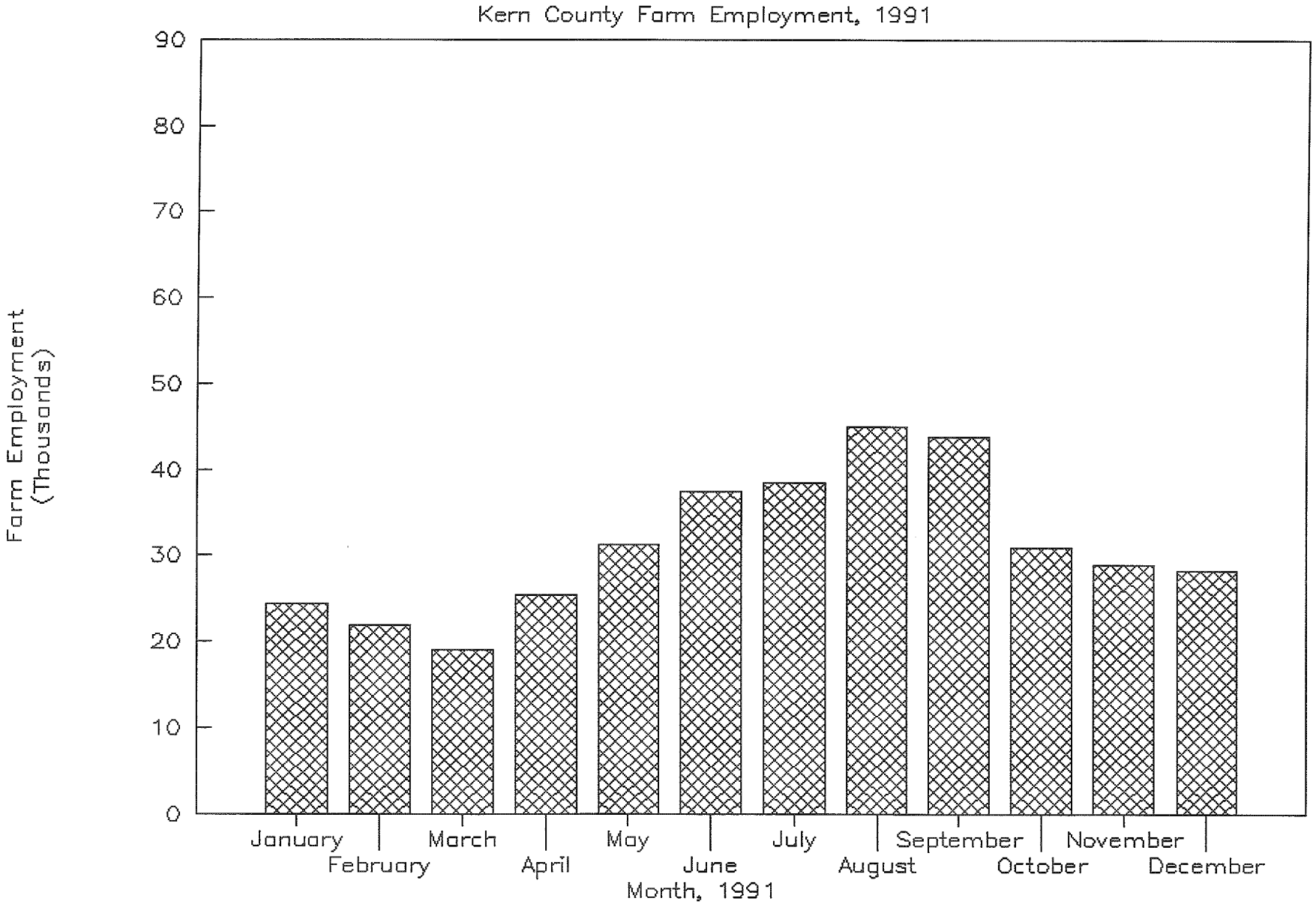
October
November
December
Month, 1991

Figure 6


Kern County Farm Employment, 1991
Farm Employment (Thousands)
90
80
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October
November
December
Month, 1991

