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## Chickpeas in Southwestern Nebraska: Crop Diversification as an Economic Development Tool

In southwestern Nebraska, which traditionally carries wheat and barley on its dryland acreage, a move toward crop diversification is underway. Less traditional nonbase crops, such as soybeans, proso, sunflowers, and chickpeas (garbanzo beans), are being planted on a trial basis. This article examines the potential of one of these alternative crops (chickpeas) as a tool to strengthen a weakened rural economy.

Area residents see the diversification of agriculture and the creation of value-added agricultural products as their main vehicle for economic stabilization and development. The successful adoption of a nontraditional crop would provide both diversification and increased utilization of existing community resources (food and feed processors).

This research was conducted to assess the potential contribution of chickpeas as an alternative crop. Some local farmers already have made trial plantings. The crop appears to have three advantages: it yields higher per acre gross revenues; it is a nonprogram crop; and there are several area dry edible bean processors and feed processors whose facilities could be used to process value-added products from the crop.

Chickpeas are a drought-tolerant crop suited to growth on dryland acres. They need only about 20 inches of rain per year. They are the third most important pulse (grain legume) crop in the world, widely grown for their edible seed, and used worldwide for food. India grows almost 90 percent of the world's production, which was 6.2 million metric tons in 1982.

### Demand and Supply

The U.S. chickpea market is characterized by steady demand, but no real growth. From 1982 - 1986, the average U.S. consumption of chickpeas (also called garbanzo beans or ceci beans) was 287,000 hundredweight (cwt) bags per year. On

Table 1  
U.S. Garbanzo Consumption by Year (in 1000 cwt), 1982 - 1986

Year	1982	1983	1984	1985	1986	Average 1982-86	Avg %
Imports	191	298	266	211	257	244.6	85
U.S. Production	<u>60</u>	<u>47</u>	<u>19</u>	<u>39</u>	<u>48</u>	<u>42.6</u>	<u>15</u>
Total Demand	251	345	285	250	305	287.2	100

Sources: *USDA Vegetable Situation & Outlook Report*, November 1987, Crop Production, Annual Summary, NASS, USDA, 2/87 and 1/88, and California Ag Statistics Bureau.

average, 85 percent of the U.S. demand during this period was met by garbanzos imported from Mexico. There is some importation of Turkish garbanzos on the east coast on a regional level. Table 1 shows annual production in thousands of cwt for domestic and foreign crops.

Right now there is little export demand for U.S.-grown garbanzos. The Mediterranean countries, which are the heaviest users, prefer a smaller, darker bean than the bean that currently is grown here. Some South American countries (particularly Venezuela, Peru, and Columbia) offer a potential market for the U.S. beans, and there is some demand for the beans in Taiwan, Japan, and Korea.

In years when native crops are in short supply, there could be a greater opportunity to export. These markets are new, however, and demand levels are not yet established. Also, U.S. growers usually will face a higher transportation cost in supplying these markets. American production has been decreasing because of disease problems in the main growing areas (wilt in California and blight in Idaho). New resistant varieties are being developed, but at the current time there is no established high volume production area in the U.S. Western Nebraska offers a disease free growing site and an alternative to increasing dependence on imports.

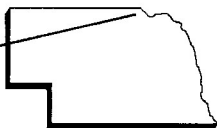
Solomon Tuwafe of the Plant Science Department at South Dakota State University believes the Sidney-Grant-Ogallala area is a good spot for raising chickpeas. He has conducted several field tests in South Dakota and at least one at Sidney. The Sidney field test and subsequent farmer trials in other parts of southwest-

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County of the Month

# Boyd



Size: 548 square miles, ranks 71st in size among Nebraska counties  
 Population (1987 estimate): 3,100, -6.8 percent change from 1980  
 Per capita personal income (1986): \$11,008, 86th in the state  
 Unemployment rate (1987): 4.1 percent in Boyd County, 4.9 percent in Nebraska  
 Net taxable retail sales (\$000, unadjusted for inflation): \$8,064 in 1987, a change of +3.7 percent from 1986; \$4,129 during January-June 1988, a change of +12.4 percent from the same period one year ago

Nonfarm employment (1987):	State	Boyd County
Wage & salary workers	659,233	596
	—(percent of total)—	
Manufacturing	13.3%	1.5%
Construction & Mining	3.9	1.3
TCU	6.5	7.6
Retail Trade	18.7	14.4
Wholesale Trade	7.1	9.2
FIRE	7.3	5.2
Services	22.7	11.6
Government	20.5	49.2
Total	100.0	100.0

