A Larger Vision For Small Scale Agriculture

public affairs
research and education
in the Minneapolis-Saint Paul
metropolitan area

CITIZENS LEAGUE

Citizens League Report

A LARGER VISION FOR SMALL SCALE AGRICULTURE

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September 25, 1984

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INTRODUCTION

The Citizens League Board of Directors gave the committee the following charge:

> "Determine if the state's economy can be strengthened by a policy of relying more in coming years on Minnesota-grown fresh produce, instead of fresh produce imported from other states."

The charge noted that persons knowledgeable about this area have suggested that widespread development of the fresh vegetable business would require that an entire system be simultaneously developed that included production, harvesting, handling and marketing. The charge asked the committee to explore the magnitude of this task and recommend a policy framework which would facilitate the development of the market for fresh produce. The committee was asked to evaluate the respective roles, if any, of large and small private sector entrepreneurs and the public sector.

The Citizens League is new to the field of agricultural policy. To some, even within our own organization, it may seem surprising to find a predominantly metropolitan group exploring an issue that has been cast as predominantly rural. But that characterization is fundamentally flawed. Twin Citians are heavily dependent upon the farm economy to bring them the basic staples of everyday sustenance. Historically it can be argued that only the viability of the rural farm economy made cities possible in the first place. It has long been understood that anything which weakens the rural tax base ultimately affects the urban tax base as well. And when there is not enough work in rural areas, metropolitan unemployment increases.

The metropolitan population then, has a substantial interest in the health of the farm economy.

This study changed the perspective of our committee in many ways. In contrast to popular perceptions, agriculture is not one industry but many. Farming is not a low-tech but increasingly a high-tech industry. Farmland is not "undeveloped" but rather highly developed...for farming. There is a deeper meaning implied by the word agriculture, for farmers and those who work the land are engaged in far more than business. To farmers, agriculture is a way of life with a culture of its own.

In conducting this study our committee faced three problems. The first problem was that the question of whether to expand the market for Minnesota-grown produce seemed largely a private sector issue as opposed to a public policy question. Consequently, our committee struggled with the appropriate role, if any, for government in this area.

A second problem was related to the committee's charge. Unlike most topics which ask a committee to examine a problem and recommend solutions, our charge seemed to suggest that specialty crops was a possible solution to the assumed problem of Minnesota's economic dependency upon other states for its fresh produce needs. But whatever dependency Minnesota has with respect to imported fresh produce is more than offset, economically, by the fact that Minnesota is a net exporter of agricultural products in general and canned and frozen produce in particular.

A third problem was how deeply to delve into larger questions of macro-agricultural policy. We chose not to stray from our charge in developing recommendations on these larger questions. Nor did we feel that the largely metropolitan composition of our committee gave us much license to address so sensitive an area for rural people. Nonetheless, we felt that many of the macro-level issues which were brought to our attention were too important to be ignored. Therefore, while we discuss these issues in our report, we did not, in any way presume to resolve them.

The reader should understand however, that this report does begin to sound an alarm of sorts about the state of the agricultural economy. The Citizens League is by no means the first to raise troubling questions about the long term sustainability of American agriculture. J. Tevere MacFadyen, in his new book, "Gaining Ground: The Renewal of America's Small Farms" argues convincingly that:

> "It seems certain now that conventional large-scale agriculture, with its abject dependence on fossil fuel energy, its capital-intensive industrial technologies, and its devotion to high-volume, standardized mass production, cannot continue indefinitely to reign supreme in an economic and biological environment where adaptability, efficiency, and conservation are ever more important assets."

New directions for American agriculture are slowly emerging. The problem, increasingly, is whether such new measures as organic gardening, specialty crop cultivation, agricultural land trusts and other measures can become profitable. As one small farmer in MacFadyen's book stated, "We do know how to farm properly, but we don't know how to make it make money."