Figure 7

Kings County Farm Employment, 1991

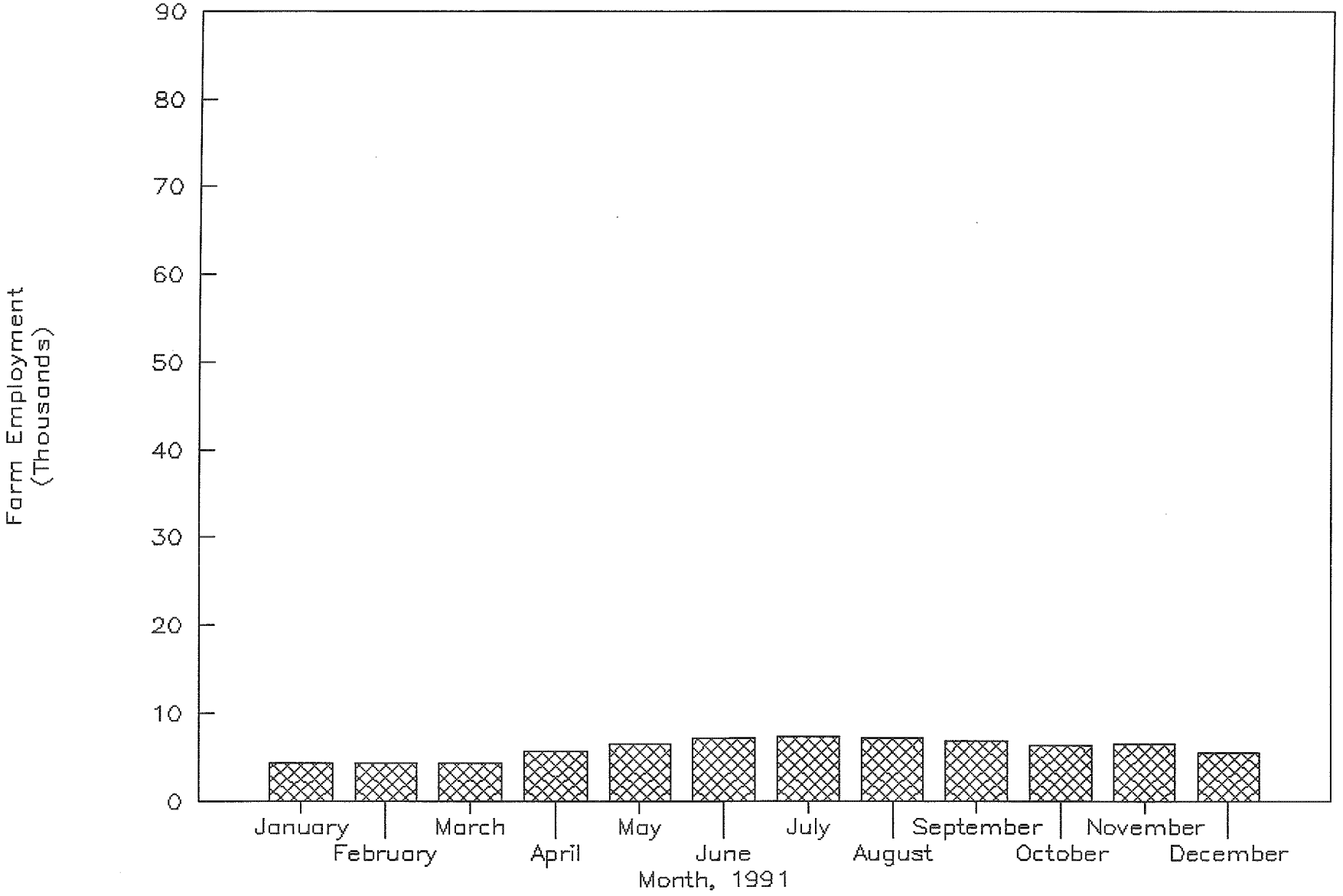


Figure 8

Madera County Farm Employment, 1991

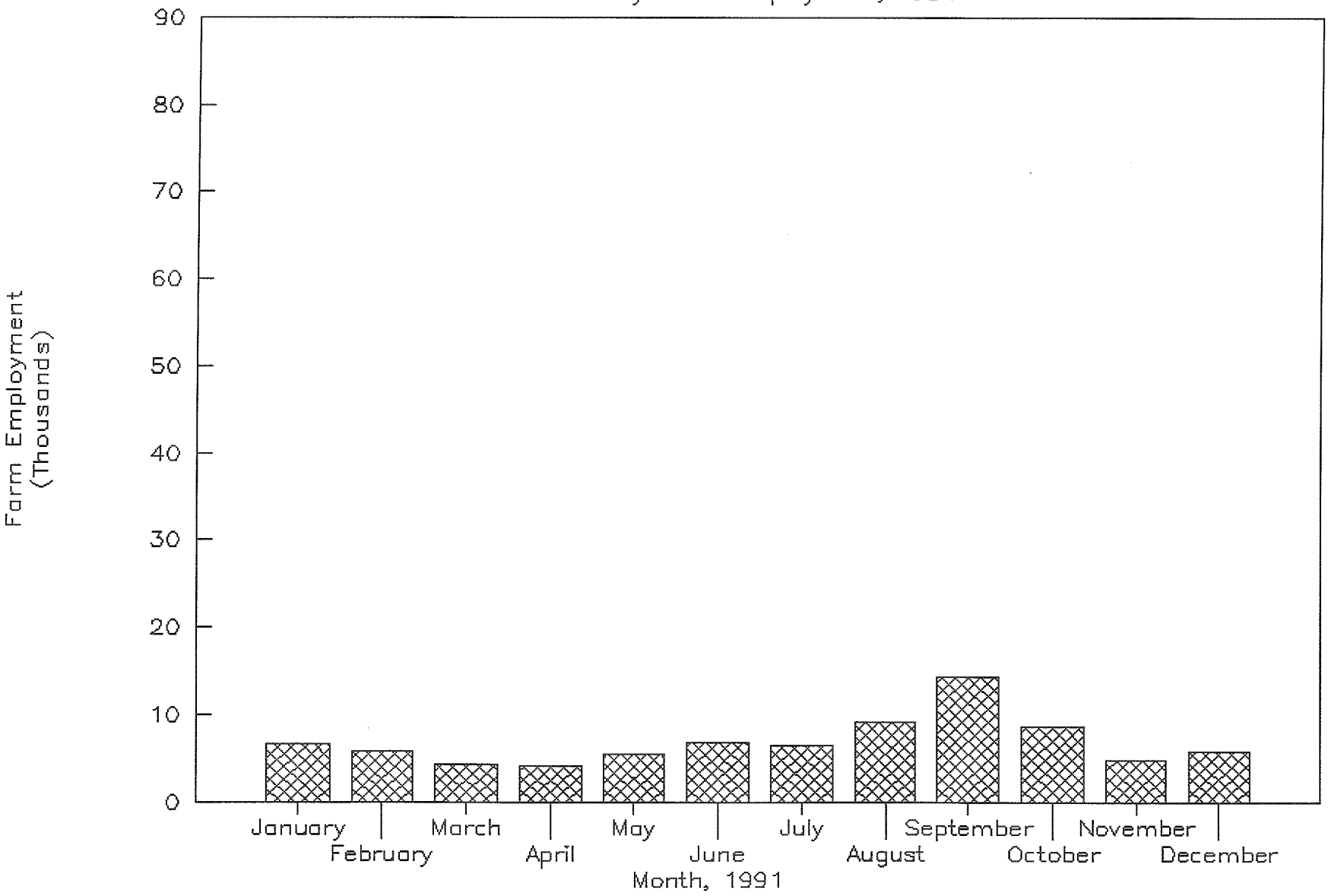
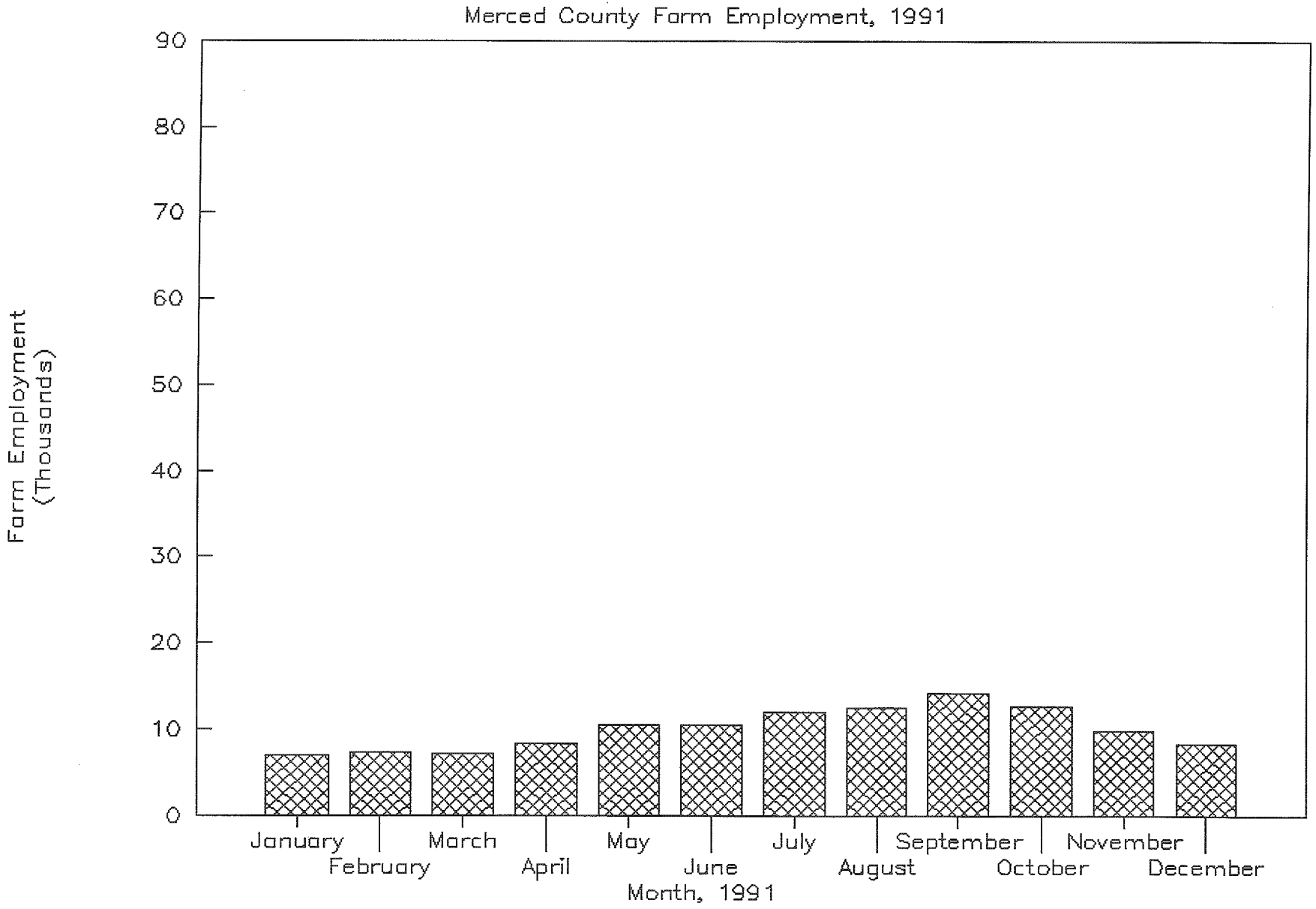


Figure 9


Merced County Farm Employment, 1991
Farm Employment (Thousands)
90
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August
September
October
November
December
Month, 1991