**Agriculture:**

Number of farms: 442 in 1982, 476 in 1978  
 Average farm size (1982): 640 acres  
 Market value of farm products sold: \$18.5 million in 1982 (\$41,933 average per farm)

**Sources:**

Bureau of Census, *Area Measurement Reports*, 1970  
 Bureau of Census, *Census of Agriculture*, 1982  
 Bureau of Census, *Census of Population*, 1980  
 Bureau of Census, *Provisional Estimates of the Population of Counties*, 1986  
 Bureau of Economic Analysis, *Survey of Current Business*, April 1988  
 Nebraska Department of Labor, *Labor Market Summary Report*, 1987  
 Nebraska Department of Revenue, unpublished data.

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## Chickpeas (continued)

ern Nebraska established that chickpeas can grow in this area of the state.

### Market Channels

Buyers for garbanzos are located nationwide. These range from buyers of the raw beans to consumers purchasing value-added beans in the grocery store. Basically, there are buyers for two types of products: raw products and processed products.

Raw product buyers are most typically processors, packagers, or brokers. Processors buy beans from growers, clean, screen, size, and bag those beans and then resell them. Processors buy most of the beans growers have for sale. Although packagers and brokers generally buy the beans after they have been cleaned and bagged by the processors, they on occasion do make raw material purchases.

Processed product buyers can include processors, packagers, commodity brokers, canners, food brokers, and ultimately, retail consumers. On the first level, these buyers typically will be commodity brokers, packagers, or canners who are buying the raw beans in bulk or in 100 pound bags. The brokers usually will resell the beans just as they receive them to other brokers, to export markets, or to canners and packagers. The packagers repack the dried beans into one, two, four, ten, 20, and 25 pound bags for resale to food brokers and/or customers.

The canners typically process garbanzos into canned beans by soaking, cooking, bleaching, and otherwise preparing them for resale to food brokers or directly to their customers. Canners have high quality standards, so only the best beans will be accepted for canning. It is estimated that 60 percent of all garbanzos are canned, leaving 40 percent of the processed beans to be bagged and sold dried. There are approximately 50 canners of garbanzo beans in the country. The closest regional canner is in Iowa.

Once the beans are in packaged form (dry pack or canned (wet pack)), they will be resold by the packagers and/or brokers to wholesale, retail, and institutional food markets. A recent market research study from Arizona State University showed the distribution of chickpeas among the following market segments: 4 percent to retail, 9 percent to export, 14 percent to food service, 21 percent to packagers, and 52 percent to canners.

Margins usually run \$3 - \$5/cwt for processors (including the bag cost) and \$0.50/cwt and up for brokers. Beans of canning quality carry a price premium, estimated at \$2 - \$4/cwt. Prices are currently at an ebb, running around \$17/cwt to the grower and \$21/cwt cleaned and bagged to the processor. (For comparison, see Table 2 for average California dealer prices for 1978 - 1987.)

In the U.S., the main use for the chickpea or garbanzo bean is in the salad bar trade. Usually first among the extras added to lettuce to establish a salad bar, the garbanzo bean enjoyed rapid growth in demand for several years in the early 1980s. The salad bar trade appears to be leveling, however, and new uses need to be found. There is a growing, although regionalized, demand for the beans in many ethnic markets on which an aggressive

**Table 2**  
 California Garbanzo Beans:  
 Monthly Average Dealer Prices per Cwt by Crop Year

Crop Year	Monthly Price Range		12 Month Average Dealer Price
	High (Month)	Low (Month)	
1978-79	53.70 (Oct)	43.75 (Aug)	50.38
1979-80	42.75 (Sep)	34.58 (Aug)	37.71
1980-81	46.00 (Aug)	34.90 (Sep)	40.21
1981-82	50.12 (Nov)	40.50 (Aug)	47.45
1982-83	39.16 (Sep)	29.00 (Aug)	34.96
1983-84	33.50 (Dec)	28.50 (Jun)	30.61
1984-85	37.75 (Dec)	33.88 (Sep)	35.53
1985-86	40.00 (Feb)	30.50 (Jun)	34.77
1986-87	35.81 (Jan)	20.25 (Aug)	29.42

Source: Federal-State Market News Service, Stockton, CA.

marketing campaign could capitalize. Other uses of the garbanzo include a roasted snack food, a snack dip, a flour to be used in sweets, a binder in sausage, baby food, and a hot drink similar to coffee.

