FRBSF Weekly Letter

February 15, 1991

District Agricultural Outlook

Over the past several years, agriculture has been a strong performer in the Twelfth District economy. Although the number of acres farmed in the district has declined, farm income has steadily risen. Since 1985, District real net farm income has increased an average of 12 percent per year.

Conditions entering 1990 were relatively strong, with high prices and solid production for many of the District's most important crops. As 1991 begins, however, the situation has changed markedly. Last year's high prices spurred record plantings of many crops, pushing current prices sharply lower. In addition, the severe freeze in late December and early January and a fifth consecutive year of drought in California will worsen conditions for many farmers. This *Letter* discusses the outlook for agriculture in the Twelfth District in 1991 and describes the problems presented by the freeze and the continued drought.

Profile

The agricultural sector in the Twelfth District is remarkably diverse. In 1988, 32 District products brought in over $100 million each in cash receipts. The number and variety of crops tend to insulate the District's aggregate agricultural performance from problems with a single crop.

Within the District, 60 percent of the agricultural production takes place in California, by far the largest producer; the next largest producer, Washington, accounts for just 12 percent. Still, a number of important crops are grown outside California: Idaho grows 22 percent of the nation's potatoes; Washington produces 42 percent of the nation's apples; Oregon grows all of the nation's grass seed; Hawaii accounts for all of the U.S.'s pineapples; and Arizona produces a substantial amount of lettuce and citrus fruit.

Because of the Twelfth District's strengths and diversity, its agricultural outlook for this year differs significantly from the nation's. In the remainder of this *Letter*, the implications of the U.S. Department of Agriculture's annual projection are drawn for the Twelfth District's agricultural economy.

Livestock and dairy

Conditions in the District's cattle and dairy industries should remain solid in 1991, but growth will not be as strong as last year because of lower prices and deteriorating range conditions. Cattle and dairy are the highest value agricultural products in the Twelfth District. The USDA forecasts record U.S. meat supplies in 1991, with beef production up 1 percent. The District's cattle-on-feed numbers are down 10 percent from a year ago, however, and drought conditions will likely force many cattle into feedlots soon. Combined with lower prices for most dairy products, growth in cash receipts may be lower in the District in 1991.

Field crops

The top five District field crops (cotton, wheat, hay, barley, and rice) accounted for $4 billion in cash receipts in 1988, 14 percent of total District receipts. Prospects for these crops in 1991 are worse than a year ago. These are crops in which the West faces abundant competition from other areas of the country, and, indeed, the rest of the world. The USDA estimates that 1990-91 world competition will be strong, with production of many field crops reaching record levels which will push prices lower and weaken export markets.

A look at cotton and wheat provides a good feel for the District field crops outlook. Cotton production in the U.S. for the 1990-91 season is forecast to increase 22 percent, but because of low beginning stocks, total cotton supply will fall 7 percent. Arizona, which produces 30 percent of the cotton in the District, will probably enjoy the same bright outlook as the nation. California,

THE WESTERN ECONOMY *The Western Economy* is a quarterly review of economic conditions in the Twelfth Federal Reserve District. It is published in the *Weekly Letter* on the third Friday of February, May, August and November.

however, which produces the remaining 70 percent of the District's cotton, will likely see production fall due to the drought. Record world and U.S. wheat production has reduced prices 37 percent from last year and should lead to significantly lower wheat plantings in 1991. Lower prices weaken the District wheat outlook and hurt the overall agricultural picture in Idaho and Washington, where most of the District's wheat is grown.

Vegetables
The outlook for the District's 1991 vegetable crop is for continued strong production, although prices for some important crops will be much lower than a year ago. The majority of the nation's vegetables are grown in the Twelfth District, and two-thirds of the District's crop comes from California. Although the top five income-producing vegetables (lettuce, potatoes, tomatoes, broccoli, and carrots) bring in about $1 billion less than the top five field crops, these vegetables represent a significant share of national production.

Fruits and nuts
District fruit production will be lower in 1991, but rising prices should help keep cash receipts stable. Nut production in the District, however, will rise sharply, leaving prices lower. Over 60 percent of the nation's fruit and nut crop is grown in the Twelfth District. The top five District fruit and nut crops (grapes, almonds, apples, oranges, and strawberries) had a value of $3.4 billion in 1988. The USDA expects U.S. fruit and nut production to be mixed in the 1990-91 season, with an 8 percent drop in noncitrus fruit, a 26 percent increase in citrus fruit, and an 11 percent rise in nut production.

