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# MINNESOTA farm business NOTES



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## WESTERN EUROPE—Largest Import Market for Agricultural Products

Arthur F. Hanau

With the effective postwar support of the United States through the far-sighted Marshall Plan, Western Europe has again become virtually self-sustaining. About 85 percent of its food consumption is produced in Western Europe and 15 percent is imported. Its population of more than 300 million people has regained a fairly high level of nutrition which is still improving.

### Agricultural Production Increasing

Western European agricultural production is on the increase. Production is now about 30 percent above prewar. (See table 1.) This increase has been achieved primarily by:

- increased yields per acre,
- replacement of animal draft power by tractors, and
- improvements in feed conversion.

In addition to the measures directed toward raising production, more and more labor-saving devices (i.e., mechanization) are applied as wages increase. Thus, an increase of productivity per man is being achieved at the same time.

In Western Europe the primary emphasis in the past has been on saving scarce land resources by increasing yields per acre and by aiming at more efficient utilization of feed. Direct labor-saving has been a secondary consideration. Now, however, the emphasis is

Table 1. Indices of agricultural production in Western Europe

Period	Gross*		Net†	
	Total	Livestock products only	Total	Livestock products only
Prewar .....	100	100	100	100
1947-48 .....	86	78	92	85
1950-51 .....	108	103	113	110
1951-52 .....	112	107	117	114
1952-53 .....	114	111	119	118
1953-54 .....	121	117	126	123
1954-55 .....	123	121	127	127
1955-56 .....	124	122	127	127
1956-57 .....	126	126	129	131
1957-58 .....	127	130	130	135

\* No deductions made for the value of imported feed.

† Excluding the value of imported feed.

Source: *Recent Developments in Agricultural Production and Food Consumption in Western Europe*. United States Department of Agriculture, Foreign Agricultural Service, FAS-M-7 Rev., Washington, D. C., March 1959, p. 7.

both on output and on labor efficiency through larger inputs of capital and materials.

Thus, in Western Europe as in the United States, a larger output is being produced with less labor than in earlier years. Labor has been moving out of agriculture because wages and per capita income have been lower than in other sectors of the economy; moreover, a high level of industrial employment has made it possible for industry to absorb the workers that have moved.

### Impact of European Economic Community

The European Economic Community (EEC) came into existence in 1958. After a transition period of 12 to 15 years a common market will be established among the six member countries: Belgium, France, Germany (West), Italy, Luxembourg, and the Netherlands. This will mean larger outlets within the common market for member countries with export surpluses. Therefore, a more intensive utilization of local agricultural resources, particularly those of France, is expected. As a consequence, a further vigorous increase of farm output of perhaps 2 to 2.5 percent per year in the EEC area is envisaged.

On the other hand, expansion in consumption will be at a slower rate. As in the United States, further increases in income will have a less important influence on food consumption. In addition, population increase in Western Europe has been, and perhaps will continue to be, only 0.6 to 0.8 percent per year (compared to the 1.5 percent per year increase in the U.S.). Thus, if peace-time conditions continue, it appears that in the next decade increases in Western European agricultural production will probably exceed increases in demand in spite of some probable downward price adjustments.

### Prospects for Exports to Western Europe

If output increases more rapidly than consumption, import needs will be affected in manners and degrees varying from commodity to commodity. This will depend on elasticities of demand and on whether or not the commodity to be imported is supplementary or complementary to Western European production.

One of the main supplementary items is grain. Net imports into Western Europe now amount to about 18 million metric tons per year, of which about

The accompanying article is the third in a series written by Visiting Professors in the Department of Agricultural Economics during the past academic year. The first article, "The Hard Farm Policy Decisions Are Ahead," by Walter W. Wilcox appeared in the December issue, and the second article entitled "Speculation Helps the Onion Grower" by Roger Gray was in the March-April issue. The author of the current article is one of the leading agricultural economists in Europe. While at Minnesota during the spring quarter he was on leave from his position as Director of the Institute of Agricultural Marketing Research at the University of Goettingen, Goettingen, West Germany.

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# Costs of Producing Certified Seed

Harold C. Pederson and  
Paul R. Hasbargen

The demand for seed of known origin and performance has made certified seed production a specialized enterprise on about 1,100 Minnesota farms.

Certified seed producers incur extra costs in order to provide pure seeds of desirable varieties. Both producers and buyers are interested in these costs from the standpoint of determining a fair market price for certified seed. This article reports some data for the 1958 growing season gathered from 23 farmers in west central Minnesota and 12 farmers in northwest Minnesota together with data from earlier studies in Minnesota.