Our investigation of the potential for expanding the market for Minnesota-grown fresh produce has convinced us that it is one of many valuable new directions for American and Minnesota agriculture. The question to us is whether and when public policy will begin to shift away from the encouragement of outmoded agricultural practices and begin to embrace many of these new directions. Until and unless that happens we are convinced that agriculture's long term contributions to the U.S. and Minnesota economies will remain in serious jeopardy.

FINDINGS

I. MINNESOTA IS HEAVILY DEPENDENT ON OTHER STATES FOR THE PRODUCTION AND SHIPMENT OF FRESH FRUITS AND VEGETABLES.

In 1977, a report on "The Marketing of Fresh and Processed Specialty Crops" prepared by the Agricultral Experiment Station of the University of Minnesota, found that 86 percent of Minnesota's supply of fresh fruit and vegetables came from outside the state. That report, based on 1975 data (detailed in the USDA Market News Service annual summary report on fresh fruit and vegetable unloads in midwestern cities) was able to document that Minnesota-grown fruits and vegetable supplied only 14 percent of the state's needs. (Note those figures probably underestimate the reality since "many loads are delivered directly to retail store outlets or directly to consumers via direct farm to consumer marketing methods." Since the volumes of those direct sales were not unloaded in the Twin Cities, the data underrepresents the true picture.) See Table 1

TABLE 1

Major Out-of-State Sources of Supply of Fresh Produce in Carload Equivalent Unloads at Minneapolis-St. Paul

State of origin	Commodity	1975	1974	1973	1972	Percent of total out-of-state produce
California	Oranges	2437	2051	1763	2078	
	Lettuce	1434	1406	1124	1256	
	Celery	482	566	517	538	
	Other	2697	2909	2199	2566	
	TOTAL	7050	6932	5603	6438	50
Washington	Apples	657	741	532	535	
	Other	355	344	294	319	
	TOTAL	1012	1085	826	854	7
Texas	Watermelon	285	193	174	120	
	Cabbage	244	227	186	202	
	Grapefruit	203	212	179	204	
	Other	317	279	237	273	
	TOTAL	1049	911	776	799	7
Florida	Grapefruit	236	283	189	242	
	Sweet Corn	114	144	128	133	
	Potatoes	120	9	166	33	
	Tomatoes	100	50	33	65	
	Other	370	315	308	346	
	TOTAL	940	801	824	819	7
North Dakota	Potatoes (total)	752	702	792	637	6
Other states		3190	2912	2724	3291	23
Total of all out-of-state unloads		13,993	13,343	11,545	12,838	100

Table 1 Cont'd

Unloads of Minnesota produce at Minneapolis-St. Paul					Percent of total reported unloads
Potatoes	1993	1806	1670	2102	
Onions	103	34	12	35	
Apples	32	25	11	23	
Cabbage	19	21	13	14	
Carrots	8	19	11	16	
Sweet corn	11	10	24	5	
Radishes	13	16	8	10	
Squash	16	12	8	10	
Other	110	64	22	40	
TOTAL	2305	2007	1779	2256	14
Total of all unloads at Minneapolis-St. Paul	16,298	15,350	13,324	15,094	

SOURCE: Development of Irrigation & Special Crops, University of Minnesota, 1977

Of the 9,000,000 cwt of produce shipped into the Twin Cities in 1979, only 11 percent was raised here, according to USDA statistics.

The majority of the produce unloaded in Minnesota was grown in California (50 percent), Washington (seven percent), Texas (seven percent), Florida (seven percent), and North Dakota (six percent).

II. MINNESOTA WAS NOT ALWAYS AS DEPENDENT UPON OTHER STATES FOR THE PROVISION OF FRESH FRUITS AND VEGETABLES AS WE ARE TODAY.

Following World War II, a variety of trends encouraged the nationalization and specialization of the market for fresh produce. These trends had the effect of decimating the underpinnings of local markets.

Major advances in refrigeration, coupled with low prices for gasoline and the development of the Interstate highway system encouraged the market for fresh produce to shift to southwestern states whose climate was ideal for year-round production. At about this same time, supermarket stores began to replace smaller Mom and Pop stores.