Figure 10


Monterey County Farm Employment, 1991
Farm Employment (Thousands)
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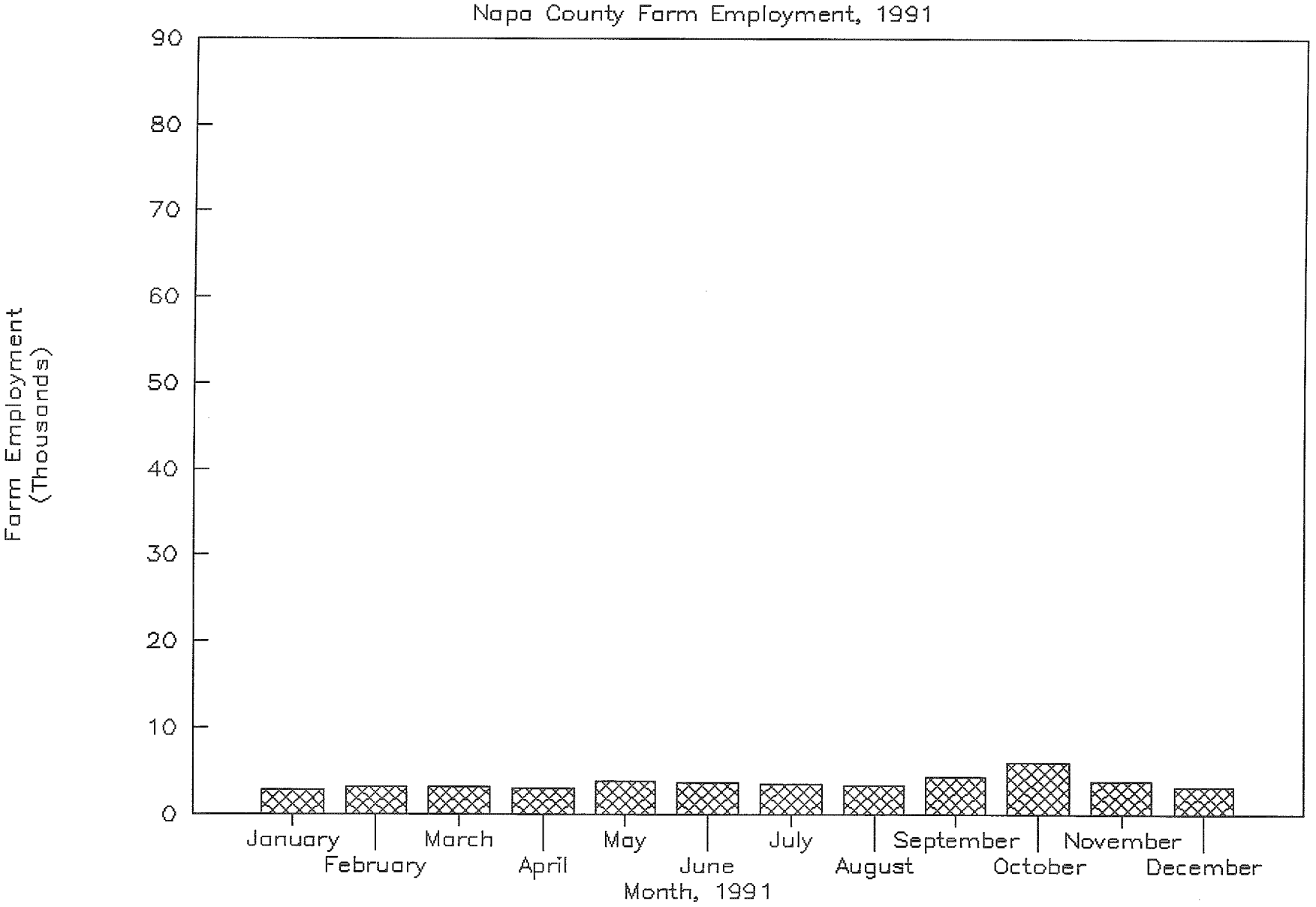
Month, 1991

Figure 11


Napa County Farm Employment, 1991
Farm Employment (Thousands)
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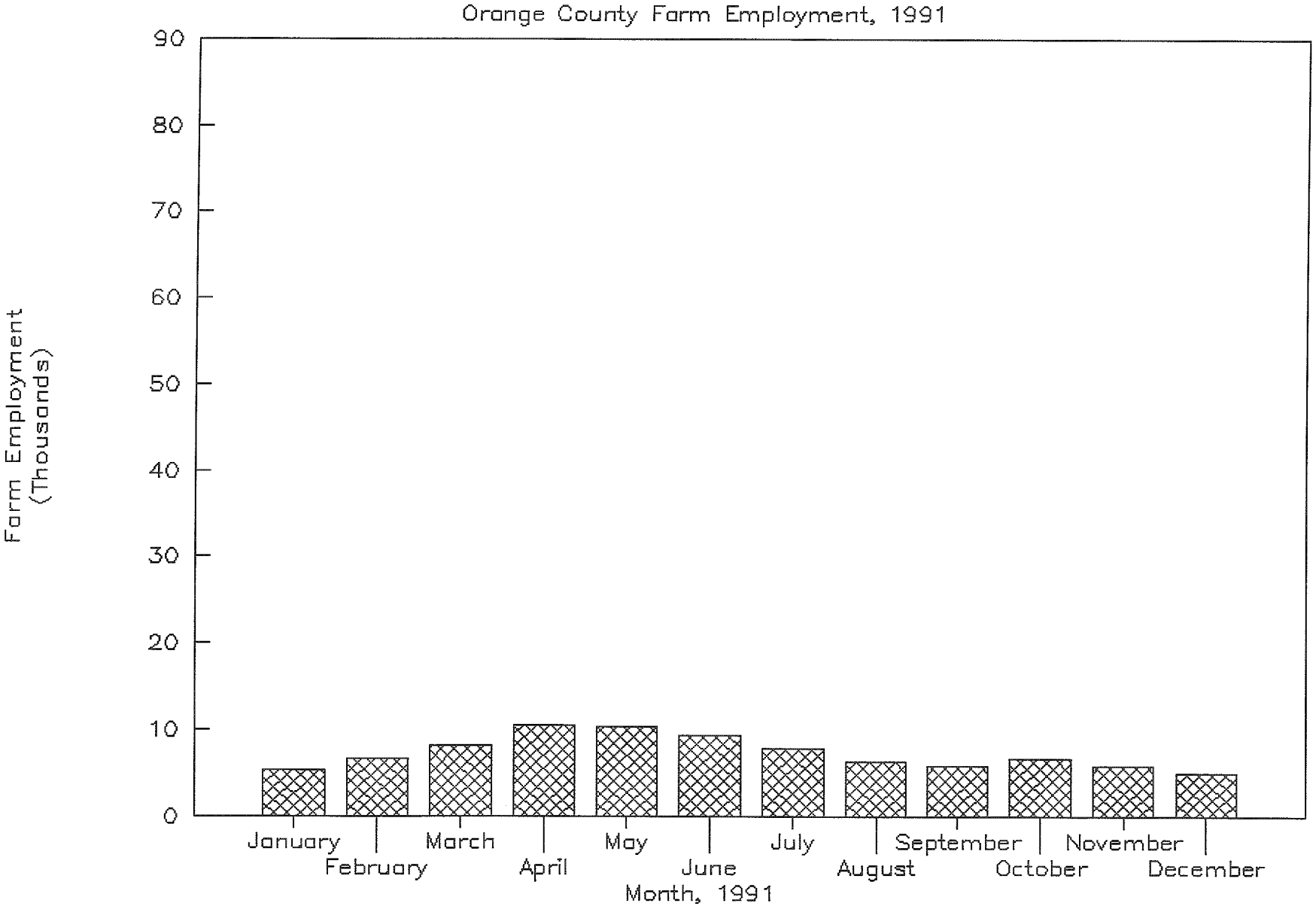
Month, 1991

Figure 12


Orange County Farm Employment, 1991
Farm Employment (Thousands)
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December
Month, 1991

Figure 13


Riverside County Farm Employment, 1991
Farm Employment (Thousands)
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Month, 1991