The human food market, however, is just one avenue of product sales. Several studies have been done that indicate that the potential use for chickpeas in the animal feed market may offer equally attractive opportunities for growers.

#### Use of Chickpeas for Feed

Although the nutrient composition can vary depending upon variety and environmental conditions, chickpeas have been shown to yield a high quality nutrient content for livestock feed. Chickpeas contain a high level of protein (about 21 percent), fat (5 percent), energy (85 percent - 98 percent total digestible nutrients), and fiber (7 percent). Thus, in the laboratory, chickpeas appear to be a high quality, well-balanced source of feed. The chickpea can be used for feeding swine and ruminants without cooking or heating.

Several independently administered experiments have demonstrated that the chickpea can be used to supply the major portion of both protein and energy for swine. Chickpeas have been used as a substitute for corn and soybean meal in the diet of growing Holstein heifers weighing 595 pounds. Chickpeas also have been fed successfully to Holstein-Friesian dairy cows to increase milk production.

In summary, chickpeas can be used to supply a large portion of both protein and energy needs for livestock and for up to 20 percent of the ration for poultry. Chickpeas can be used to supply 95 percent of the diet for sows and 89 percent of the ration for growing pigs without affecting growth and feed efficiency.

In these industries, chickpeas can be utilized when reliable, consistent supplies are available and when the price of the chickpea makes it the cheapest source of available protein. For most feed use, chickpeas would be priced on the basis of the value of their protein content, which would depend in part on the value of the protein source they replace.

#### Yield Estimation and Production Costs

Yield plots at Sidney in 1985 averaged about 2061 pounds per acre. This yield is comparable to that obtained by producers in established growing areas in Idaho and Washington. It should be noted that only about one half of the gross yield usually can be marketed as human food because the food market demands a strictly quality product. Quality means that the beans must be large in size, bright buff in color, have an absence of immature (green) beans, have no cracks or splits, be firm in texture but be edible and soakable, have no off taste, and must meet these requirements uniformly.

The problem of maintaining quality is the most important one facing growers in a new area such as southwestern Nebraska. A reputation for quality must be established early or processors and buyers will not be interested in buying those chickpeas for food. Thus, the exact percentage of a crop that will be purchased for human food consumption is likely to vary from grower to grower, from year to year, and from field to field. If rain falls when ripe chickpeas are in the field, none of the crop may meet the strict requirements of the human food market. Fortunately, the remain-

ing portion of the crop not acceptable to the food segment can be used as livestock feed.

The estimated cost of producing an acre of chickpeas is \$173, excluding land and management costs. (See Table 3.) The gross revenue per acre depends heavily upon the quantity and quality of beans produced and the market price for both food and feed. Under current conditions, a 2000 pound yield sent 50 percent to the food market @ \$17/cwt and 50 percent to the feed market @ \$125/ton (priced strictly as a protein source) would generate \$232 per acre gross income and make a \$59 per acre contribution to land, management, and overhead. This contribution could be increased to \$127/acre if the feed could be fed to growing cattle weighing about 600 pounds to achieve higher daily gains and increase feed conversion.

A break-even calculation indicates that the grower would have to receive \$8.65/cwt or \$173/ton just to cover all nonland costs on a yield of 2000 pounds per acre. (See Table 4.)

#### Conclusions

This analysis of the chickpea market shows that there is a window of opportunity for Nebraska farmers interested in growing chickpeas. Before leaping through that window, however, growers carefully should assess what lies beneath the window ledge.

