University of Nebraska News
Vol. 47 No. 19

Business in Nebraska
Number 281, February 1968

PREPARED BY THE BUREAU OF BUSINESS RESEARCH, COLLEGE OF BUSINESS ADMINISTRATION

EXPORTS OF NEBRASKA MANUFACTURERS

Total exports of manufactured goods from Nebraska amounted to almost 55 million dollars in 1966, according to data revealed recently in the revised published report of a study made by the Bureau of the Census of the U. S. Department of Commerce. Figures for Nebraska fully confirm the spectacular increase in exports of the state's manufactured products reported in the August, 1967, issue of Business In Nebraska, and based on data collected in a Bureau of Business Research survey of a sample of Nebraska manufacturers. The national study also corroborates the local survey as to rapid-growth export industries in Nebraska, with both surveys showing high rates of increase in exports of all kinds of machinery, including agricultural equipment, and electrical machinery; fabricated metal products; instruments and related products; and transportation equipment.

Since the figures cited from the Bureau of the Census survey are for exports of manufactured products only, exports of unprocessed agricultural commodities obviously are not included. Nebraska's agricultural commodity exports in 1966, exclusive of manufactured agricultural products, are known, however, to have amounted to $205.3 million. This means that Nebraska with $54.9 million in value of manufactured exports and $205.3 million in agricultural commodity exports had total exports amounting to $260.2 million in 1966. There can be no doubt, then, that export trade is becoming increasingly big business in this state.

Export Index Is Second High in Region

Significant evidence of the growth of Nebraska manufactured exports is found in the fact that with the year 1963 taken as a base (1963=100), the state's export index in 1966 was 154, compared to 129 for the nation and 146 for the West North Central Region. In the seven-state region, the Nebraska index was exceeded by that of Missouri only, and was 8 and 9 index points above the Minnesota and Iowa figures, respectively. Missouri, Minnesota, and Iowa have, of course, for many years been more heavily industrialized than Nebraska.

Except in years in which a special survey is made by the Bureau of the Census, little is known about the origin of manufactured exports. Because there is widespread interest in Nebraska in development of export business, the Bureau of Business Research periodically conducts a survey among a sample of the state's exporters. This is the first time that the two studies have covered the same trade year, however, thus permitting comparison of data.

Figures in the table which accompanies this article are derived from revised data published in a "change sheet" issued late in December, 1967, to correct and supplement the figures published two months earlier under the title Survey of the Origin of Exports of Manufactured Products, 1966. Sales to foreign countries include: exports reported by manufacturing plants (which amount to 71 percent of the total value f.o.b.); exports through wholesalers or other purchasers whose intentions to export were not known to the manufacturers; and exports by small manufacturers not covered in a direct survey which included only plants with 100 or more employees. The Bureau of the Census decided upon 100 or more workers as its criteria for the direct survey because a previous study had shown that, nationally, manufacturing plants of this size accounted for a large proportion of total exports.

Intricate System Yields Complete Data

In states such as Nebraska, however, where manufacturing plants with fewer than 100 employees do a significant amount of export business, it is important to take into consideration all exports, including those not covered by the Census Bureau's direct survey of larger plants, only. Thus the figures reported in the accompanying table, although derived in part from an intricate system of allocations, give reasonably complete data on Nebraska total exports in 1966. Similarly, the figures on exports by major industry groups are believed to reflect the distribution of Nebraska exports with considerable accuracy.

Analysis of the national survey shows that Nebraska manufacturers are already represented in the major industry groups of most rapid export growth, except those in which lack of natural resources is a limiting factor. The plastics industry had a national export index of 140 from 1963 to 1966, contrasted to the regional index of 277, which is one of the highest shown. In 1966, the value of Nebraska exports in this category totaled $1.8 million but for reasons not explained, no export index was published for the state. It appears, however, that this is an industry well suited to the midwest and one in which more and more Nebraska industrialists might find export possibilities.

Food and Kindred Exports Rank First

As may be seen in the table, manufactures of food and kindred exports amounted to $27 million or almost half of Nebraska's total exports in 1966. The export index from 1963 to 1966 was a modest 125, but it was considerably higher than for the nation, 111, and the region, 114. The state rose from fifth place in index of exported food products in 1960 to third place in 1966.