Figure 14

San Benito County Farm Employment, 1991

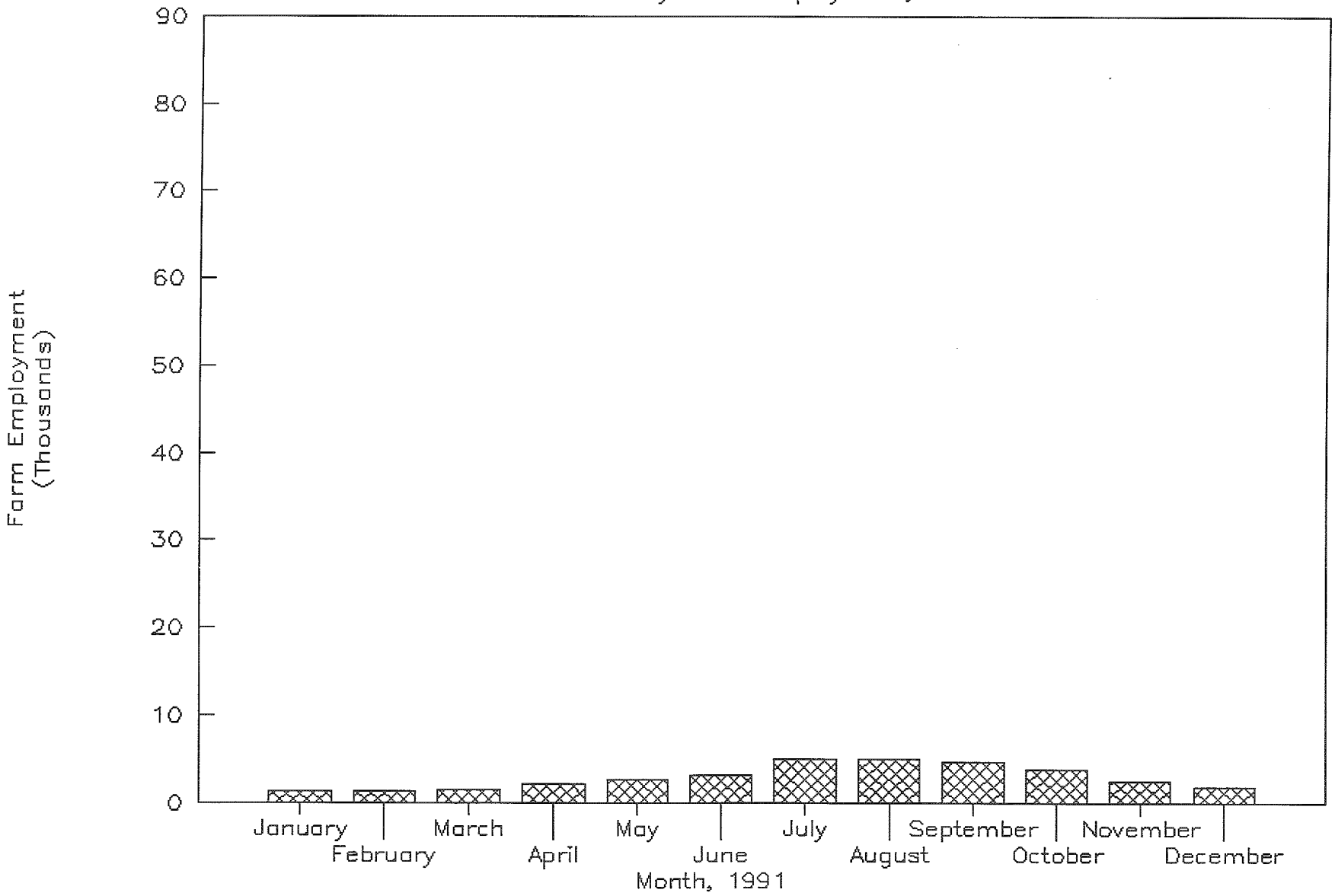
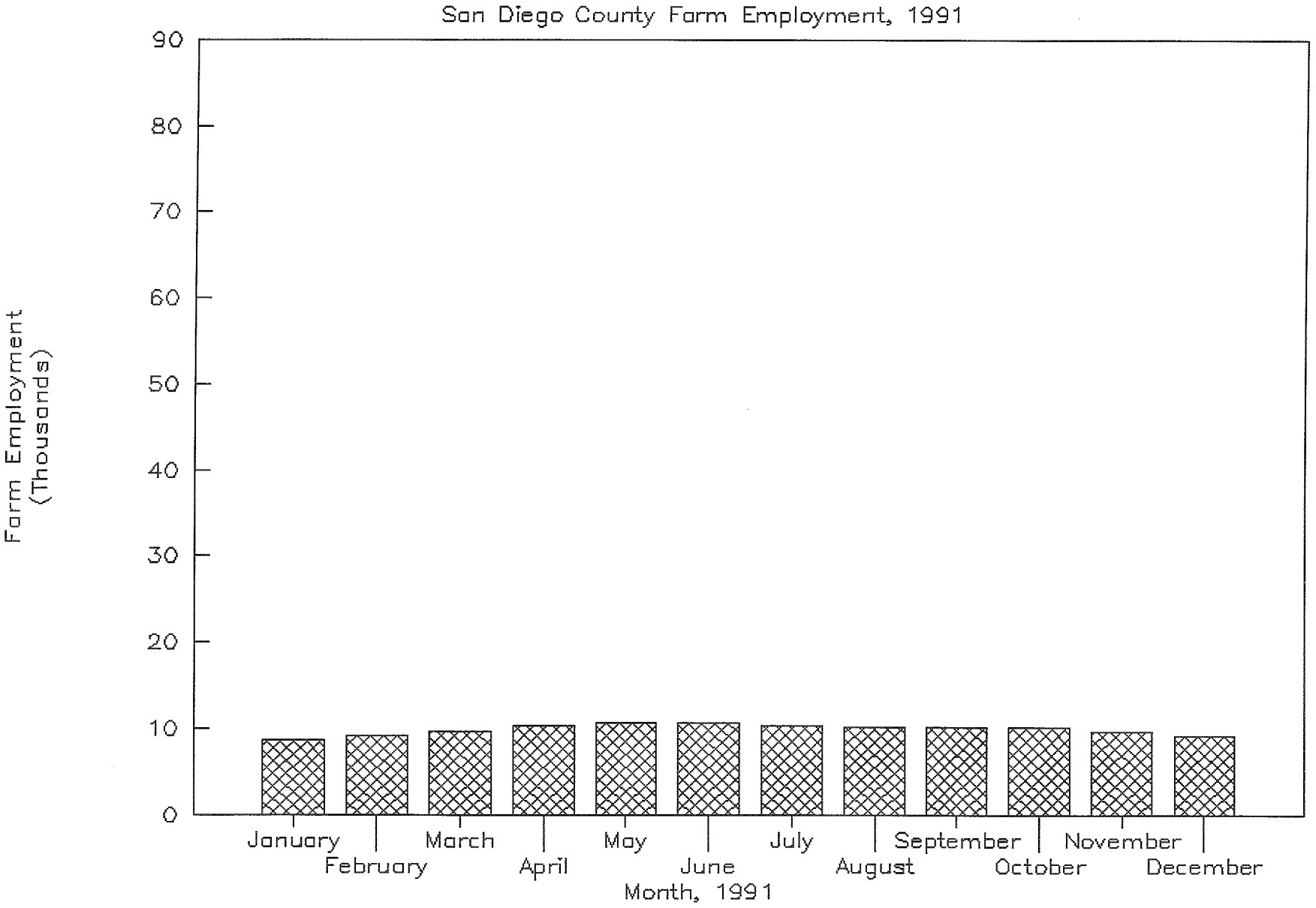