#### The Ledge

The current chickpea inventory level is at 31 percent of annual consumption or two years' worth of domestic production. This high level is due to crops being held because of low prices

**Table 3**  
Estimated Cost of Producing an Acre of Dryland Chickpeas in  
Southwestern Nebraska

Item	\$ Cost
Seed @ 150 lb/acre @ \$.50/lb	75
Inoculation, Pesticide, Weed Control, Fertilizer	35
Tandem Disc	4
Chisel-Rod-Harrow	4
Plant	11
Rotary Hoe	2
2 Cultivations (If planted in 30' rows)	7
Combine	17
Truck	3
Hail Insurance	15
<b>Total Nonland Costs</b>	<b>173</b>

**Table 4**  
Estimated Per Acre Dryland Contribution  
For Land, Management, and Overhead

I. Estimated gross revenue per acre assuming yield of 2000 pounds consisting of 50 percent for food market and 50 percent for livestock feed

Item	\$ Return if Feed Worth:	
	\$125/ton	\$260/ton
1000 Pounds for Food @ \$17/cwt	170	170
1000 Pounds for Feed	62	130
<b>Total Revenue</b>	<b>232</b>	<b>300</b>
Minus		
Total Nonland Costs	173	173
<b>Equals</b>		
Contribution for Land, Management, and Overhead	59	127

II. Break-even price needed to cover all nonland costs if yield is 2000 pounds per acre is \$173 per ton or \$8.65/cwt.

induced by Mexican imports. Mexican growers have a competitive advantage arising from inexpensive labor, which is used to hand sort the beans to ensure premium, uniform quality.

There is a slow learning curve with this crop, as it takes about five years experience to understand fully how to produce quality beans. Production problems include late season rainfall that damages the beans and the need to plow the crop residue after harvest to reduce blight. This plowing can cause problems with wind erosion and soil conservation measures. At the same time, chickpeas face competition for acreage from both traditional and alternative crops.

Consumption of canned garbanzos is on a slight decline. The dried garbanzos do not fit with today's minimum fuss lifestyle. The market channels are controlled by just a few processors, some of whom do not believe a good quality bean can be grown in Nebraska. That prejudice must be overcome. At the same time, the consistency of crop quality must be appraised realistically.

### The Window

U.S. chickpea production is in a state of change. The blight problems in Washington and Idaho, coupled with the wilt problems in California, are limiting domestic production. It will be one to five years before blight resistant seed is available to current growing areas. That opens a window of opportunity if Nebraska growers can keep the garbanzo growing areas disease free.

Nebraska growers enjoy a \$1/cwt freight cost advantage to Midwest markets. If and when prices increase to make Nebraska beans competitive with Mexican crops, this advantage still will exist. Chickpeas are a dryland crop that can be grown on some idle acres in Nebraska. Land costs for production are cheaper here than in other areas of the U.S.

Chickpeas useful only for animal feed could be used in hog and cattle rations with minimal processing and transportation cost. Moreover, the feed market may become a primary market for some producers as herdsmen looking for least cost inputs begin using more chickpeas.

Chickpeas could be promoted by publicizing new uses in the health food and ethnic food markets. For example, an appeal could be made to health-conscious consumers to eat more garbanzos because eating dried beans may lower cholesterol. Processors could address the ethnic food market by preparing the beans in different sauces or relabeling them to correspond with ethnic perceptions (i.e., selling them under their Italian name, ceci beans, to markets with high concentrations of Italian consumers).

### Recommendations

1. Interested producers should obtain another year of production experience on limited acreage to refine production practices and to provide further data to validate two things: that the production estimate of 2000 pounds per acre is a reasonable average and that area growers are correct in their belief that a consistent, high quality chickpea can be produced for the food market.

2. Commercial tests should be undertaken to verify the work done using chickpeas as animal feed. Two important, high value segments in particular should be tested: the 50 percent concentrate ration for beef calves and feeder cattle and the 95 percent

chickpea ration for baby pigs. If these feeding trials prove successful, these two market segments alone would offer sufficient economic attractiveness to warrant production on some nonwheat base acres in southwestern Nebraska.

3. The search for alternative crops does not begin or end with garbanzo beans. The search for economic stability in rural regions does not begin or end with the adoption of a single alternative crop, either. Nevertheless, the potential for strengthening a small segment of the Nebraska economy exists with this crop. Chickpeas do offer a higher per acre gross revenue than some traditional crops; they are free of program planting restrictions; and they offer potential economic benefit in two ways: by utilizing area food and feed processors, and by providing lower cost inputs to livestock producers.

*This article was written and researched by Ms. Lynn Samsel and Dr. Ray Marquardt. Samsel is a research associate and Marquardt is a professor of marketing and director of the University of Nebraska-Lincoln agribusiness program.*

## Review and Outlook

### National Outlook

In order to know where we are going, we need to know where we are. The public often displays a mistrust for economists because economists often disagree with one another. Although there is common ground on the statistics of where we are, the problem remains of whether the glass is half full or half empty. In this case, the question is whether we are headed for a recession or if we can maintain moderate growth indefinitely. Unfortunately, there is no clear cut answer to this question. Let us look at some of the issues.