Second high in total valuation of exports from Nebraska last year was the machinery category (exclusive of electrical machinery), which totaled $10.6 million. Evidence of the rapid increase of machinery exports in recent years may be found in the fact that this state's export index, 1963 to 1966, was 235 contrasted to almost 100 index points less in the nation and 69 points less in the seven-state region. Only Kansas, with an index of 237, exceeded Nebraska in the West North Central

(Continued on page 6)

Business Summary

November's dollar volume of business in Nebraska (Table I) rose 5.0% from November, 1966. Physical volume for the same period rose only 3.0%, thus giving us an indication of the extent of rising prices. Comparison with year-ago changes in the U.S. dollar volume (+9.5%) and the physical volume (+5.7%) indicates that prices may have risen less in Nebraska than for the U.S. as a whole. Nebraska's November increase in manufacturing employment (+3.7%) over November, 1966, is the 42nd consecutive month having an increase over the same month a year ago.

Retail sales for Nebraska (Tables III, IV, V) in December were only 0.6% above December, 1966. Hard goods for the total state remained below year-ago levels, yet the larger cities generally indicated significant increases over a year ago for the hard goods categories. While it is to be expected that December should have higher sales than November, the use of a seasonal adjustment factor results in a few cities and counties showing a decline from November. This, along with November's sales figures, would indicate that more of the Christmas buying is being moved to November.

The index of city business indicators (Table VI) rose in 16 cities over December, 1966.

All figures on this page are adjusted for seasonal changes, which means that the month-to-month ratios are relative to the normal or expected changes. Figures in Table I (except the first line) are adjusted where appropriate for price changes. Gasoline sales for Nebraska are for road use only; for the United States they are production in the previous month.

E. L. BURGESS

I. NEBRASKA and the UNITED STATES

NOV Business Indicators	Per Cent of 1948 Average		Per Cent of Same Month a Year Ago		Per Cent of Preceding Month	
	Nebraska	U.S.	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume of Business	270.8	333.1	105.0	109.5	89.8	99.6
Physical Volume of Business	190.8	219.1	103.0	105.7	94.0	101.1
Bank debits (checks, etc.)	214.2	336.3	103.6	108.6	93.0	100.0
Construction activity	217.5	175.8	96.2	103.3	71.5	98.1
Retail sales	141.6	180.4	101.1	101.7	96.7	101.1
Life insurance sales	364.4	440.9	105.2	112.3	111.3	96.9
Cash farm marketings	165.2	145.4	114.6	108.8	62.0	97.6
Electricity produced	334.9	452.8	106.7	107.8	92.7	103.2
Newspaper advertising	162.9	148.6	100.2	100.1	106.8	104.3
Manufacturing employment	164.6	126.7	103.7	100.0	102.2	101.3
Other employment	141.5	163.5	102.9	104.9	101.4	101.0
Gasoline sales	178.3	221.6	95.9	106.4	99.7	102.7

II. PHYSICAL VOLUME OF BUSINESS
Percentage of 1948 Average

Month	Nebraska 1966-67	U.S. 1966-67
November	185.2	207.3
December	194.2	209.6
January	189.1	213.4
February	206.7	214.6
March	198.6	216.3
April	191.6	217.6
May	195.7	216.2
June	198.7	219.5
July	196.9	217.6
August	203.2	219.5
September	202.8	216.5
October	203.0	216.8
November	190.8	219.1

III. RETAIL SALES for Selected Cities. Total, Hard Goods, and Soft Goods Stores. Hard Goods include automobile, building material, furniture, hardware, equipment. Soft Goods include food, gasoline, department, clothing, and miscellaneous stores.

DEC City	No. of Reports*	Per Cent of Same Month a Year Ago			Per Cent of Preceding Month	DEC City	No. of Reports*	Per Cent of Same Month a Year Ago			Per Cent of Preceding Month
		Total	Hard Goods	Soft Goods	Total			Total	Hard Goods	Soft Goods	Total
THE STATE	865	100.6	97.1	102.1	106.8	Fremont	33	107.3	102.8	111.1	111.0
						Fairbury	27	87.7	82.1	92.3	106.4
Omaha	90	106.2	110.8	102.4	111.6	Norfolk	34	103.2	108.3	98.6	124.0
Lincoln	83	111.0	115.6	107.3	97.2	Scottsbluff	37	88.1	76.4	98.1	94.5
Grand Island	32	106.7	105.0	108.3	123.2	Columbus	27	96.6	81.9	109.8	117.0
Hastings	31	106.2	106.8	105.7	108.0	McCook	21	96.5	100.7	92.0	101.4
North Platte	21	96.5	88.8	101.9	121.4	York	25	103.5	95.1	109.1	119.6