These changes had major effects on local production and consumption of fresh produce. Producers quickly found that they could not compete year-round with growers from California and Florida. And, with the very low cost of gasoline, the prices charged by out of state producers were competitive with local growers. The growth of supermarket chains also proved to be a problem for local growers. Supermarket stores demanded much higher volumes than local growers were able to supply. Consequently, the supermarkets began to contract more frequently with out of state growers and, as they did so, vital "contact networks" with local growers evaporated.

Local production of fresh market vegetables and melons slowly declined. According to statistics provided by the Crop Reporting Board of the USDA, in the past, Minnesota had almost twice as many acres as it does today reserved for the production of fresh market vegetables and melons. In

1954, the state had 9,100 acres set aside for those purposes (28th nationally) as against only 4,950 in 1981 (41st nationally). In 1954, Minnesota harvested 8,350 acres (38th nationally) for principal vegetables and melons as opposed to only 4,650 in 1981 (42nd nationally).

III. MINNESOTA'S DEPENDENCE ON OTHER STATES FOR FRESH PRODUCE IS NOT A PROBLEM FOR THE STATE ECONOMICALLY. MINNESOTA IS A NET EXPORTER OF AGRICULTURAL COMMODITIES IN GENERAL AND VEGETABLES IN PARTICULAR.

Minnesota agriculture as a whole tends to have a positive "balance of trade" (i.e., we export more than we import agriculturally.) In his study, "Agriculture: Essential to Minnesota's Economy and Its Regions and Communities -- An Update", University of Minnesota Professor Wilbur Maki has noted:

> "The livestock and crop agricultural industry group was a net exporter in 1977. Industry outshipments to rest of nation and abroad were larger than inshipments of gross output from rest of nation industries to the crop and livestock agricultural group in Minnesota. Inshipments of livestock and crop agricultural industry outputs from rest of nation also were less than corresponding Minnesota industry outshipments."

Maki's study found that while Minnesota was a net exporter in total, the state was a net importer in 11 of 19 individual commodity groups in agriculture. For these industries, total requirements exceeded total supplies in varying proportions. According to the study:

> "Inshipments of meat animals, although less than 20 percent of total meat packing requirements, accounted for 63 percent of the (Minnesota) imports of agricultural products from rest of nation. Other crops, including grass seed, tobacco, fruits, tree nuts, and vegetables were the next largest category of imports, accounting for 24 percent of agricultural imports from rest of nation. Forest and fisheries products and agricultural, forest and fisheries services were third in total import value."

<u>The economic impact of Minnesota's dependence on other states for its fresh produce needs is minimal since Minnesota does very well in the processed vegetable market.</u>

Minnesota's heavy emphasis on corn production has made it one of the top five states in the United States in terms of areas harvested, production, and value of the nine principal vegetables for processing. Together, California, Wisconsin, Minnesota, Oregon and Washington accounted for 74 percent of the harvested area, 82 percent of production and 77 percent of the value of processed vegetables in the U.S. in 1983. (See Table 2) In 1983, Minnesota was the nation's third largest vegetable processor, producing 5.8% of the nation's canned and frozen product. The leaders were California (58.5 percent), Wisconsin (8.7%) and Minnesota, followed by Oregon (4.8% percent) and Washington (4.2 percent).

TABLE 2

Leading Processing Vegetable States in 1983*

Rank	Area Harvested State	Area Harvested % of Total	Production State	Production % of Total	Value State	Value % of Total
1	-WI	-22.8	-CA	58.5	-CA	-49.4
2	CA	20.4	WI	8.7	WI	10.8
3	MN	14.9	MN	5.8	OR	6.2
4	WA	8.1	OR	4.8	MN	5.9
5	OR	8.1	WA	4.2	WA	4.9

*Snap beans, sweetcorn, peas, & tomatoes.
SOURCE: Annual Vegetables, December 1983, Crop Reporting Board, SRS, USDA

Because of Minnesota's concentration on the production of processing vegetables, it does not compete nearly as effectively with other states in the production of the 22 principal fresh market vegetables and melons.