Where are we? The best description is that we are in a period of slow, steady growth. We are experiencing the longest post-World War II peacetime expansion, although the recovery came after one of the deepest modern recessions in 1981-82. Growth rates now are moderate and fairly steady in the 3 percent range (see Table A). Many economists believe that moderate steady growth is easier to sustain and in the long run will have advantages over volatile growth rates.

If we were on the verge of a recession, what would be occurring? Classic business cycle analysis says that the basis of

**Table A**  
National Indicators

	Annual		Quarterly (SAAR)	
	1986	1987	1988 I	1988 II
Real GNP (% Change)	2.8	3.4	3.4	3.0
Real Consumption (% Change)	4.3	2.7	4.5	3.0
Housing Starts (Millions)	1.81	1.62	1.48	1.48
Auto Sales, Total (Million of Units)	11.4	10.3	10.8	10.6
Interest Rate (90 Day T-Bill)	5.96	5.82	5.76	6.23
Unemployment Rate	7.0	6.2	5.7	5.4

SAAR: Seasonally adjusted at annual rates  
Source: U.S. Bureau of Economic Analysis

a recession is an overheated economy. Evidence of such pressure is reflected in capacity utilization rates in the 82 to 84 percent range. Inventories of raw materials start to fall and prices of raw materials start to inflate, followed by intermediate materials and finished or consumer goods prices. High consumption rates and the inflation of consumer prices cause monetary authorities to react, even to overreact. The money supply is restricted, interest rates rise, the housing market, followed by consumer durable goods—often autos, falls. After enough bad news, business cancels and defers investment plans. The recession deepens until either consumers, investors, or government increases spending.

These classic business cycle arguments would lead us to expect high levels of capacity utilization. The economy is already there. Capacity utilization, as reported by the Federal Reserve, was at 83.8 percent in August. That should mean some increase in inflation. Table II shows little evidence of renewed or raging inflation, especially to anyone who remembers the late 1970s. Nevertheless, there seems to be a slight increase from the low rates of increase of late last year. But the pattern is puzzling—raw materials are inflating slowly and intermediate goods are increasing faster than finished goods.

The Federal Reserve has tightened in recent months. Short-term rates have risen by over one full percentage point in the last two months. Housing starts this year are below last year. The first half of this year saw housing starts at 1.48 million at annual rates, while last year's total housing starts were 1.62 million. Total real dollar consumption grew at 3.0 percent (annual rate) in the second quarter, down from 4.5 percent in the first quarter, but close to the 1987 gain of 2.7 percent.

Theses are mixed signals at best. Moderate, steady growth is continuing with little evidence of recession.

A recent *Wall Street Journal* consensus of 16 economic forecasters confirms continued moderate growth for the remain-

der of this year. Their forecast calls for real GNP to grow 3.4 percent and 2.9 percent for the third and fourth quarters of this year.

With the large and growing role of the service sector in our economy, does classic business cycle analysis have any relevance to today's economy? A full answer to that question is beyond the scope of this article. Briefly, the issues are as follows: services tend to be a more stable sector of the economy. There are few inventory oscillations in the service sector because inventories are minimal. Therefore, services should dampen the classic manufacturing-based business cycle. Downturns in a service economy likely will come from two sources: external shock, such as an oil crisis, or bad policy, such as a money crunch.

The manufacturing sector still can cause disturbances. It remains to be seen if it alone could cause a recession. A policy-induced recession is a real possibility.

### Nebraska Outlook

Even a casual driver along Interstate 80 has noticed that the fall harvest is underway. Milo crops were among the leaders. Farm cash receipts will be coming in the usual highly variable manner.

There is the added complication this year of drought relief loans and payments. Although Nebraska did not suffer as much as other hard hit areas of the Midwest such as eastern Iowa and large parts of Illinois, 18 counties on the north and east edges of the state did qualify for relief loans. Direct drought relief payments will take a while to process and may not show in Nebraska farm income this year. April to September rainfall reports show that parts of Nebraska received above average rainfall. Those farmers with good yield who have managed to lock in the high prices for corn and wheat resulting from the initial USDA announcement of the size of the drought impact on this year's harvest stand to make a handsome profit on their crops.