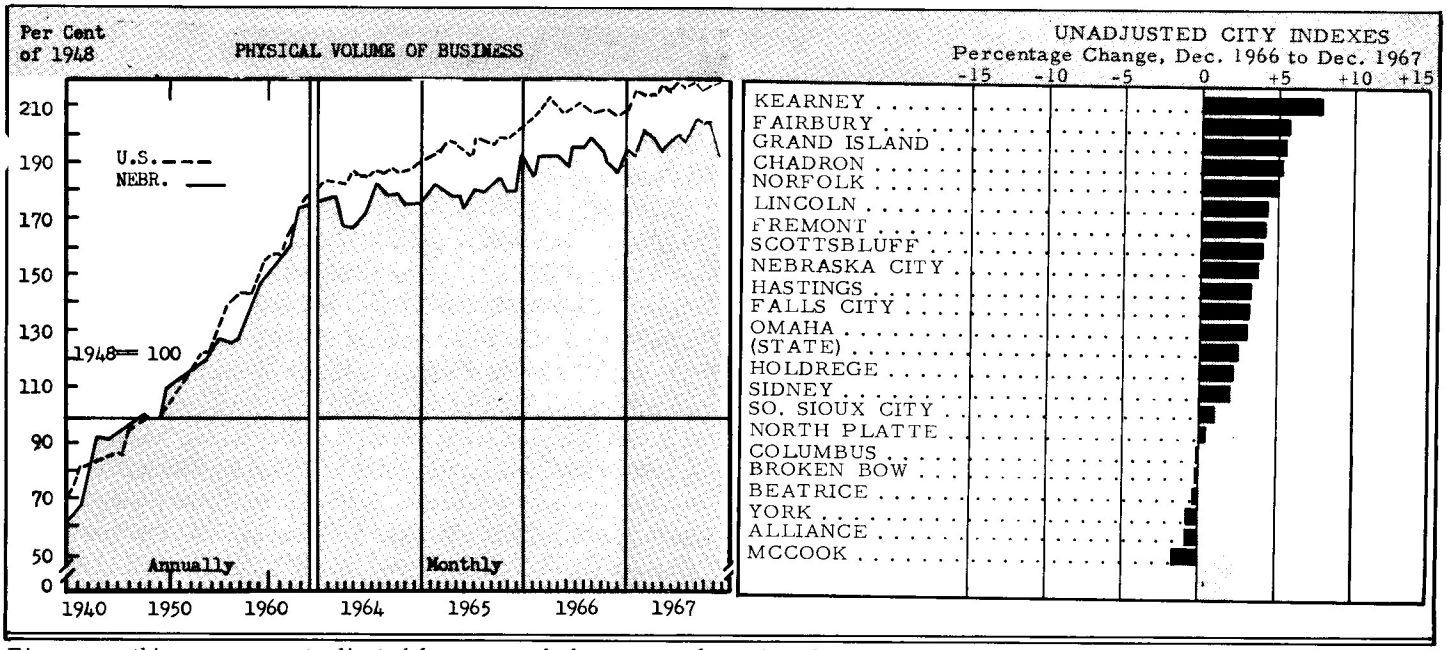
IV. RETAIL SALES, Other Cities and Rural Counties

DEC Locality	No. of Reports*	Per Cent of Same Month A Year Ago	Per Cent of Preceding Month
Kearney	22	107.0	123.5
Alliance	31	87.8	116.4
Nebraska City	20	98.4	111.5
Broken Bow	16	107.1	118.5
Falls City	18	103.9	114.1
Holdrege	19	94.9	113.4
Chadron	26	98.3	119.7
Beatrice	22	90.2	97.4
Sidney	24	94.7	121.2
So. Sioux City	13	105.7	126.6
Antelope	11	88.3	117.1
Cass	24	99.2	111.7
Cuming	14	79.2	82.6
Sand Hills**	25	101.6	108.9
Dodge***	12	104.9	116.9
Franklin	10	91.4	94.0
Holt	14	95.3	109.2
Saunders	15	94.1	96.6
Thayer	NA	NA	NA
Misc. Counties	58	95.4	109.8