Figure 15


San Diego County Farm Employment, 1991
Farm Employment (Thousands)
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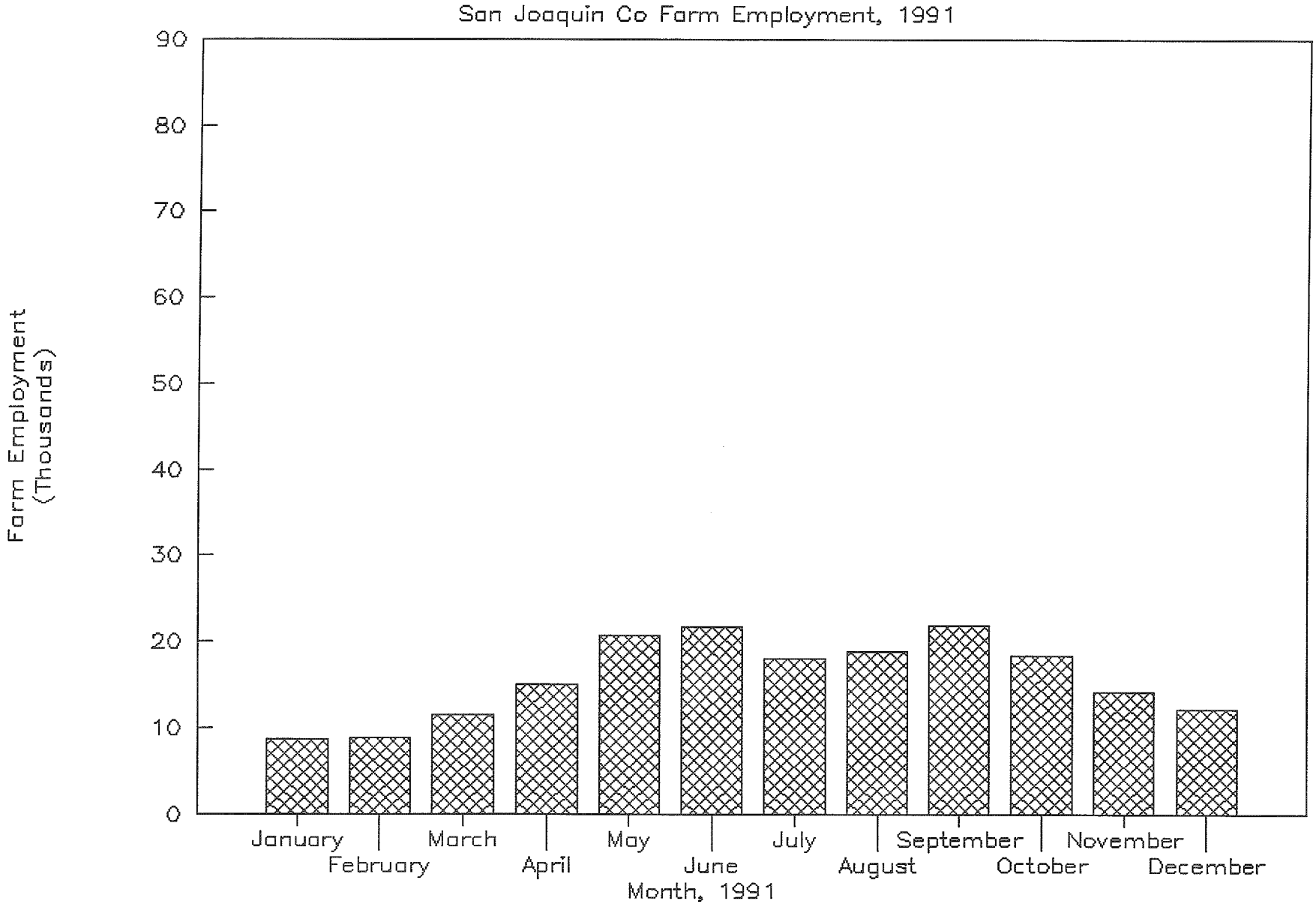
Month, 1991

Figure 16


San Joaquin Co Farm Employment, 1991
Farm Employment (Thousands)
90
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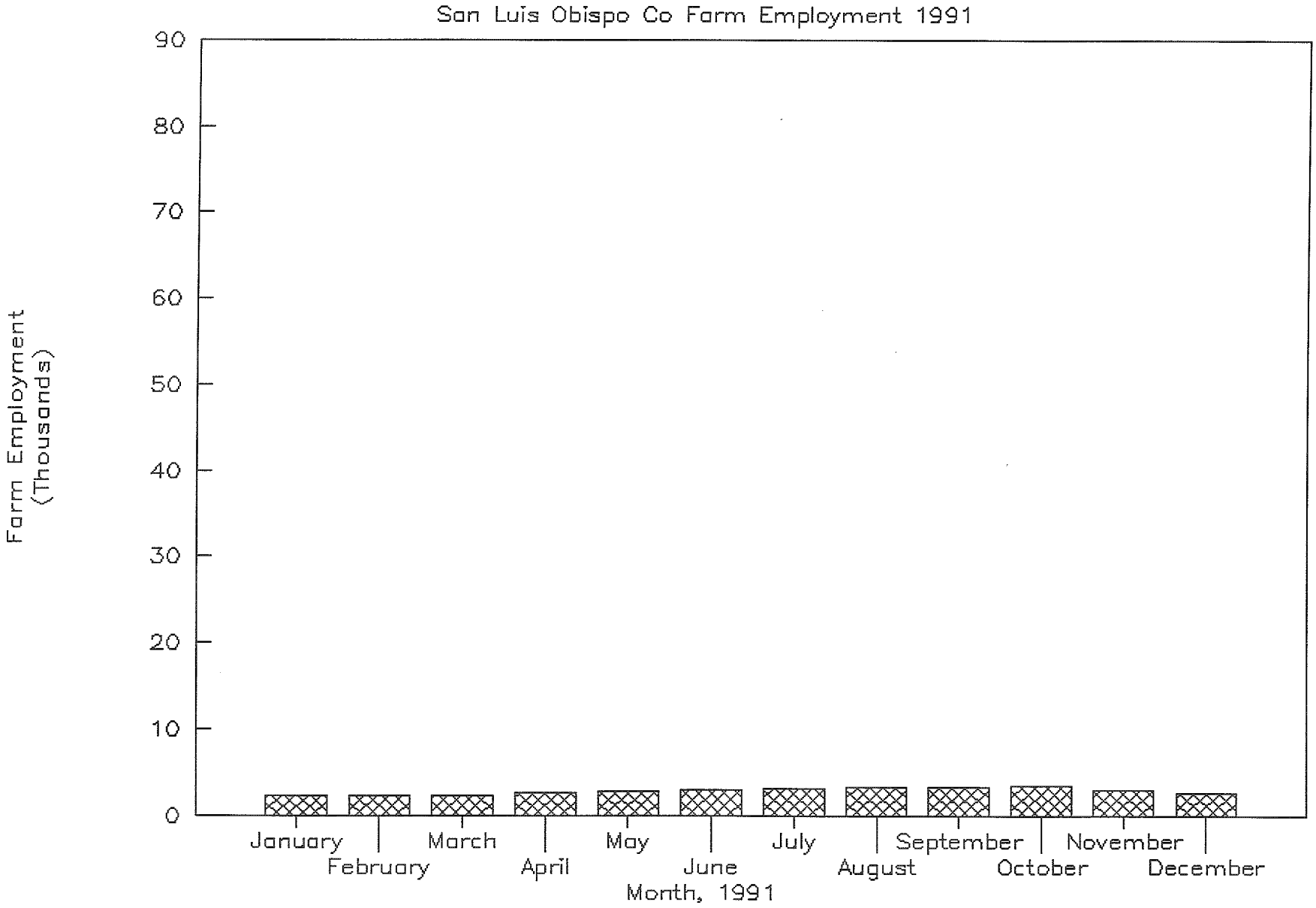
Month, 1991

Figure 17


San Luis Obispo Co Farm Employment 1991
Farm Employment (Thousands)
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December
Month, 1991

Figure 18


Santa Barbara Co Farm Employment, 1991
Farm Employment (Thousands)
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December
Month, 1991

Figure 19


Santa Clara Co Farm Employment, 1991
Farm Employment (Thousands)
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Month, 1991

Figure 20


Santa Cruz Co Farm Employment, 1991
Farm Employment (Thousands)
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Month, 1991