The five leading states in production of fresh vegetables and melons during 1983 in order of total output were California, Florida, Arizona, Texas and Michigan. These states accounted for 76 percent of the harvested area, 79 percent of the production and 83 percent of the value of fresh market vegetables in the United States in 1983. (See Table 3)

TABLE 3

Leading Fresh Market Vegetable States in 1983

Rank	Area Harvested State	Area Harvested % of Total	Production State	Production % of Total	Value State	Value % of Total
1	CA	45.1	CA	51.1	CA	49.0
2	FL	13.6	FL	12.3	FL	19.6
3	TX	6.8	AR	7.1	AR	5.9
4	AR	5.7	TX	5.7	TX	5.3
5	NY	5.1	MI	3.4	NY	3.4

SOURCE: Annual Vegetables, December 1983, Crop Reporting Board, SRS, USDA

In 1983, Minnesota ranked 45th in the area planted for fresh market vegetables, 45th in harvested area for fresh market vegetables, 37th in total production (cwt.) of fresh market vegetables and 44th in total value of fresh market vegetables per $1,000.

National trends indicate that people are consuming more fresh vegetables and fewer processed vegetables. Should this trend continue, Minnesota's reliance on vegetable processing and its dependence upon out of state fresh vegetables could become problematic.

Americans are buying more fresh and fewer processed vegetables. The annual per-capita consumption of commercial fresh vegetables grew about 13 percent to 109 lbs. from 1972 to 1982, according to the U.S. Department of

Agriculture. During the same period, consumption of processed vegetables fell four percent to 111 pounds. (Processed vegetables includes both canned and frozen vegetables. During this period canned vegetable consumption declined six percent, while consumption of frozen vegetables rose eight percent.)

A December 1983 report by the Saint Paul Food Resources Project provides a more localized view of the growing importance of fresh fruits and vegetables in St. Paul residents' diets. The report found that the "market" for food bought at home and in restaurants in St. Paul was $379 million in 1983, more than three times the city government's annual operating budget. Of that, $271.4 million was spent for food consumed at home. St. Paul consumers supplemented those purchases with foods from their own gardens worth an estimated five percent of their grocery purchases.

The Saint Paul Food Resources Project found that meat comprised 36 percent of 1983 total food sales in St. Paul, followed by dairy products (15 percent), flour, cereal and bakery purchases (15 percent), fresh vegetables (8 percent), fresh fruits (6.5 percent), poultry (5 percent), fish and shellfish (4.8 percent), canned fruits and vegetables (3.4 percent), eggs (2.5 percent), and frozen fruits and vegetables (1 percent).

St. Paul consumers' purchased fresh fruits and vegetables (14.5 percent) at three times the rate of canned or frozen fruit and vegetable purchases (4.4 percent). The margin between the two would increase still further if the value of St. Paul consumers gardens were added to the equation.

IV. THERE IS A GROWING INTEREST IN ACTIVITIES WHICH PROMOTE THE LOCAL PRODUCTION OF FOOD.

A. Many stores are beginning to buy more local produce.

Stores like Super Valu, Byerly's, Lunds', and Cub Foods are carrying more locally grown produce. Brad Bailey, produce supplier for Super Valu, says he buys Minnesota fruits and vegetables for the 225 Super Valu stores he supplies, as long as its available and comparable in price to imported produce. Mike Witt, the manager of the Super Valu produce department operation told our committee that the firm is responding to increased consumer consumption of fresh produce. According to Witt, industry surveys indicate that consumers shop at a specific grocery store because of the produce department. That represents a major shift from the past when shoppers chose stores based on their meat departments. Witt stated that 10 percent of Super Valu's produce sales come from local produce. Super Valu spends between $1 million and $2 million on procuring local produce and is thinking about installing salad bars in many of its grocery stores.

B. Some farmers are beginning to organize to sell fresh produce in bulk to grocery wholesalers.

The East Central Minnesota Vegetable Producers Cooperative in Minnesota is the state's first vegetable marketing co-op. Because forward markets are critical for perishable crops, the cooperative has focused primarily on securing contractual agreements with grocery

wholesalers. In 1983, 27 members had 60 acres under such contract arrangements. In 1984 45 growers had 100 acres under contract.