V. RETAIL SALES, by Subgroups, for the State and Major Divisions

DEC Type of Store	Per Cent of Same Month a Year Ago			
	Nebraska	Omaha and Lincoln	Other Cities	Rural Counties
ALL STORES****	100.6	105.5	99.7	96.5
Selected Services	102.0	90.5	111.9	103.7
Food stores	105.5	106.9	104.9	104.6
Groceries and meats	108.8	108.1	111.1	107.1
Eating and drinking pl.	101.1	107.8	94.1	101.5
Dairies and other foods	98.5	96.7	99.8	98.9
Equipment	98.5	112.8	99.2	83.4
Building material	98.1	109.3	110.1	75.0
Hardware dealers	114.2	148.7	102.3	91.7
Farm equipment	75.6	70.7	75.8	80.4
Home equipment	106.3	119.4	98.6	100.8
Automotive stores	97.9	107.7	91.9	94.0
Automotive dealers	95.3	108.7	91.3	85.8
Service stations	100.0	103.3	94.6	102.2
Miscellaneous stores	99.0	100.4	98.5	98.2
General merchandise	99.1	104.1	98.5	94.8
Variety stores	88.9	70.5	99.6	96.7
Apparel stores	102.2	102.7	100.3	103.6
Luxury goods stores	104.2	114.5	104.2	93.9
Drug stores	100.9	104.4	98.4	99.9
Other stores	95.5	96.5	88.1	102.0

**Hooker, Grant, Dawes, Cherry, and Sheridan Counties
***Outside Principal City
****Not including Selected Services



Figures on this page are not adjusted for seasonal changes nor for price changes. Building activity includes the effects of past as well as present building permits, on the theory that not all building is completed in the month the permit is issued. E. L. B.

VI. CITY BUSINESS INDICATORS

DEC — Per Cent of Same Month a Year Ago

State or City	City Index	Bank Debits	Building Activity	Retail Sales	Electricity Consumed	Gas Consumed	Water Pumped	Postal Receipts	Newspaper Advertising
The State	102.5	103.4	173.8	100.6	107.5	98.4	105.7	89.0	100.2
Beatrice	99.7	130.8	105.6	90.2	98.7	94.4	149.9	92.6	100.0
Omaha	103.1	101.4	196.4	106.2	104.7	95.5	101.5	103.1	103.2
Lincoln	104.3	109.5	147.6	111.0	113.8	97.2	98.2	85.3	98.6
Grand Island	105.6	104.9	111.0	106.7	113.2	101.9	108.8	87.5	- -
Hastings	103.3	101.9	905.1	106.2	103.5	101.7	109.4	74.4	87.8
Fremont	104.2	107.3	166.7	107.3	112.3	NA	87.0	90.0	NA
North Platte	100.4	98.2	103.6	96.5	108.7	74.3	101.1	112.9	98.7
Kearney	107.9	108.5	166.1	107.0	110.6	100.9	108.3	81.6	NA
Scottsbluff	104.0	105.1	NA	88.1	104.3	116.3	130.6	99.7	102.7
Norfolk	105.0	97.8	153.5	103.2	118.6	100.1	126.5	81.5	92.5
Columbus	99.9	97.6	90.5	96.6	113.2	99.0	102.5	100.4	112.0
McCook	98.3	97.0	124.0	96.5	101.4	94.0	NA	72.0	108.6
Sidney	102.0	107.1	105.4	94.7	106.0	108.7	73.3	88.5	NA
Alliance	99.1	100.0	78.9	87.8	113.4	112.3	108.7	92.9	94.9
Nebraska City	103.8	91.0	202.2	98.4	105.7	172.0	100.4	105.3	NA
So. Sioux City	101.0	103.0	61.9	105.7	95.2	100.3	NA	125.1	NA
York	99.2	108.2	53.8	103.5	106.2	99.7	97.0	96.8	- -
Falls City	103.2	105.6	42.4	103.9	107.7	106.7	96.8	90.9	109.8
Fairbury	105.7	102.8	259.8	87.7	117.6	NA	117.1	92.2	97.3
Holdrege	102.2	118.1	20.2	94.9	109.9	112.6	102.4	85.1	101.6
Chadron	105.4	93.6	87.4	98.3	137.8	124.2	197.0	86.1	NA
Broken Bow	99.8	81.3	184.5	107.1	111.1	102.4	97.2	86.8	92.3

DEC — Per Cent of Preceding Month (Unadjusted)