Certified seed is produced under the supervision of the Minnesota Crop Improvement Association, an organization of seed growers, cooperating with the Minnesota Agricultural Experiment Station and Agricultural Extension Service. The Experiment Station supplies seed of new releases to approved growers; the price of this seed is set by an Experiment Station committee. The certified grower then raises the crop under conditions specified by the Crop Improvement Association. The Experiment Station sets a maximum selling price on the first seed crop produced from a new variety.

Certified seed growers furnish about 5 percent of the 16 million or more bushels of seed used annually to plant the state's acreage of oats, soybeans, wheat, barley, and flax. Most of the other seed is not many generations removed from certified seed. Consequently, these growers exert a strong influence on the grain and oilseed industry in Minnesota.

**Table 1. Costs per acre of producing certified seed in two selected areas—Minnesota, 1958**

	West central			Northwest	
	Comet soybeans 13*	Arny flax 5*	Minhafer oats 5*	Arny flax 3*	Minhafer oats 4*
Costs per acre					
Preharvest (except labor) .....	\$17	\$16	\$18	\$19	\$18
Harvest (except labor) .....	5	7	8	4	5
Labor .....	6	6	6	2	2
Land .....	17	17	17	14	12
Other .....	9	13	19	11	21
<b>Total .....</b>	<b>\$54</b>	<b>\$59</b>	<b>\$68</b>	<b>\$50</b>	<b>\$58</b>
Gross yield (bu.) .....	20	18	77	19	86
Net yield (bu.) .....	18	14	65	17	67
Salvage (bu.) .....	2	3	12	2	19
Value of salvage/acre .....	\$2.10	\$5.04	\$5.20	\$2.52	\$8.00
Cost cert. seed/bu. ....	2.92	4.23	1.03	3.13	.74

\* Number of fields.

**Table 2. Extra costs for producing certified seed—Minnesota, 1958**

Type of Cost	West central			Northwest	
	Soybeans	Flax	Oats	Flax	Oats
	dollars per bushel				
Total cost for certified seed .....	2.92	4.23	1.03	3.13	.74
Total cost for market grain .....	2.10	2.69	.60	1.98	.36
Extra cost for certified seed .....	.82	1.54	.43	1.15	.38

## Production Costs

The certified seed production costs for Comet soybeans, Arny flax, and Minhafer oats are shown in table 1. Since these costs represent such few cases they must be interpreted with care. There is normally a big difference in costs among farmers and a similar study with different farmers would, no doubt, show somewhat different results. Therefore, the averages reported in tables 1 and 2 should be used to indicate the approximate amount of the extra costs involved in producing certified seed rather than as actual costs applicable to any individual grower. (The per bushel cost for an individual depends on many factors such as: yield per acre, fertilizer requirements, size of farm, and size of fields.)

Some observations pertaining to the costs shown in table 1 are:

**Preharvest costs.** The cost of seed is a major item. For instance, last year Comet soybeans cost growers at least \$6.20 a bushel; Arny flax, \$8.40; and Minhafer oats, \$3.75. The costs of roguing varied considerably among growers, but usually ranged from 1 to 4 dollars per acre. An occasional need for reinspection added another cost item for a few producers.

**Harvest cost.** Power and machinery costs are essentially the same for certi-

fied seed growers as for other grain producers except that some extra expense is incurred in cleaning the combine before entering each field and in preparing the bins for the grain. These precautions are necessary to avoid grain mixtures.

**Labor charges.** These costs, mainly for labor to operate machinery and equipment, are determined from earlier farm management studies except in a few instances where producers had their own labor records.

**The land charge.** Except in instances where cash rent is paid, the land charge is set at \$17.00 an acre for west central Minnesota and \$15.00 per acre for the northwest area.

**Other costs.** These are: (1) variety, field, acreage, laboratory, sampling fees; (2) cleaning, transportation, tags, bags, seals, wire; and (3) in some instances, some selling and storage costs.

## Extra Costs for Certifying

The estimated average cost of producing the certified grains included in this study is shown in the last line of table 1. In table 2, this information is compared with the estimated costs of producing market grains under comparable conditions. The difference between these two is the estimated additional cost for producing certified seed grain. On a per bushel basis, average production costs for certified seed were 39 percent higher than those for market grain for soy beans, 57 percent higher for flax, and 80 percent for oats.