C. Area cooperatives are active in promoting fresh produce. Coop customers, when surveyed, seem to prefer locally-grown produce.

Our committee visited with representatives of two coops, DANCE, or Distributors Alliance of the North Country, and Roots 'N Fruits. Both purchase locally grown produce as much as possible and are thinking about possibly expanding their involvement with it. DANCE is considering expanding its role as a distributor of Minnesota grown produce. Roots N' Fruits estimates that at least nine percent of its produce is locally grown in the sense of being raised in either Minnesota or Wisconsin. A Roots 'N Fruits survey of its shoppers revealed the following attitudes toward local produce:

1. People generally prefer local produce whenever available.

2. Quite a few people are not aware of what is local versus shipped in.

3. People buy locally grown produce primarily because it is fresher than shipped in produce; it helps to support local farmers rather than national growers and it supports the local economy.

4. A substantial number of people are willing to pay up to 15 percent higher for locally grown organic produce. Quite a few are willing to pay 16 to 30 percent higher.

D. The Minnesota Department of Agriculture has started a major campaign to promote locally-grown produce and other Minnesota products.

The State Department of Agriculture has contributed $70,000 to a 1984 statewide promotional campaign for Minnesota grown fresh produce. The Minnesota Vegetable Growers Association is expected to contribute $23,000 towards the effort which features the slogan, "Minnesota Grown Tastes 2,000 Miles Fresher." Television and radio advertisements will appear throughout the summer and fall. The Department of Agriculture has published informational brochures telling consumers how to find pick your own farms, farmers markets and roadside stands in their area.

State money is also being used to encourage the development or promotion of other Minnesota products. A mobile field cooling system to preserve sweet corn freshness and quality is being developed. Money has been provided for market development of dry and edible beans and promotion of the St. Paul farmers market. Poinsettas and other Minnesota grown plants will be the focus of another marketing effort.

E. A proposal has been introduced into the Minnesota House to encourage all state institutions to buy locally grown produce whenever possible.

F. The University of Minnesota is beginning to encourage research that would benefit small Minnesota produce growers and horticultural specialty farmers.

Luther Waters, a nationally known horticultural expert, has been hired by the University to stimulate specialty crop production. Since 1981, Waters has directed a three-year, $250,000 project funded by the Governor's Council on Rural Development to identify and develop new markets for Minnesota-grown asparagus, broccoli and cauliflower.

G. Many local foundations are actively involved in funding projects which would encourage greater local self-sufficiency through the development of a local market for locally-grown produce.

Such foundations include the McKnight Foundation, the Wilder Foundation, the Northwest Area Foundation, the Otto Bremer Foundation, and the Blandin Foundation.

H. Several locally-grown produce projects have been started as self-help measures by inner city residents and the Hmong community.

Our committee has become especially familiar with the Wilder Forest Project, the Bryant-Regina-King (B.A.R.K.) urban gardening and farmers market projects. All of these projects are attempting to provide greater economic self-sufficiency for their members.

The most interesting and ambitious project is a Minnesota Agricultural Enterprise for New Americans (MAENA). The project involves 56 Hmong and Cambodian families in farming a 160 acre plot west of Farmington. Emphasis is placed on the growing of specialty crops and preparing them for market. In 1984, the group grew green peppers, tomatoes, broccoli, cauliflower, cabbage, green onions, lettuce, spinach and snow peas. An expected return of $470,000 (after broker's fees) was predicted by Thomas K. Reis who directs the project for the University of Minnesota. Although all the participants in the project are on welfare, it is expected that after 18 months on the project workers should earn more than their welfare payments and become self-sufficient. By 1987, the University of Minnesota's role in the project is scheduled to end and the group will become a worker-owned cooperative.