State or City	City Index	Bank Debits	Building Activity	Retail Sales	Electricity Consumed	Gas Consumed	Water Pumped	Postal Receipts	Newspaper Advertising
The State	107.2	106.3	104.3	130.6	105.4	112.6	101.0	137.8	102.1
Beatrice	112.7	109.2	86.2	117.2	112.6	116.3	220.8	NA	99.8
Omaha	101.8	101.4	94.1	128.9	105.9	99.2	100.5	116.9	97.2
Lincoln	106.5	111.8	92.9	111.8	106.7	111.1	96.5	138.6	95.7
Grand Island	116.6	109.7	92.9	141.2	109.7	147.9	107.7	136.7	- -
Hastings	111.3	119.1	167.7	123.4	96.2	140.9	76.3	103.9	98.7
Fremont	114.6	106.3	118.9	127.9	108.4	NA	88.8	124.6	NA
North Platte	110.7	94.2	100.2	141.1	102.3	130.9	93.4	192.2	109.3
Kearney	121.9	131.0	109.7	142.6	127.3	106.1	93.6	128.7	NA
Scottsbluff	107.5	93.8	NA	110.9	97.6	144.8	102.6	171.6	108.8
Norfolk	116.4	111.2	110.1	141.8	90.6	134.5	116.0	128.3	104.8
Columbus	119.3	114.2	143.8	134.4	96.2	124.9	94.1	125.8	112.2
McCook	116.9	102.9	139.3	118.9	104.0	127.8	NA	169.8	100.0
Sidney	133.7	113.9	269.8	142.2	104.1	145.1	58.0	164.8	NA
Alliance	112.4	88.2	74.4	132.1	105.8	130.5	102.4	167.7	111.1
Nebraska City	109.8	113.1	73.7	127.0	107.9	108.4	100.4	165.6	NA
o. Sioux City	124.8	103.7	99.9	142.6	89.1	153.1	NA	189.9	NA
York	108.5	114.2	96.1	139.7	98.7	125.1	88.1	134.7	- -
Falls City	111.6	125.7	80.1	133.1	103.5	110.1	87.3	155.6	106.9
Fairbury	120.3	101.9	142.9	121.1	108.7	NA	96.6	156.8	131.0
Holdrege	110.1	116.3	78.5	131.2	106.4	116.4	72.3	148.9	101.3
Chadron	128.9	78.3	84.3	141.4	109.1	153.3	195.8	136.2	NA
Broken Bow	112.1	110.1	97.8	140.2	109.0	130.0	94.0	156.7	99.2

Published three times in January, February, September, October, and December, and twice in other months, by the University of Nebraska Office of Publications, Nebraska Hall, Lincoln, Nebraska 68508. Second class postage paid at Lincoln, Nebraska.

Vol. 47 Lincoln, Nebr., February 16, 1968 No. 19

BUSINESS IN NEBRASKA
published monthly by the
University of Nebraska College of Business Administration
Dr. C. S. Miller, Dean
BUREAU OF BUSINESS RESEARCH
309-10 Social Science Building, City Campus, Lincoln, Nebraska
Member, Associated University Bureaus of Business and Economic Research

Director	Dr. E. S. Wallace
Associate Director	Dr. Edward L. Hauswald
Statistician	Dr. Alfredo Roldan
Editorial Assistant	Mrs. Dorothy Switzer
Assistant, Economic Education	Mr. David Smith

Graduate Research Assistants

Miss Loisjean Drake	Roger K. Rebman
L. Kenneth Hubbell	Fred Schroeder

BUSINESS IN NEBRASKA is issued as a public service of the University and mailed free upon request. Material published herein may be reprinted with proper credit.

DEATH OF DR. ELLIOTT

We regret to announce the sudden death last month of Dr. Curtis M. Elliott, Bert Rodgers Professor of Economics and Insurance, and faculty member of the College of Business Administration since 1941.

REVIEWS

Departmental Merchandising Results in Small Department Stores, 1963-64, Edgar H. Gault, University of Michigan, 1966. Paperback. $2.00.

According to the 1963 census of retail trade in Nebraska, the number of department stores increased by only two from 1958 to 1963 and the total number of general merchandise stores decreased from 683 to 551. Thus the situation in this state appears to justify the premise of this study that the forgotten retail unit in the postwar retailing revolution is the small department store. The growth of the discount house, the increase in the number of shopping centers, and the expansion of department store chains and supermarkets are all generally recognized phenomena of the postwar period.

The large department stores have shown a resurgence through the establishment of suburban branch stores and the development of other effective merchandising tools to meet the new competition. Meanwhile the small department store has not shared in the year-to-year increases in the Gross National Product that are reflected in the substantial growth in sales of the larger chains and discount houses. The small department store has not been defeated in the competitive struggle, but neither has it made much progress.

Statistics in this study were secured from eight noncompeting independently owned department stores located in the Great Lakes region, all of which do the bulk of their business in the medium and better-than-medium quality merchandise. Even though the data are from other states, the analyses cannot fail to be of interest to any Nebraskan who operates a small department store or general merchandise store.