Figure 21

Sonoma County Farm Employment, 1991

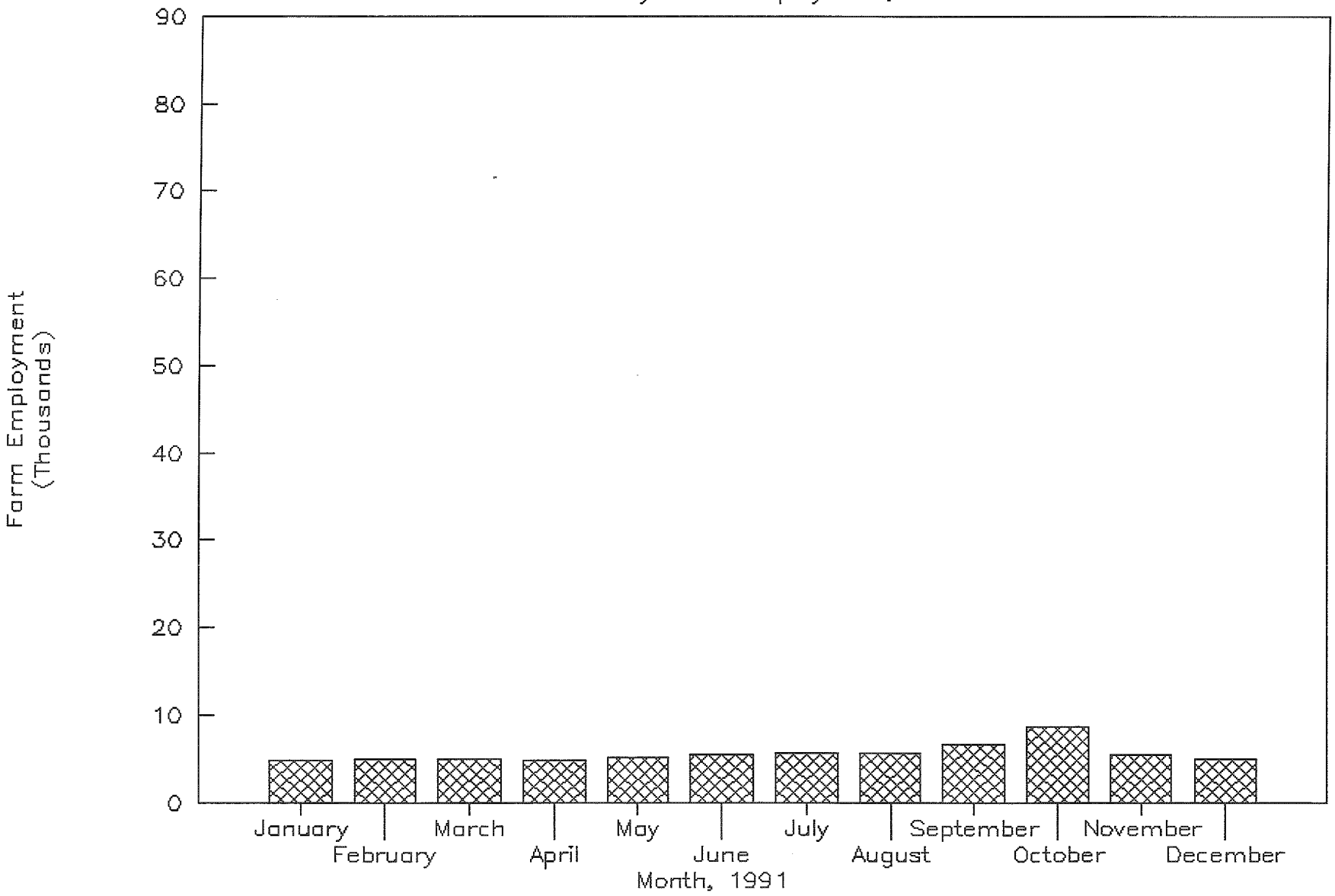

Figure 22


Stanislaus Co Farm Employment, 1991
Farm Employment (Thousands)
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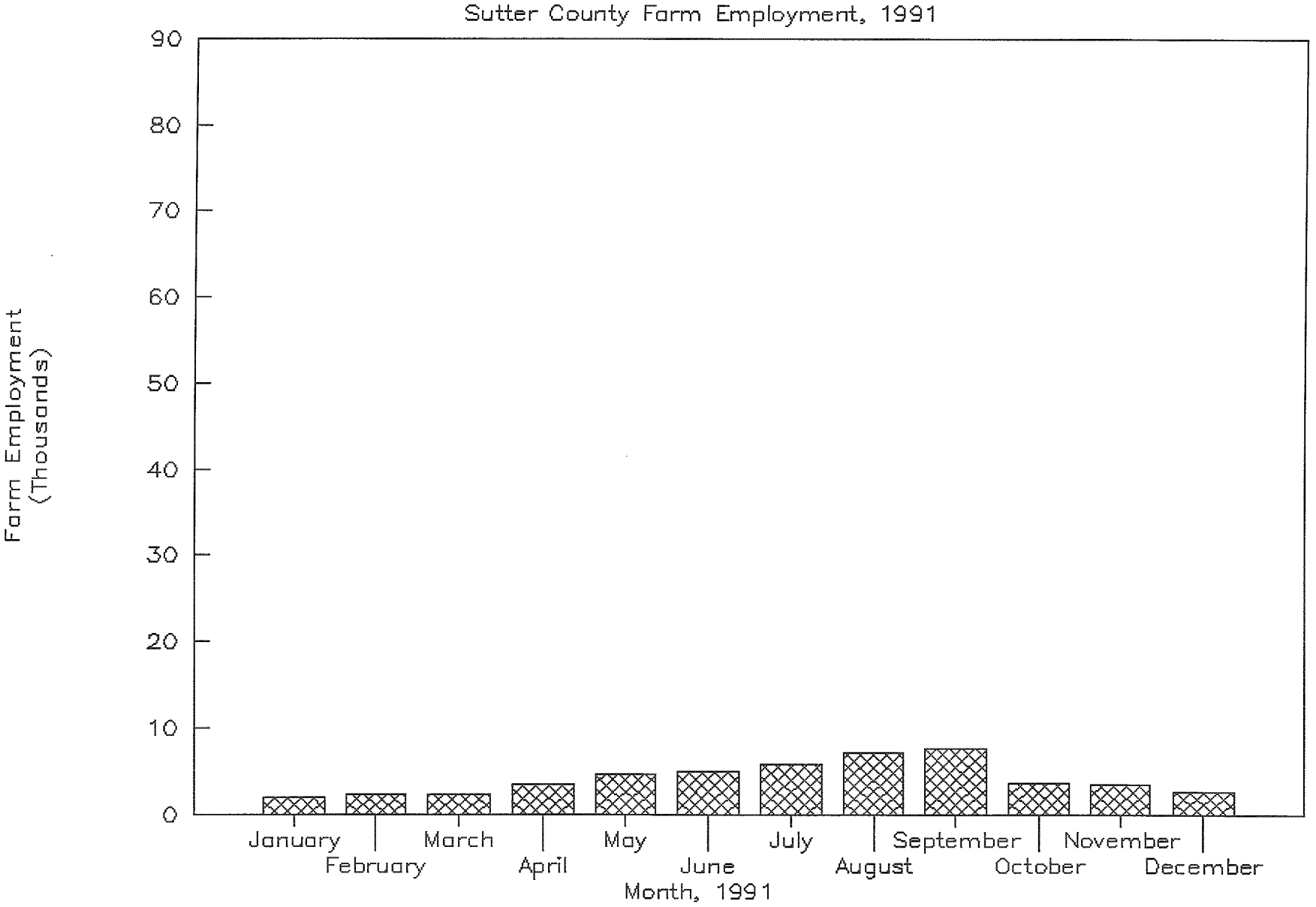
Figure 23