I. The St. Paul Farmers Market is once again a vigorous, thriving institution.

Founded in 1881, the St. Paul Farmers Market appeared to have no future several years ago. But a new location, a growing emphasis on healthy lifestyles and changing consumer tastes have helped it to flourish again. Today, there is a waiting list for its 167 open air stalls. Market manager Patty Brand says that the market attracts young, old, rich and poor. "There's no dollar savings," Brand says, "they're after quality and interacting with the grower."

J. Northern States Power Company and the University of Minnesota have joined forces to raise and market locally-grown fish.

NSP and the University's School of Fisheries and Wildlife are raising catfish in Mississippi River water run through the company's Sherco plant. Catfish need hot water to grow. So far, the process seems to be working. Sherco catfish have been successfully marketed at

Byerly's, Applebaums and Morey's Fish House. The project has the potential to produce 500,000 pounds of fish per acre through intensive aquaculture techniques. By contrast, fish farms using small ponds produce 1,000 to 1,500 pounds per acre. The Sherco catfish project expects to expand to include tullopes and striped bass. It is the third successful venture using the power plant's cooling water. Tomatoes and roses are also grown with the water and steam from the plant.

K. St. Paul's Homegrown Economy Project and other, similiar projects are also aimed at expanding local production and consumption of food.

Saint Paul Mayor George Latimer has instituted a Homegrown Economy Project. The key to the project is an attempt to "retain capital in the local area to spur innovation" and to diversify the local economy. Emphasis is on shifting from importing goods and services to providing a network that assures that such products will be provided locally. Over time it is hoped that St. Paul will become less dependent on imports and more of an exporter in its own right.

St. Paul's Homegrown Economy Project will include a large energy-efficient greenhouse for raising fresh vegetables, and a local research and development firm to market and produce a long-term storage boiler. The latter product is cheaper than current equivalent wood boilers on the market for residential homes and should help to create a mini-market for wood waste products generated by many St. Paul firms.

V. IN MINNESOTA, SPECIALTY CROP PRODUCTION AND DIRECT MARKETING ARRANGEMENTS BETWEEN FARMERS AND CONSUMERS APPEAR TO BE INCREASING.

Little is known about the number of acres of specialty crops in production in Minnesota. Currently the Minnesota Department of Agriculture only collects acreage estimates for the production of asparagus, broccoli, cauliflower, strawberries and tomatoes. Actual production figures are not available.

University of Minnesota professor Wilbur Maki estimates that a meager two percent of the total acreage devoted to agriculture in the state is used for horticultural purposes.

But some observers believe that farmers, increasingly, are turning to specialty crops. Jim Sutherland, president of Specrotech International, a national consulting firm serving the specialty crop industry, has stated that "since 1970 specialty crop acreage in Minnesota has quadrupled to about 200,000 acres, and that doesn't include the canning and fresh frozen markets."

Direct farmer-consumer marketing programs also appear to be increasing. The best available source of data on direct marketing arrangements in Minnesota comes from a series of four directories published by the Minnesota Department of Agriculture. The four directories provide listings of roadside stands, pick-your-own farms and farmers markets in the Twin Cities and southern, central and northern Minnesota.

In 1983 the four directories contained a total of 360 listings where Minnesota-grown produce (fruits, vegetables and other products) were sold. The metropolitan area had the most listings (156) followed by central Minnesota (88), southern Minnesota (83), and northern Minnesota (32). Table 4 indicates that the pick-your-own marketing arrangement was the most popular of the direct marketing methods in use.

TABLE 4

TYPE OF DIRECT MARKETING OUTLETS IN MINNESOTA - 1983

Pick-your-own	160
Roadside stands	120
On-farm sales	58
Farmers markets	49
TOTAL	387*

*Total exceeds 360 because some outlets had combined PYO with roadside stands or on-farm sales.

SOURCE: MN Dept. of Agriculture, 1983

It is difficult to tell whether such direct marketing arrangements are increasing in number. An October 1979 survey by the Minnesota Department of Agriculture was sent to 725 farmer/growers throughout the state in the hope of acquiring a reliable estimate of direct marketing practices. The response rate of only 12 percent was disappointing, but did indicate that there were 19 roadside stands, 51 pick-your-own operations and 36 farmers markets operating in the reporting 32 counties. (The 32 counties represented 37 percent of the 87 counties in Minnesota.) While the 1983 Minnesota Department of Agriculture listings indicate many more outlets than the 1979 survey, the survey results did not cover the entire state.