**Table I**  
Employment in Nebraska

	Revised July 1988	Preliminary Aug. 1988	Aug. % Change vs. Year Ago
Place of Work			
Nonfarm	665,316	666,598	1.3%
Manufacturing	92,582	93,362	3.1
Durables	45,990	46,513	5.7
Nondurables	46,592	46,849	0.6
Mining	1,875	1,848	3.4
Construction	25,711	25,785	-1.6
TCU*	44,257	44,446	2.9
Trade	170,559	171,866	0.7
Wholesale	48,375	48,242	2.3
Retail	122,184	123,624	0.1
FIRE**	48,228	48,342	0.3
Services	150,561	150,959	1.5
Government	131,543	129,990	1.1
Place of Residence			
Civilian Labor Force	818,292	818,528	-0.2
Unemployment Rate	3.4%	3.2%	

\* Transportation, Communication, and Utilities

\*\* Finance, Insurance, and Real Estate

Source: Nebraska Department of Labor

**Table II**  
Price Indices

	Aug. 1988	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U*			
(1982-84 = 100)			
All Items	119.0	4.0%	4.0%
Commodities	111.9	3.5	3.4
Services	126.7	4.5	4.5
Producer Price Index			
(1982 = 100)			
Finished Goods	108.8	2.7	2.1
Intermediate Materials	108.4	5.8	5.4
Crude Materials	97.3	0.8	3.1
Ag Prices Received			
(1977 = 100)			
Nebraska	152	14.3	10.3
Crops	135	60.7	29.4
Livestock	163	-0.6	3.7
United States	144	13.4	7.4
Crops	136	33.3	15.7
Livestock	152	1.3	1.5

U\* = All urban consumers

Source: U.S. Bureau of Labor Statistics

Nebraska retail sales increased in June 10.4 percent from May and 16.2 percent from year ago levels. The auto portion of sales was strong. Because the surge in Nebraska auto sales is partly tied to national rebate promotions and national auto sales in August slipped between promotions, Nebraska auto sales in August should slip when they are reported. Evidence through mid-September suggests a national return to high auto sales levels. Nebraska should follow that trend.

Projecting Nebraska's near future is harder than doing the same for the nation. Two major economic elements for the state's economy have opposite cyclical characteristics.

In Nebraska, the service sector accounted for 18.5 percent of the state's nonagricultural employment in 1987. That sector has been Nebraska's fastest growing employment sector, increasing by 177.8 percent from 1960 to 1987. The service sector is fairly stable over the long run, showing little cyclical behavior. When we add service-like sectors, a total of 82.8 percent of nonagricultural employment is in relatively stable and growing sectors. Those sectors are: transportation, communication, and utilities; wholesale and retail trade; finance, insurance and real estate; and government.

The other major economic force for Nebraska is agriculture, a highly volatile sector. Incomes from farm and farm-related industries vary due to the timing of federal payments, the harvest, decisions by farmers to delay or speed delivery to the market of either cash crops or livestock, export demands for grain and meats, volatility of commodity markets, and weather. All those factors combine to make it difficult to forecast changes in the state's farm income.

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**Table III**  
**City Business Indicators**  
**June 1988 Percent Change from Year Ago**