The drop in noncitrus fruit production is largely the result of reduced production of apples and grapes. In Washington, where 90 percent of the District's crop is grown, production is expected to drop 6 percent, which will push prices up. Production is expected to fall for all types of grapes in California, with raisins down 12 percent, wine grapes off 4 percent, and table grapes down 3 percent. The expected increase in U.S. citrus fruit production is mostly the result of high production in Florida and Arizona. With the loss of approximately 80 percent of California's $250 million navel orange crop to the freeze, California production is likely to drop significantly. Nut production, however, will be strong, especially California almonds and pistachios.

Freeze and drought
Weather problems temper the Twelfth District agricultural outlook more than ever this year. The year-end freeze on the West coast and the increasing likelihood of a fifth consecutive year of drought in California cause significant concern. Extreme cold in eastern Washington reportedly damaged much of the winter wheat crop. In California, estimates put the potential damage to agriculture from the freeze at $1 billion. Most of the naval orange, lemon, grapefruit, and artichoke crop was wiped out in California. In California's San Joaquin Valley, a majority of the avocado crop suffered permanent damage. On the positive side, farmers in Arizona and some areas of southern California where these crops were not destroyed will be able to take advantage of higher prices.

It is more difficult to estimate the potential impact from the continued drought in California. Many experts suggest that the losses could be worse than from the freeze. The fact that the drought is in its fifth year makes conditions especially bad. Reservoir levels already are at historically low levels, and, with just 20 percent of the normal level of precipitation having fallen by January, agricultural water delivery cutbacks may reach 75 percent or more. Normally, California farmers adjust to reduced water supplies by idling some land, reducing production of certain water-intensive field crops, and pumping more ground water. With ground water sources already heavily used in the last several years, pumping water this year will be even more expensive than usual. Even if, as in past droughts, these adjustments allow cash receipts to remain relatively unchanged, costs will be significantly higher for California farmers this year.

Summary
In 1991, Twelfth District agriculture faces its most difficult conditions in several years. High production of many field crops and vegetables has left prices sharply lower than a year ago. Severe weather problems darken the normally bright agricultural outlook in California.

Despite these concerns, the West's enormous diversity of crops will help it withstand such difficult conditions. Because numerous District crops have few competitors outside the District, reduced production quickly causes prices to rise. Thus, District cash receipts for many crops are affected less by reduced production than they would be in other parts of the country.

Stephen O. Dean
Research Coordinator

DISTRICT INDICATORS
(Seasonally Adjusted)