Therefore, to cover all production costs the certified seed grower must receive a price considerably higher than the price of market grain. This study is too limited in nature to determine just what this price differential should be under various conditions. However, it does give some indication of the magnitude of the extra costs that can be expected in certified seed production. It also reveals several important factors that influence per bushel production costs of certified seed. These include:

**Total yield.** In all the cases included in this study, the yields realized were comparatively high. It appeared that producers who specialized in certified seed production selected good fields and used the cultural practices essential to obtain high yields. Most farmers, for instance, used liberal applications of fertilizer.

**Net yield.** A high net yield is important since the "salvage" (grain not qualifying as seed) has a relatively low value compared to certified seed. The growers in this study reported a rather small proportion of salvage. This so-called salvage was limited largely to small and broken kernels. The salvage had a value near that of the lower grades of market grains as there was

very little foreign material or weed seeds contained in it.

**Field size.** Since some of the service charges associated with seed certification are based on a flat rate per field, or per sample, field size is significant. (All soybean and flax fields were less than 15 acres.) In instances where a new release of a variety of grain is involved, the producers have no choice as to the size of the field because the supply of seed is limited.

### Conclusions

This limited study and survey of certified seed producers in two areas of Minnesota reveal cost approximations which suggest that:

- The costs per bushel of producing

certified seed may in some instances be as much as twice as high as they are for producing noncertified, market grain.

- The production of certified seed has the characteristics of a farm specialty or a farm enterprise in itself. This appears to be especially true with farmers who produce certified seed year after year. Because of this, the production and marketing problems associated with certified seed are viewed with great interest by this group of growers. A more detailed cost study of the production and market phases would no doubt reveal useful information that would help expand this important segment of the state's grain and oilseed industry.

## Western Europe—

(Continued from page 1)

8 million tons are taken by the six common market countries. Although the demand for total imports of wheat is declining, the demand for hard wheat will probably be better maintained than the demand for soft wheat.

The United Kingdom is the only country that imports livestock products in considerable volume. This is part of the traditional division of labor between the highly industrialized United Kingdom, and those that specialize in the production of animal products—Denmark, Argentina, New Zealand, Australia, and several minor exporting countries.

Imports of animal products by other countries in Western Europe are comparatively small, and the outlook is not promising. The rather small family farm of Western Europe is particularly dependent upon livestock production for the utilization of its family labor throughout the year. However, more emphasis on the production of lean meat is needed. In the case of milk and milk products surpluses are likely to develop.

Although fruits are produced in Western Europe in large volume, im-

ports are in some respects complementary in terms of seasonality and types. In addition, income elasticities of demand for fruits are relatively high, particularly in the case of citrus and other more expensive fruits. The Mediterranean areas (inside and outside the common market) are striving to meet the growing European import needs. The development of these low income countries is greatly dependent on larger exports to the highly industrialized European countries.

Net imports of oil seeds and vegetable oil to Western Europe amount to about 2.5 million tons (fat content), of which more than 1.5 million tons are being taken by the common market countries. These imports are essentially complementary, although indigenous olive oil, animal fats, etc., provide about 55 percent of total fat consumption. Largely due to climate, vegetable oils are produced outside Western Europe with considerable comparative advantage and import policies have thus far been quite liberal. However, because total fat consumption per capita in the high income countries has reached the saturation level, imports in the future will grow only in line with the slow population increase.

Consumption of raw materials of agricultural origin, i.e., cotton, wool, and rubber, will also profit further from economic growth. It remains open to question however, how far indigenous synthetics or more imports will be employed to satisfy the additional demand.

In total, Western Europe will continue to be the largest overall import market for agricultural products. This market will grow further for complementary imports, including coffee, tea,

**Table 2. Common market countries' gross imports of specified commodities, 1956**

Product	Imports from all regions*	Share of imports from the U. S.
	million dollars	percent
Wheat .....	522	35.6
Rice .....	46	12.0
Corn .....	196	29.4
Other grains .....	366	34.8
Fruits, fresh .....	542	7.1
dried .....	51	18.4
other .....	76	23.0
Tobacco (unmfd.) ..	200	32.1
Cotton .....	756	26.8
Oilseeds, fats, and oils .....	951	23.2

\* Including imports from common market countries.

Source: *The Agricultural Import Trade of the Common Market Countries*. USDA, FAS-M-32, February 1958, p. 5.

cocoa, and tobacco in addition to the commodities mentioned above. This import market will cease to grow or may even diminish for imports of food-stuffs of the temperate zone, if normal peacetime developments continue.