Another means of exploring whether direct farmer-consumer marketing efforts has increased is to compare the number of listings in the 1983 directories to the number in earlier years. Although it is clear from Tables 5 and 6 that the number of listings has tripled in both the state and metro areas it cannot be concluded that the number of operations has grown. It could be that some operations simply opted not to be included in the listings in earlier years.

TABLE 5

MINNESOTA LISTINGS IN MNDAG DIRECTORIES 1980-1983

YEAR	NUMBER
1980	130
1981	284
1982	307
1983	360

SOURCE: MN Department of Agriculture

TABLE 6

TWIN CITIES LISTINGS IN
MNDAG DIRECTORIES 1980-1983

YEAR	NUMBER
1980	50
1981	130
1982	136
1983	157

SOURCE: MN Department of Agriculture

Data on direct farmer-consumer marketing activities in Minnesota is only now beginning to emerge.

Table 7 shows the top 10 Minnesota counties in terms of the value of agricultural produts sold directly to consumers for human consumption in 1978. (Per farmer that sells gross.)

TABLE 7

TOP 10 COUNTIES IN VALUE OF AGRICULTURAL PRODUCTS
SOLD DIRECTLY TO CONSUMERS FOR HUMAN CONSUMPTION, 1978

Counties	Average Value of Products Sold
Washington	$11,900
Hennepin	2,700
Rice	3,000
Houston	5,500
Stearns	2,400
Sherburne	3,200
Wabasha	5,400
Dakota	2,800
Wright	1,800
Ottertail	1,500

SOURCE: MN Department of Agriculture, 1978

Table 8 renders an indication of direct marketing activities in the Twin Cities metropolitan area in 1978.

TABLE 8

FARMERS WHO SOLD AGRICULTURAL PRODUCTS
DIRECTLY TO CONSUMERS FOR HUMAN CONSUMPTION

County	Number	Percent	Average Value of Products Sold
Anoka	92	16	$ 2,100
Carver	53	5	2,800
Dakota	98	10	2,800
Hennepin	137	16	2,700
Ramsey	23	25	2,900
Scott	65	7	2,400
Washington	104	15	11,900
Six Counties	549*	11	2,600#
MINNESOTA	5,252	6	1,900

*The six county total is 10 percent of the farmers in Minnesota who market directly.
#Washington County was deleted and Ramsey was retained in this calculation.

SOURCE: MN Department of Agriculture, 1978

Based on the table it would appear that 11 percent of Twin Cities metropolitan farmers are actively engaged in direct farmer-consumer marketing.

Perhaps the best data on Minnesota farmers' and consumers' attitudes towards direct marketing methods came from two separate surveys of these groups conducted by the Minnesota Department of Agriculture. Both surveys were conducted in 1979.

Approximately 1,000 consumer questionnaires were distributed to individuals frequenting farmers markets throughout the state in October 1979. Sixteen percent of the surveys were returned.

The results showed that younger people tended to use farmers markets more than older people. Professionals and homemakers tended to use farmers markets more than other occupational groups. Customers elected to shop at farmers markets because of the fresh quality of the produce (74 percent), lower prices (56 percent), and friendly atmosphere (37 percent).The average market in the study had a trading radius of about 20 miles.

Consumers used the produce which they purchased at farmers markets for immediate family needs (60.5 percent) for canning or freezing (30 percent) or to supply their own food business (eight percent). The average consumer spent $15 per week at the farmers market.

When surveyed, Minnesota farmers/growers involved with direct marketing operations said that the top three fruits sold to consumers were tomatoes, raspberries and strawberries. The top three vegetables were sweet corn, green beans and cabbage. Outside of these products the top three other products sold were honey, eggs, and nursery products.