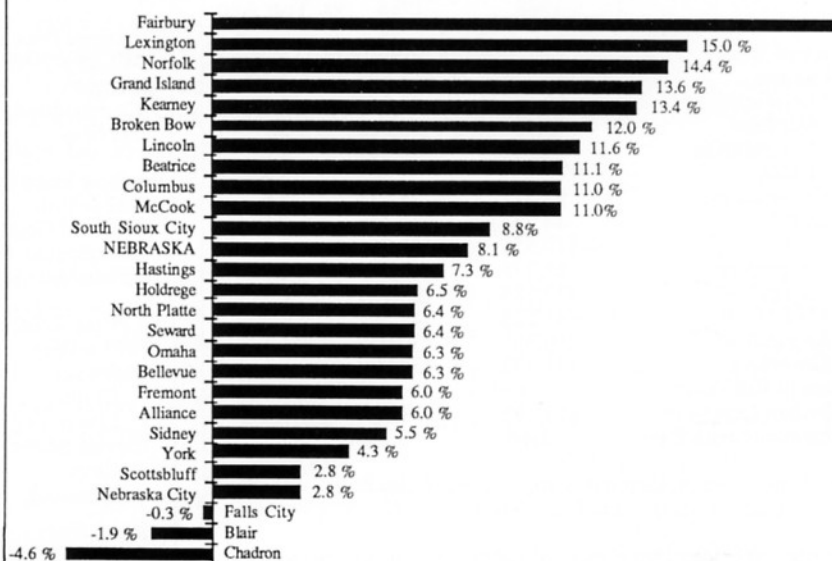
The State and Its Trading Centers	Employment (1)	Building Activity (2)
NEBRASKA	3.2%	16.0%
Alliance	1.4	21.3
Beatrice	3.7	229.6
Bellevue	2.9	23.2
Blair	2.9	-65.5
Broken Bow	6.6	73.6
Chadron	5.6	-78.4
Columbus	6.2	104.2
Fairbury	5.1	2,138.1
Falls City	3.6	9.5
Fremont	2.2	-11.2
Grand Island	1.3	72.3
Hastings	0.4	99.0
Holdrege	4.8	-7.3
Kearney	1.7	113.1
Lexington	2.1	365.3
Lincoln	1.6	28.8
McCook	1.3	391.0
Nebraska City	3.9	-16.0
Norfolk	2.5	13.3
North Platte	0.9	-18.6
Omaha	2.9	-3.9
Scottsbluff/Gering	2.5	-5.2
Seward	1.2	-36.9
Sidney	2.6	9.6
South Sioux City	1.0	45.2
York	3.1	-45.1

(1) As a proxy for city employment, total employment (labor force basis) for the county in which a city is located is used.

(2) Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes.

Sources: Nebraska Department of Labor and reports from private and public agencies.

**Figure I**  
**City Business Index**  
**June 1988 Percent Change from Year Ago**



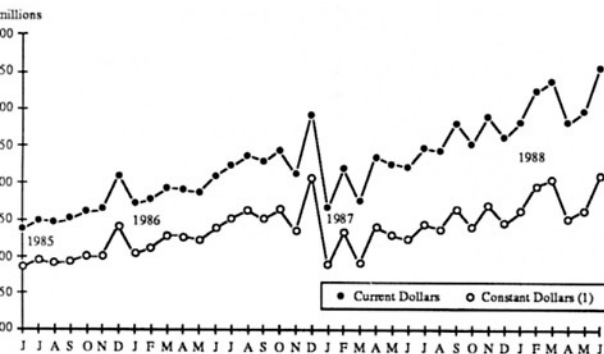
**Table IV**  
**Net Taxable Retail Sales of Nebraska Regions and Cities**

Region Number and City (1)	City Sales (2)		Region Sales (2)		YTD % Change vs. Year Ago
	June 1988 (000s)	% Change vs. Year Ago	June 1988 (000s)	% Change vs. Year Ago	
NEBRASKA	859,034	16.9%	988,337	16.2%	12.9%
1 Omaha	294,844	15.1	369,888	14.0	9.5
Bellevue	12,517	12.6	*	*	*
Blair	4,417	7.6	*	*	*
2 Lincoln	120,576	25.6	139,570	23.1	14.8
3 South Sioux City	4,338	18.4	6,324	11.1	25.9
4 Nebraska City	3,797	7.5	18,392	10.1	10.2
6 Fremont	14,572	16.1	27,045	11.3	16.7
West Point	2,448	23.2	*	*	*
7 Falls City	2,246	-2.2	8,879	5.0	8.4
8 Seward	4,050	22.0	14,787	15.2	13.3
York	6,125	16.5	14,562	18.9	13.4
10 Columbus	14,055	14.2	25,925	16.7	16.7
11 Norfolk	16,862	32.6	32,053	24.8	19.0
Wayne	2,617	16.8	*	*	*
12 Grand Island	31,238	27.2	44,553	21.0	17.4
13 Hastings	14,741	11.9	24,849	12.0	11.5
14 Beatrice	7,383	11.7	17,602	11.5	12.0
Fairbury	2,665	8.7	*	*	*
15 Kearney	17,087	24.0	25,101	19.2	20.7
16 Lexington	5,399	18.6	16,274	16.3	22.3
17 Holdrege	4,328	14.2	8,201	11.7	14.9
18 North Platte	15,597	19.4	19,867	19.3	18.7
19 Ogallala	6,141	32.7	12,503	22.7	14.5
20 McCook	7,111	9.6	10,611	7.0	20.6
21 Sidney	3,819	12.2	8,238	13.9	11.1
Kimball	1,957	10.1	*	*	*
22 Scottsbluff/Gering	16,187	7.7	23,593	7.6	7.6
23 Alliance	5,241	13.3	14,920	16.9	13.6
Chadron	2,943	3.9	*	*	*
24 O'Neill	4,046	32.1	14,564	24.3	17.8
Valentine	2,904	17.4	*	*	*
25 Hartington	1,431	9.1	8,430	11.3	10.8
26 Broken Bow	3,195	18.1	12,043	16.5	22.8