Sutter County Farm Employment, 1991
Farm Employment (Thousands)
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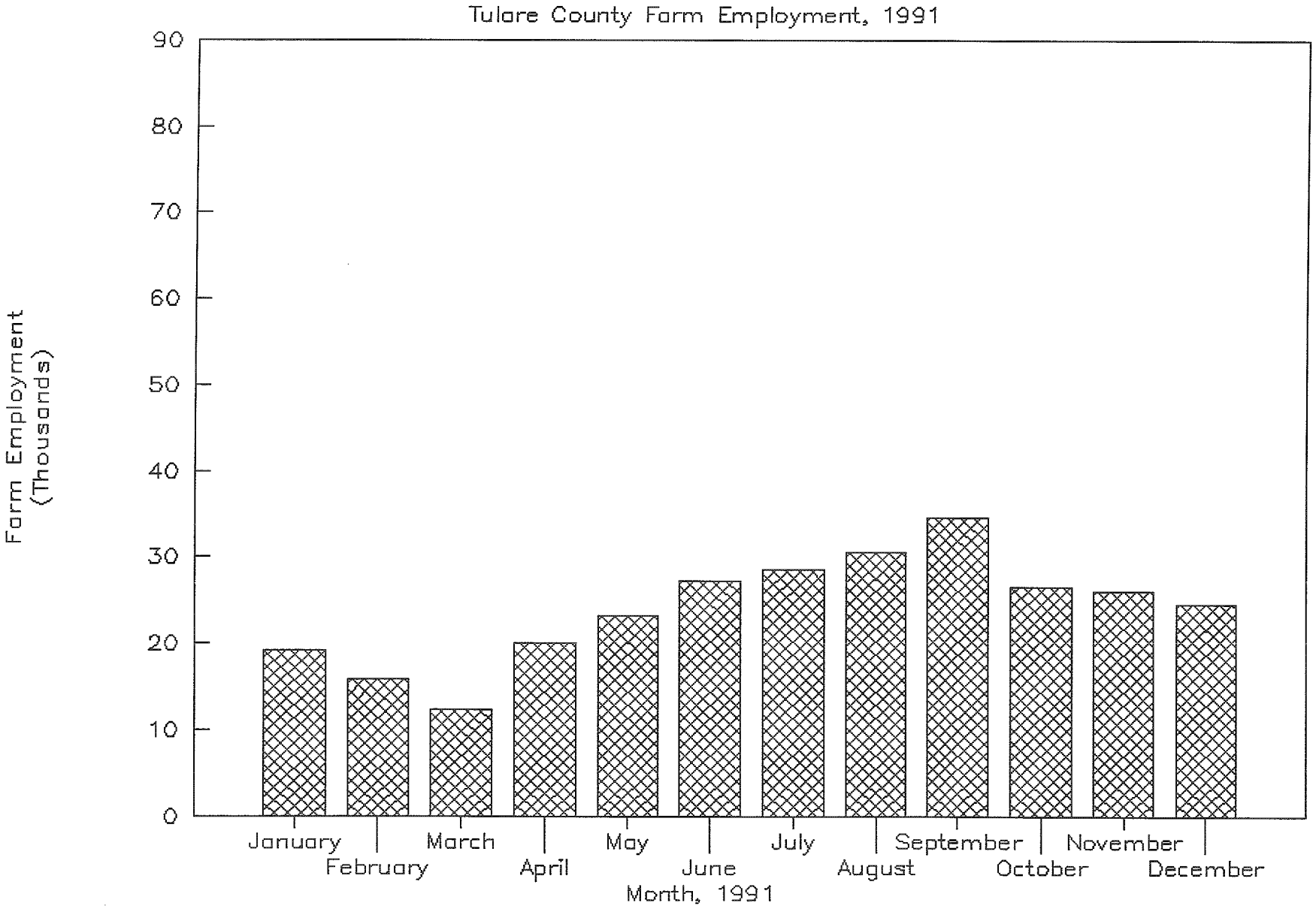
Month, 1991

Figure 24


Tulare County Farm Employment, 1991
Farm Employment (Thousands)
90
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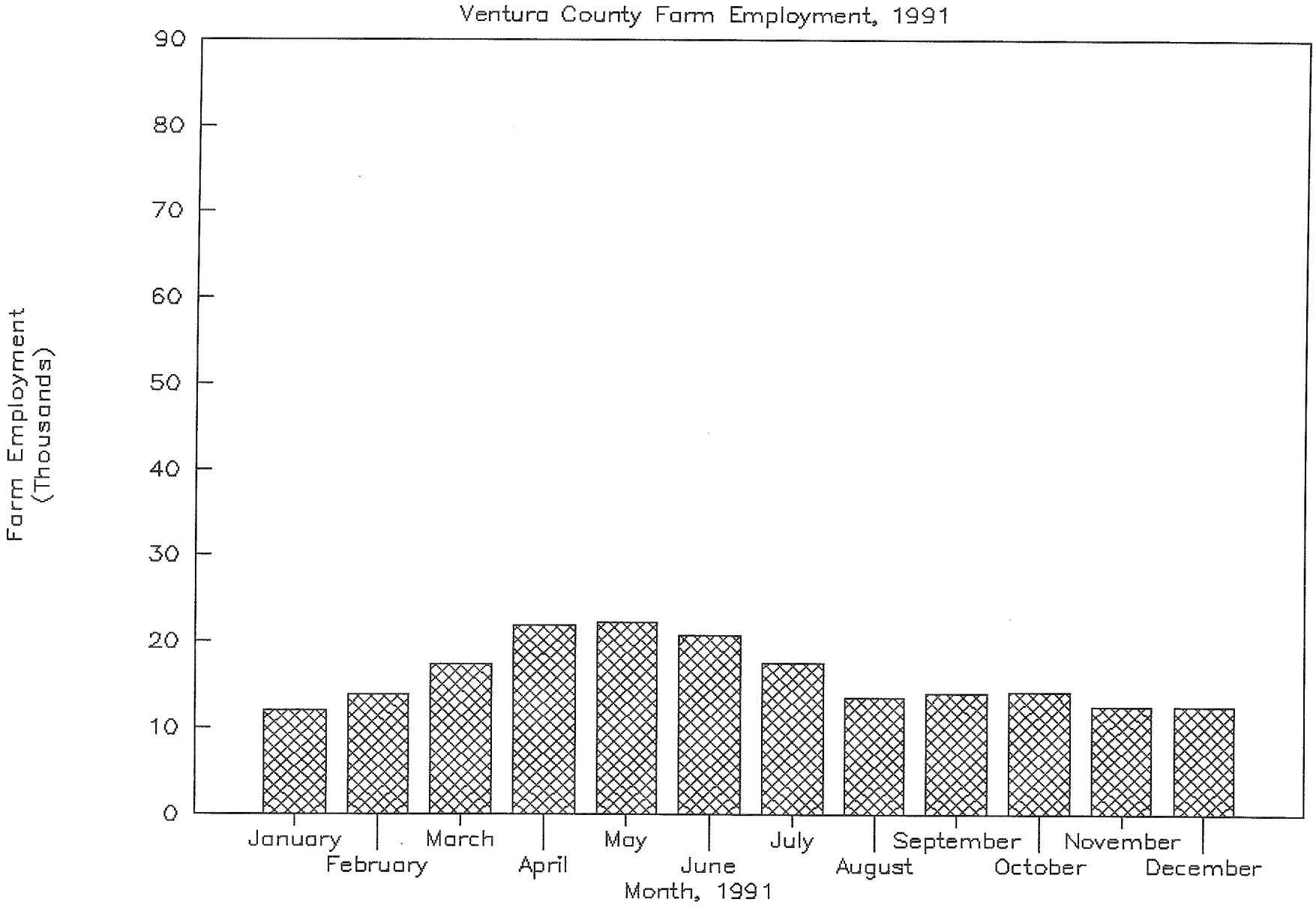
December
Month, 1991

Figure 25


Ventura County Farm Employment, 1991
Farm Employment (Thousands)
90
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30
20
10
0
January
February
March
April
May
June
July
August
September
October
November
December
Month, 1991