The author shows that although the small department store has not been able to reverse the postwar trend of declining profits, there is a strong possibility that such a trend can be changed. It was found that in most instances the decline of small department stores has been caused by environmental rather than managerial conditions. To meet the new competition successfully, a major step appears to be reduction in operating costs, principally through increased productivity of employees. It was found that small department stores can push such selling devices as self-service and self-selection without degrading the store's image, and that merchandise management accounting could add substantially to the net profit of the small department store. Although many of the competitive devices that have re-established the large department stores as leaders in their field will admittedly not work for the small retailer, the researcher found that opportunities still remain for small department stores to maintain their position in relatively small markets.

Nebraska retailers will be interested in the painstaking analyses of departmental performance, including sales volume, original markup, markdowns, gross margins, stock turn, employee discounts, and age of merchandise, as well as the tables on operating expenses, credit sales and collection ratios, and the detailed analyses of items sold by month by each department.

D. S.

The Executive in Crisis by Eugene E. Jennings, Michigan State University Business Study, 1965. Clothbound.

This book, which is an attempt to examine the nature and consequences of administrative anxiety, is based on case studies of business executives. The author, who is professor of management in the Graduate School of Business Administration at Michigan State, has attempted to enter the private world of executives who have climbed to the top of the corporate ladder and then slipped. The purpose of his study was to discover why big business administrators crack up and "how they can be put back together again," as he says.

Dr. Jennings' concern is not only with the individuals involved, but also with the ways in which acts of neurotic executives may directly or indirectly carry consequences for all society and may affect the very direction and character of economic life. It is certain to occur to the thoughtful reader that the pressures which form what the author calls "a corporate triangle" - authority, organization, and self - are felt by administrators in governmental and other agencies as well as by those in business. The author would agree, no doubt that the acts of neurotic federal and state administrators, even more than those of business executives, may have grave consequences for society, but he confines his study to the corporate world.

The case history of a man whose career crisis was precipitated by unproductive notions of authority constitutes the first chapter of the book. Dr. Jennings examines and discusses many other case histories, but the first case is elaborated on and recapitulated throughout the book, thus adding unity to the study as well as serving illustrative purposes. The pressures of corporate existence are found to come from superiors with the power to give and withhold rewards of many kinds; from carrying out the goals and objectives of the corporation, and from the inner anxieties of the executive himself in terms of who he is and what he wants to become.

It appears that the big business executive is motivated by the drive to achieve; this means not merely to perform increasingly challenging tasks, but also to receive the rewards which are popularly equated with success. In this the businessman seems to differ very little from the public official or the professional man who sets his sights upward and uses each responsibility to show proficiency for a higher position. The success ethic is not confined to the business world, and Dr. Jennings' book has merit for a much wider readership than the title might imply. D. S.

THE IMPACT OF COMPUTERS ON AGRICULTURE

ollowing is condensed from a paper presented by Mr. Wen- Clithero of IBM at Ohio State University September 22, nd is reprinted by permission.

g the past 15 years we have witnessed a revolution in the ion technology in agriculture. With the vast amount of time ney that is being expended by our various agricultural re- centers, it is safe to forecast that this technological rev- in production will move at an ever accelerating rate.

ve seen a change from labor to capital as the major input ulture. This has produced a complex set of problems for nagement of agricultural enterprises. Capital takes on rms as input. These many inputs compete for the capital ates them. Further, as a result of our increased produc- abilities, we are now dealing with much higher production and therefore much higher risk factors.

e now entering another era in agriculture that may well be l to as the "Management Revolution". Outstanding progress g made in implementing and expanding the use of account- mathematical techniques utilizing high speed data process- pment in the production, management, and research field culture. Economists predict that the use of electronic ocessing by farmers to assist them in their very complex ment decisions in order to improve profits, "may prove e most revolutionary agricultural development of this cen-

ammed farming, utilizing linear programming, is becom- will become more so in the future, a powerful management the overall decision-making process of a farming enter- This technique has been used for many years by agricul- conomists in their teaching of farm management. With ent of high speed computers, it is now being applied to the al farm. This mathematical technique permits considera- hundreds and even thousands of variables that can affect ning enterprise and produces an optimum solution based on set of conditions. This set of conditions such as price, , etc., can be varied according to the best judgment of the and many different solutions can be run over a very short of time. From these solutions he can then choose the one feels will best suit his forecasted conditions. The com- es not make the decision; it merely provides the necessary tion on which a good manager can base his decisions.