(1) See region map.  
 (2) Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales.  
 \* Within an already designated region.

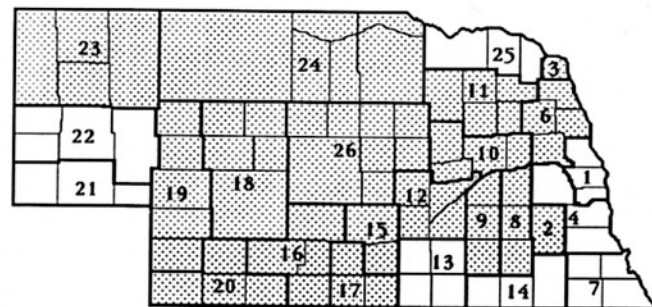
Compiled from data provided by the Nebraska Department of Revenue

**Figure II**  
**Nebraska Net Taxable Retail Sales**  
**(Seasonally Adjusted)**



The Consumer Price Index (1982-84 = 100) is used to deflate current dollars into constant dollars

**Figure III**  
**Region Sales Pattern**  
**YTD as Percent Change from Year Ago**



Shaded areas are those with sales gains above the state average.

# BScoreboard

Percent of same month one year ago

	State	Metro+	Nonmetro
<b>Motor Vehicle Sales (June)</b> Constant \$	11.4%	11.2%	11.6%
<b>Nonmotor Vehicle Sales (Aug)</b> Constant \$	13.4%	16.7%	8.6%
<b>Building Activity (June)</b> Constant \$	16.0%	7.9%	32.0%
<b>Employment (Aug)</b>	1.0%	2.5%	-0.6%
<b>Unemployment Rate* (Aug)</b>	3.2%	3.4%	3.2%

+Omaha and Lincoln

\*Unemployment is this month's rate, not a percent change from year ago

## Bureau Personnel Notes:

### John Austin & Merlin Erickson

The Bureau is proud to introduce John S. Austin, statistical coordinator, and Dr. Merlin W. Erickson, research associate. Merlin joined the Bureau staff on August 1, and John began September 1.

Fresh from graduate studies, John began his professional career as an instructor at the University of Wisconsin-Oshkosh teaching principles of economics, statistics, and quantitative methods. John then joined the Federal Reserve Board where he was assistant to one of the Board's seven governors. Next he joined Chase Econometrics as director of Chase's industrial price forecasting service. John has worked for two railroads: Union Pacific and Burlington Northern. John's last position was director of business economics at Burlington Northern.

John will be a regular writer for **Business in Nebraska's** "Review and Outlook" series. John also will write several lead articles.

Merlin served with USDA for 24 years working on water and related land issues. Merlin held a number of positions at USDA such as the Economic Research Service representative to the Water Resources Committee of the Great Plains Agricultural Council, economic consultant to the Nebraska Natural Resources Commission for the Water and Water Rights Transfer study, and Economic Research Service representative to the Nebraska Food and Agricultural Council. Merlin has a long list of publications that reflect his work.

Merlin is a native of Cuming County where he has farmed in the past. Merlin currently is assisting in the study of two agricultural topics: the economic importance of irrigation in Nebraska and the economic impact of the 1988 drought on the state. Merlin will help prepare research summaries for **Business in Nebraska**. Both studies are expected to be completed by the end of the year. In addition to Merlin's research responsibilities, he assumes a lead role in answering inquiries on Nebraska economic and demographic statistics.

F.C.L.

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Margo Young, *Editorial Assistant*  
John S. Austin, *Statistical Coordinator*  
David D. DeFruiter, *Statistical Technician*

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