The United States' share in the main agricultural imports of the common market countries in 1956 is given in table 2. In that year United States deliveries amounted to 1.08 billion dollars or 13.3 percent of the total agricultural import of 8.12 billion dollars.

The high quality of U.S. agricultural products and the improved dollar situation in Western Europe as this region further industrializes should permit the United States to continue to share in Western Europe's vast agricultural import market. However, to do so, the United States must remain aware of the necessity to shift its resources and output in relation to changes in demand in Western European nations.

## MINNESOTA

## farm business

### NOTES

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# The Outlook Corner — Number of Farms

The number of farms in Minnesota has declined continuously since about 1935. The number of farms according to the U.S. Census of Agriculture, was:

1910—156,000
1920—178,000
1930—185,000
1935—203,000
1940—197,000
1950—179,000
1955—165,000

The number of farms in Minnesota declined by 16 percent from 1939 to 1954. This is an average of slightly more than 1 percent per year.

Data on later years are available from the State Farm Census.<sup>1</sup> From 1954 to 1958 the number of farms declined by 9 percent, or more than 2 percent per year. The most rapid drop came in the last two years.

This recent speedup in the consolidation of farms applied to all parts of the state (see table 1).

The decline in number of farms has been most rapid in the northeast, north central, and east central counties. The least change has occurred in the southwest and the south central counties.

This shift in number of farms has come as small farms have been sold. Many of these have been added to other farms to make fewer but larger farms. This is illustrated by the shift in the 16 northeastern counties, where the change in number of farms was greatest (see table 2). Comparable but smaller changes took place in other areas of the state.

With fewer farms, the average size of farms increased. In the northeastern

**Table 2. Number of small farms fell rapidly, 16 northeast counties**

Size of farm	Thousands of farms	
	1940	1954
Under 100 acres .....	18.5	6.4
100-179 acres .....	8.0	5.4
180 acres and over .....	3.6	5.5
All sizes .....	30.1	17.3

counties, the average size was 107 acres in 1940; this went to 180 acres by 1954.

The biggest drop in number of farms came in those counties where there was a large proportion of farms of less than 140 acres (see table 3). For example, in the eight counties where 75 percent or more of the farms were small, the number of farms decreased 3.0 percent a year from 1940 to 1954 and 4.5 percent a year from 1954 to 1958, or a total decline of 42 percent over this 19-year period.

There were some significant deviations from this trend. The consolidation

of farms in the northwest counties was quite rapid, even though farms were already quite large. On the other hand, the consolidation was less than expected in the area between St. Cloud and Owatonna.

## What have been the primary reasons for this decline in number of farms?

1. Mechanization has made it possible for farmers to operate more land.
2. Earnings generally are higher on the large farms, consequently farmers tend to add land if they are able to handle the work.
3. With mechanization, overhead costs are high. By enlarging the farm the overhead cost per acre is less.
4. Established farmers, who want to enlarge their operations, frequently can bid more for a small farm than can a man who wants to buy and operate the small farm as a separate unit.
5. Employment opportunities off the farm have been good. Many farmers on small farms have found they could increase their earnings by turning to other jobs.

## What are probable future trends?

1. The size of farm has not yet caught up with increased labor efficiency.
2. Improvements in machinery are continuing, giving still greater labor efficiency.
3. Job opportunities off the farm continue to be fairly good. This, however, is difficult to forecast for the future.
4. Since the same basic forces are still at work, it is likely that the trend to fewer farms will continue.

**Table 1. The decline in number of farms varies by areas**

Region	1939 to 1954	1954 to 1958
	percent decreased per year	
Northwest .....	0.7	3.0
North central .....	1.7	6.2
Northeast .....	2.8	7.2
West central .....	0.6	2.0
Central .....	0.7	2.0
East central .....	1.8	3.0
Southwest .....	0.3	1.2
South central .....	0.5	1.2
Southeast .....	0.8	1.5
State .....	0.9	2.2

Source: State Farm Census.

**Table 3. Counties with many small farms show biggest change**

Percent of farms under 140 acres in 1940	Number of counties*	Change in number of farms	
		1940 to 1954	1954 to 1958
7 to 24 .....	25	percent per year	
25 to 49 .....	28	0.9	1.7
50 to 74 .....	25	1.1	1.7
75 to 91 .....	8	1.8	2.2
		3.0	4.5

\* Source: State Farm Census; Ramsey County omitted.

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