s now take a look at what we may reasonably expect in the The utilization of electronic data processing in agricul- l be a matter of evolution. We are now in the first stages evolution. We have converted manual record keeping to e processing. At this state of the art, manually written s are made out by the farmer and sent to a center for the sing of the information. In most instances these records iled once a month by the farmer to the processing center. are various timetables as to the production of the reports back to the farmer. Some are monthly, others quarterly, nnual. This, of course, means the farmer has received ore detailed analytical information at a much earlier time had ever been able to secure by manually kept records, s permitting him to make both short and long range deci- ased on accurate information.

estimated there are approximately 10,000 farmers now g EDP in the processing of their farm records and farm s. This is slightly over 0.2 percent of the census definition of farms in the United States. If we include only the one m farms in the United States that have sales of $10,000 and ove see that still only one percent of these viable commercial f are using this method of record keeping. Certainly much ren to be done.

We must move more rapidly in the management phase in to keep pace with the technological and economic changes oc ring in agriculture. It is becoming apparent that monthly, terly, and annual reports are not sufficient. Many are begi to realize they need weekly reports and some are beginning to to daily reports. A good basis for this argument is the evol which has occurred in nonagricultural industries.

Present day communication systems permit access to comp from remote locations. Undoubtedly the second stage of this lution will be for the farmer to have a communications devi his farm that will permit him to transmit data directly to a tral point where his project is being handled. Rather than his information out and mail it he will merely key the inform and transmit it directly to the computer at the central loca These communication devices will be as common as the telep and electricity are today on the farm, and just as essential.

We are now building mathematical models of farms and far operations. The computer solutions of these models permit optimize over a given set of conditions various facets of the e prise. As we move ahead in this evolution we can visualiz mathematical model of an agricultural enterprise being stor the central computer memory at all times.

The information stored in this model would be data such a total number of acres on the farm, the number of acres of va crops, types of soil, type and size of improvements, capital a able, type and number of livestock, machinery, and all othe sources that might be applicable to that particular farm opera The farmer would keep this information updated on a daily b He would also feed in all information affecting the growing of or animal life, such as in the case of plant life, rainfall, g moisture, hours of sunshine, ground temperatures, and air peratures. With information such as this, he would be simul the growing of plant life in the computer. Pertinent data v also be fed in relative to his livestock operations. We might alize this updating being accomplished by the farmer hav portable recording device that would permit him to reco voice at any place, any time, his observations and at the end o day or any time during the day he could then automatically tr mit this by voice directly to a central computer. This would he would be able to record all information at the time it happ and would eliminate the need for all hand-posted records. It w also eliminate the need for all coding.

When the farmer had to make decisions as to the best tim soil preparation, fertilizer application, or in the case of sup mental irrigation, the application of water, he could make inc of the computer and it would be able to give him the best pos mathematical decision based on the data that he had kept upd in the computer. His decision would be based on possibly n hundreds or even thousands of observations, rather than the casual observations he now makes when he is faced with t decisions. Many of the large farms today are equipped with way radio communication systems. This would permit instan eous transmission of the computer's findings to the operat the machine in the field.

(Continued from first page)

Region, and that by only 2 points. In the 1963-1966 period, no other state in the region had an index of exports higher than 177.

Exports of electrical machinery from Nebraska amounted to $0.7 million last year but no export index was computed for the state. Nebraska exports of chemicals and allied products were valued at $2.6 million and the state's index of export change (162) was much higher than the index for the nation (131) or the region (132).

In the table accompanying this article, figures are cited only for major industry groups represented in Nebraska exports. No industry in which the state exported less than $1 million in products in 1966 has been included. It should be noted, however, that Nebraska exported $0.7 million in electrical machinery; $0.6 million in primary metals; $0.4 million each in lumber and wood, and printing and publishing products; and $0.2 million each in apparel, and in paper and allied products.

Part of the state's gain both in employment and export trade is accounted for by diverse and in some cases highly innovative new products hidden in the "miscellaneous" category in the table below. The economic truism that the more we sell abroad, the more jobs there are at home indicates that it is not mere coincidence but the result of a clearcut cause and effect relationship that the Nebraska industries with the greatest gains in employment are the identical categories that show the sharpest rises in export business.

Much of this growth in foreign trade may be attributed to a shift from "do-it-yourself" marketing plans to international sales programs that take advantage of all available expertise, according to the Bureau of Business Research survey. It appears that many Nebraska manufacturers - both the large exporters and some of the smaller, but successful, firms - have decided that just as they cannot have an effective sales program at home without the help of marketing specialists, neither can they venture into difficult foreign markets without the services of international marketing men, either on the staff or as retained consultants, or both.