	90Q4	90Q3	90Q2	90Q1	89Q4	89Q3	89Q2	89Q1	PERCENT CHANGE FROM:	
									90Q3	89Q4
AGRICULTURE										
U.S. CROP PRICES, 1985=100	114.4	116.9	118.0	118.7	115.3	112.9	115.0	116.2	-2.19	-0.85
DISTRICT CROP PRICES, 1985=100	113.0	112.7	112.2	129.6	117.2	114.9	122.1	120.6	0.26	-3.58
FARM CASH RECEIPTS, MILLION $	N/A	2508.5	2389.6	2350.7	2534.2	2425.5	2511.8	2431.5	N/A	N/A
CATTLE ON FEED, 1985=100	84.1	88.0	90.2	90.5	90.4	92.5	90.5	93.4	-4.44	-6.89
CATTLE PRICES, CALIFORNIA, $/CWT.	63.9	65.9	68.3	63.6	62.4	62.7	61.8	61.7	-3.03	2.46
FORESTRY										
LUMBER PRODUCTION, MILLIONS BOARD FEET	1358.2	1564.3	1669.5	1767.2	1795.1	1787.9	1732.8	1630.0	-13.18	-24.34
NORTHWEST LUMBER INVENTORY, MIL. BOARD FEET	2315.2	2497.8	2620.5	2611.7	2523.1	2535.5	2444.5	2423.7	-7.31	-8.24
U.S. LUMBER PRICES, 1986=100	120.1	130.1	132.0	130.3	128.1	123.8	119.5	123.4	-7.71	-6.21
ENERGY										
SPOT PRICE OF OIL, $/BARREL	32.1	26.2	17.8	21.8	20.3	19.3	20.5	18.5	22.19	57.50
U.S. RIG COUNT	1084.1	994.1	1038.2	921.7	1002.3	878.2	828.7	765.3	9.05	8.16
DISTRICT RIG COUNT	73.6	74.4	72.8	56.8	69.2	73.4	68.5	62.9	-1.10	6.31
FUEL MINING EMPLOYMENT, 1985=100	78.2	79.7	80.1	80.1	79.6	80.1	79.6	78.3	-1.92	-1.77
U.S. SEISMIC CREW COUNT	118.0	123.9	128.4	126.1	128.0	131.3	129.9	137.3	-4.74	-7.81
MINING										
MINERAL PRICES, 1986=100	112.2	133.5	125.6	123.3	125.5	131.8	134.3	147.4	-15.99	-10.59
METAL MINING EMPLOYMENT, 1985=100	204.5	202.1	200.7	201.0	191.2	187.7	182.5	176.3	1.19	6.95
CONSTRUCTION										
NONRESIDENTIAL AWARDS	1411.4	1557.5	1585.5	1726.2	1469.9	1655.5	1519.8	1437.1	-9.38	-3.98
RESIDENTIAL PERMITS	18676	22758	25989	32741	33475	30509	31304	31065	-17.93	-44.21
WESTERN HOUSING STARTS, THOUSANDS	18.7	29.1	31.2	30.7	29.3	35.2	37.7	29.6	-35.85	-36.22
CONSTRUCTION EMPLOYMENT, THOUSANDS	1020.9	1031.4	1042.3	1052.3	1029.0	1013.9	1003.2	983.7	-1.02	-0.79
MANUFACTURING										
WAGES, CALIFORNIA, $/HOUR	11.6	11.6	11.4	11.3	11.3	11.2	11.1	11.0	0.71	3.15
EMPLOYMENT, THOUSANDS	3097.5	3124.2	3140.1	3163.0	3151.2	3151.9	3152.9	3148.0	-0.85	-1.70
DURABLES, 1985=100	100.5	102.0	103.1	104.0	103.6	104.0	104.1	104.0	-1.49	-3.04
CONSTRUCTION DURABLES, 1985=100	105.4	108.6	111.2	114.0	111.1	111.3	110.9	111.6	-3.03	-5.20
AEROSPACE, 1985=100	111.2	113.4	115.8	116.6	116.1	115.8	115.3	113.8	-1.88	-4.20
ELECTRONICS, 1985=100	94.1	94.3	94.5	95.2	94.8	94.7	95.2	95.7	-0.17	-0.67
SEMICONDUCTOR ORDERS, MILLIONS $, NOT S.A.	1151.4	1192.2	1309.7	1227.7	1197.9	1166.3	1300.0	1300.0	-3.42	-3.88
WHLS/RETAIL TRADE EMPLOYMENT, THOUSANDS	4854.0	4859.7	4830.6	4809.9	4755.0	4718.7	4681.8	4654.9	-0.12	2.08
RETAIL SALES, PACIFIC DISTRICT, MIL. $	25287	24983	24865	24685	23961	23815	23417	22730	1.22	5.53
SERVICES EMPLOYMENT, THOUSANDS	5408.1	5355.4	5281.8	5234.5	5191.9	5126.7	5065.6	5015.3	0.98	4.16
HEALTH CARE, 1985=100	127.4	125.5	123.8	122.6	120.6	118.9	117.7	116.9	1.50	5.65
BUSINESS SERVICES, 1985=100	113.2	113.3	113.6	113.0	110.3	109.8	109.4	108.8	-0.08	2.71
HOTEL, 1985=100	139.7	134.9	133.8	133.7	131.9	128.7	127.1	126.2	3.55	5.94
RECREATION, 1985=100	133.4	128.7	128.2	126.6	128.5	125.9	125.9	125.1	3.64	3.87
FINANCE, INSUR. AND REAL ESTATE EMPLOYMENT	1283.8	1278.5	1268.7	1265.5	1256.1	1244.6	1232.7	1227.4	0.41	2.20
GOVERNMENT EMPLOYMENT, THOUSANDS										
FEDERAL GOVERNMENT	616.3	633.1	657.1	626.9	623.1	619.0	625.2	624.8	-2.65	-1.09
STATE AND LOCAL	2845.5	2833.3	2784.5	2758.7	2731.8	2700.3	2663.6	2644.8	0.43	4.16

Data are weighted aggregates of available 12th District state data and are expressed as monthly rates unless otherwise noted. District indicator data are constructed by FRBSF research staff from public and industry sources.