Figure 26

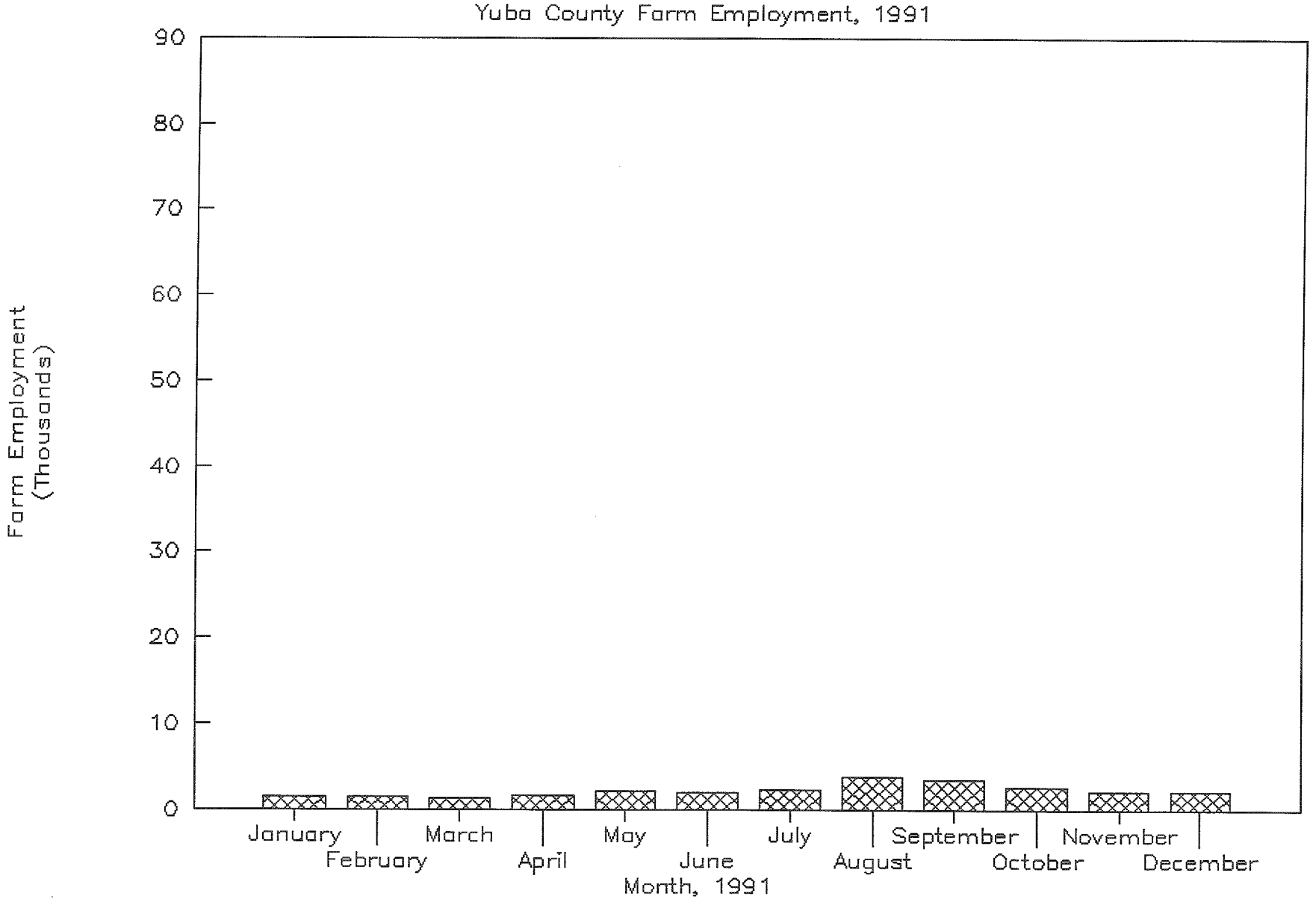
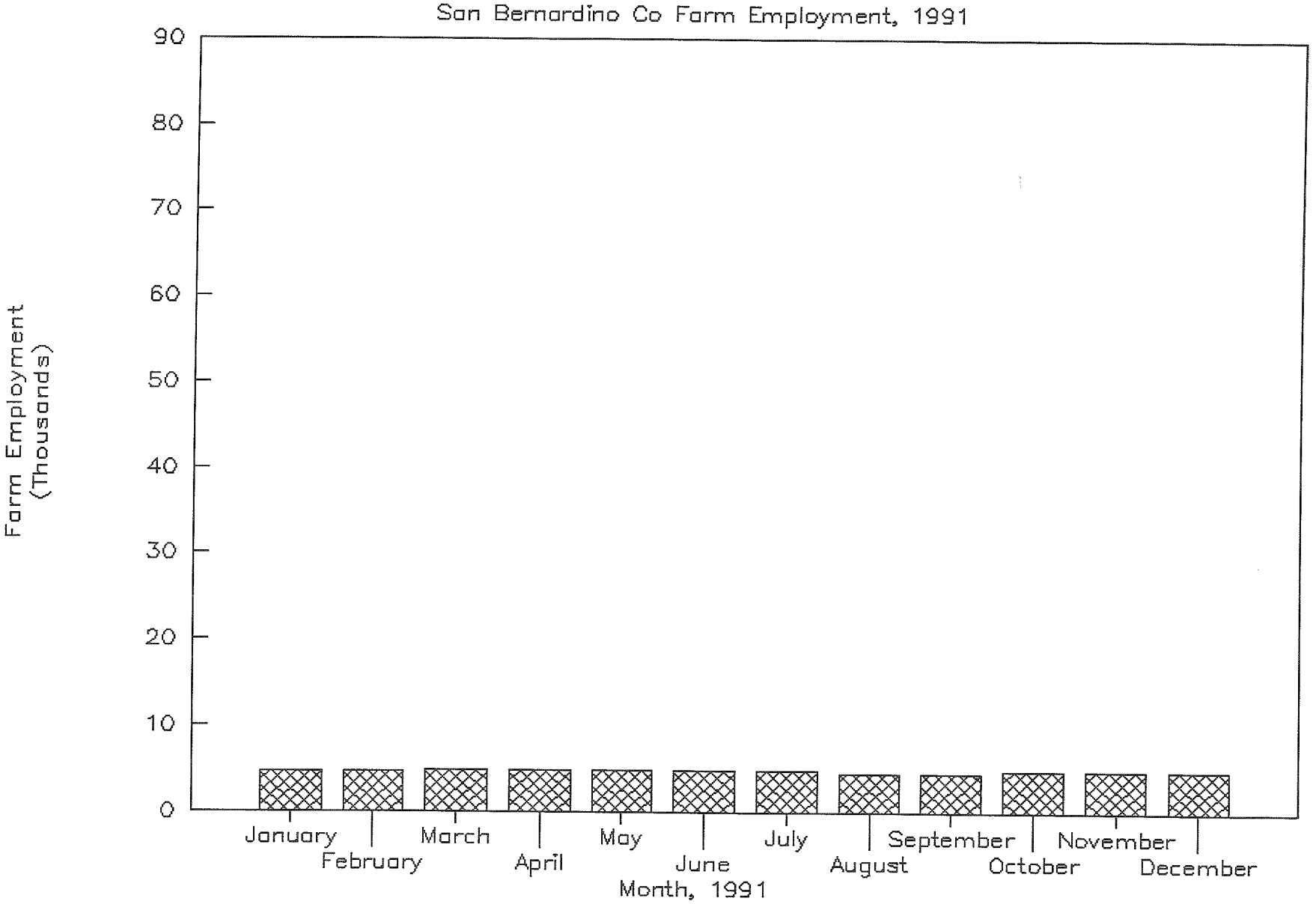

Yuba County Farm Employment, 1991
Farm Employment (Thousands)
90
80
70
60
50
40
30
20
10
0
January
February
March
April
May
June
July
August
September
October
November
December
Month, 1991

Figure 27


San Bernardino Co Farm Employment, 1991
Farm Employment (Thousands)
90
80
70
60
50
40
30
20
10
0
January
February
March
April
May
June
July
August
September
October
November
December
Month, 1991