Nebraska indexes of export change exhibited in the table below show the same spectacular growth in foreign sales of the state's manufactured products as did the Bureau's survey. Thus, Nebraska exporters who have manufactured high quality products at competitive prices; have enlisted the help of international marketing specialists to facilitate trade; and have, themselves, traveled abroad extensively to seek new outlets, have found some of the answers to problems of industrial expansion. They have set new records in export business, and by doing so have brightened the economic outlook for the entire state.

DOROTHY SWITZER

VALUE OF EXPORTS OF MANUFACTURED PRODUCTS; U.S., WEST NORTH CENTRAL REGION, AND SEVEN STATES, BY SELECTED MAJOR INDUSTRY GROUPS, 1966

Division & State	Total Exports of Manufactured Products			Food & Kindred Products			Machinery, except Electrical			Fabricated Metal Products		
	1966 (million dollars)	Index of Export Change (1963=100) 1966	1960	1966 (million dollars)	Index of Export Change (1963=100) 1966	1960	1966 (million dollars)	Index of Export Change (1963=100) 1966	1960	1966 (million dollars)	Index of Export Change (1963=100) 1966	1960
U.S. Total Value at Port	23,938.9	(*)	(*)	2,131.5	(*)	(*)	5,224.0	(*)	(*)	1,062.5	(*)	(*)
U.S. Total Value F.O.B. Producing Plant	21,299.2	129	87	1,908.1	111	76	4,722.3	137	77	948.0	162	67
West North Central	1,247.2	146	84	260.0	114	84	396.5	166	83	38.7	156	77
Minnesota	311.4	146	76	82.3	172	86	118.8	177	63	7.4	164	90
Iowa	353.1	145	91	62.3	123	106	181.5	152	85	11.2	142	82
Missouri	371.8	224	90	54.1	113	86	59.0	164	98	12.3	178	68
North Dakota	2.5	137	68	1.9	151	67	.04	161	-	.1	177	-
South Dakota	7.0	94	74	5.3	97	71	.9	69	88	.1	178	-
Nebraska	54.9	154	85	27.0	125	83	10.6	235	173	4.3	183	(b)
Kansas	146.5	123	78	27.1	51	62	25.7	237	113	3.3	121	116

Division & State	Chemicals and Allied Products			Transportation Equipment			Instruments and Related Products			Miscellaneous Manufacturing, & Ordnance and Accessories		
	1966 (million dollars)	Index of Export Change (1963=100) 1966	1960	1966 (million dollars)	Index of Export Change (1963=100) 1966	1960	1966 (million dollars)	Index of Export Change (1963=100) 1966	1960	1966 (million dollars)	Index of Export Change (1963=100) 1966	1960
U.S. Total Value at Port	2,794.8	(*)	(*)	3,754.5	(*)	(*)	936.9	(*)	(*)	1,130.8	(*)	(*)
U.S. Total Value F.O.B. Producing Plant	2,438.6	131	92	3,452.4	130	98	791.9	142	63	978.5	142	63
West North Central	65.8	132	77	191.7	241	90	30.7	119	(b)	60.2	119	(b)
Minnesota	7.0	113	113	23.2	250	(c)	19.0	135	(b)	11.5	135	(b)
Iowa	7.4	133	69	2.9	142	(c)	4.2	86	(b)	13.5	86	(b)
Missouri	40.0	126	78	96.4	369	76	5.3	110	(b)	31.6	110	(b)
North Dakota	.1	(c)	(c)	(a)	(c)	(c)	-	-	-	.2	-	-
South Dakota	-	-	-	.04	-	-	.01	(c)	(c)	.1	83	-
Nebraska	2.6	162	(b)	2.2	208	(c)	1.1	158	(b)	2.5	93	(c)
Kansas	8.7	189	(b)	67.0	164	96	1.1	87	(c)	.8	(c)	(c)

Note: Index of export change was calculated on unrounded data.
Only major categories of Nebraska export products are included above.
*Index of export change for total U.S. exports at port statistically the same as index for f.o.b. plant totals.
- Represents zero.
Ranges and Indices
(a) Indicates less than $1.0 million.
(b) Data for 1963 and/or 1960 not available.
(c) Percent change not calculated where exports were less than $1.0 million.

Source: Change Sheet, Survey of the Origin of Exports of Manufactured Products 1966, Bureau of the Census, U.S. Department of Commerce, Dec. 22, 1967.