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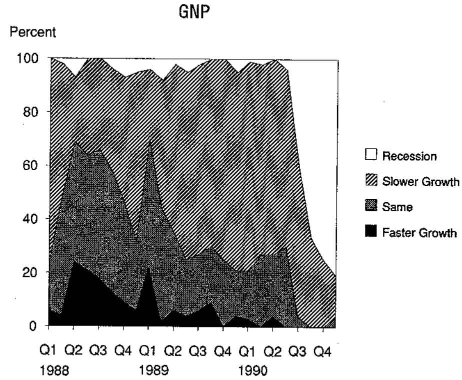
PERSONAL INCOME
ANNUALIZED PERCENT GROWTH RATES

	90Q3	90Q2	90Q1	89Q4	89Q3	ANNUAL GROWTH 1990*	1989	1988
ALASKA	6.0	9.9	5.9	-5.8	15.2	7.2	12.0	6.5
ARIZONA	8.8	5.6	6.7	5.2	5.6	7.0	7.1	5.9
CALIFORNIA	7.2	4.1	14.6	3.4	5.9	8.6	6.5	9.0
HAWAII	6.8	9.7	7.7	8.7	11.2	8.1	11.0	9.6
IDAHO	-0.1	3.1	18.4	14.6	0.1	6.9	8.7	9.3
NEVADA	12.5	6.0	11.7	11.3	9.7	10.0	12.7	14.1
OREGON	4.8	6.9	8.0	11.0	5.8	6.6	9.1	9.4
UTAH	7.1	8.1	7.3	9.6	4.2	7.5	8.0	7.2
WASHINGTON	5.8	4.7	12.6	9.1	7.7	7.6	10.3	7.8
12TH DISTRICT	7.0	4.8	13.0	5.0	6.2	8.2	7.4	8.7
U.S.	5.0	5.3	8.7	6.3	3.6	6.3	6.6	7.4

* Year-to-date

Twelfth District Business Sentiment Index*
GNP



* The index is constructed from a survey of approximately 75 business leaders in the12th Federal Reserve District.

NON-AGRICULTURAL EMPLOYMENT
ANNUALIZED PERCENT GROWTH RATES

	90Q4	90Q3	90Q2	90Q1	89Q4	ANNUAL GROWTH 1990	1989	1988
ALASKA	2.9	0.4	3.4	2.8	-3.1	2.4	5.7	3.2
ARIZONA	1.9	3.6	1.4	4.6	5.2	2.9	3.0	1.6
CALIFORNIA	-2.1	1.3	2.4	3.2	2.5	1.2	2.4	4.2
HAWAII	3.5	-0.5	3.1	1.9	3.4	2.0	5.5	3.7
IDAHO	4.4	2.0	-1.3	9.2	7.0	3.6	6.1	5.1
NEVADA	7.9	7.3	0.1	9.6	8.9	6.3	8.5	7.9
OREGON	0.4	0.7	2.1	6.7	2.4	2.5	3.4	5.2
UTAH	4.5	2.2	7.6	4.0	4.0	4.7	4.7	3.9
WASHINGTON	3.7	2.0	2.1	6.0	6.0	3.5	5.9	4.3
12TH DISTRICT	-0.1	1.7	2.4	4.1	3.3	2.0	3.3	4.2
U.S.	-1.6	0.4	2.3	2.6	2.0	0.9	2.3	3.1

UNEMPLOYMENT RATES
AVERAGE QUARTERLY DATA

	90Q4	90Q3	90Q2	90Q1	89Q4	ANNUAL AVG. 1990	1989	1988
ALASKA	7.0	6.9	7.1	7.1	6.7	7.0	6.7	9.2
ARIZONA	5.5	5.3	5.3	4.8	4.6	5.2	5.2	6.3
CALIFORNIA	6.5	5.5	5.2	5.1	5.1	5.6	5.1	5.3
HAWAII	2.8	2.5	2.6	3.1	2.6	2.7	2.5	3.1
IDAHO	6.1	5.8	5.9	5.0	5.0	5.7	5.1	6.1
NEVADA	5.8	4.6	4.9	4.5	4.8	4.9	5.0	5.1
OREGON	6.0	5.8	5.0	5.1	5.5	5.5	5.7	5.8
UTAH	4.4	4.5	4.7	4.3	4.1	4.5	4.2	4.9
WASHINGTON	5.5	4.9	5.2	5.5	6.2	5.3	6.2	6.2
12TH DISTRICT	6.2	5.3	5.2	5.1	5.1	5.4	5.2	5.5
U.S.	5.9	5.6	5.3	5.3	5.3	5.5	5.3	5.5