The principal reasons for direct marketing were for higher profits (no middleman), less costs (no packaging) and an outlet for fresh high quality produce without the necessity of grading produce. Additional costs not needed for conventional marketing channels for the three outlets were indicated to be advertising, insurance, labor, maintenance, utilities, rent and/or leasing costs. Costs avoided in direct marketing that would be required in conventional marketing were packing, packaging, labor and transportation.

Ninety percent of those responding and replying to the questionnaire indicated plans to increase their volume in the next five years. Ten percent indicated no change. Ninety percent of those repsonding and replying to the questionnaire indicated that their production of agricultural products in 1979 as their part-time supplementary income. Ten percent indicated that their production constituted their principal source of income. Of those involved in part-time farming, 90 percent plan to increase their volume.

Considering all agricultural products produced and sold in 1979, the average total gross was estimated at approximately $9,773 in 1979. The average acreage designated for specialty crops in the top 10 counties is approximately 19 acres. The primary reason for remaining part-time was indicated as a lack of production to sell to the wholesale markets. The pick-your-own is the most profitable form of marketing since the grower can work the land and sell simultaneously. The farmers markets provide an outlet for non-graded produce.

Band on the results of its survey of farmers in 1979, MNDAG was able to construct Table 9. (Note that only 12 percent of all surveys were returned and only 32 of Minnesota's 87 counties were represented in the returns.)

TABLE 9

MINNESOTA'S LEADING COUNTIES OF 1979 AGRICULTURAL PRODUCTS

1979 RANK		FARM NUMBERS	AVERAGE FARM SIZE (ACREAGE)	AVERAGE ACREAGE SPECIALITY CROPS	% OF AVERAGE ACRES IN SPECIALITY CROPS	AVERAGE GROSS INCOME OF SPECIALITY CROPS
1	Hennepin	21	92	27	29%	$32,000
2	Carver	11	30	2	7	5,000
3	Wright	9	25	3	12	4,500
4	Hubbard	8	183	9	5	4,600
5	Becker	5	53	13	25	3,400
6	Isanti	4	39	1	3	12,000
7	Otter Tail	3	347	108	31	7,500
8	Ramsey	3	59	2	3	20,000
9	St. Louis	3	90	24	27	7,000
10	Pennington	2	3	1	33	825

SOURCE: MN Department of Agriculture, 1979

VI. INCREASES IN FRESH FRUIT AND VEGETABLE SALES, AS WELL AS A GROWING EMPHASIS ON DIRECT FARMER TO CONSUMER MARKETING, HAVE ALSO BEEN SEEN IN OTHER STATES.

According to a report by MNDAG, (Direct Farm Marketing: A Prospectus, 1979) those states with the greatest number of roadside fruit and vegetable stands include: New Jersey, New York, Ohio, Pennsylvania, California, Connecticut, Michigan and Texas. Leading states in the number of pick-your-own operations include: New York, Ohio, Michigan, North Carolina, Alabama, and Illinois. According to the American Fruit Grower (April 1977) Illinois ranked fourth nationally in the number of pick-your-own strawberries. Over 94 percent of Illinois strawberries were sold via direct marketing methods.

Here's a few examples of direct marketing activities in other states:

PENNSYLVANIA -- This state leads the nation in farmers markets (125) and is among the leaders in roadside stands (1,157) and pick-your-owns (600). In the mid-1970s according to a recent book by Charles Lutz, Farming the Lord's Land, 1980, the Pennsylvania Department of Agriculture established a direct marketing program aimed at reversing a decrease in the number of Pennsylvania's small farmers.

The Pennsylvania Department of Agriculture estimates that, for every dollar that reaches a farmer through direct marketing, three more are generated within the farm economy and seven more within the rural economy as a whole.

A June 1982 survey conducted by the Cornucopia Project in just two south-eastern Pennsylvania counties (Lehigh Valley and Northampton) showed that if farmers sold directly to local bulk food purchasers they could gain access to a $8.1 million market. That was the total value of locally grown foodstuffs which local grocery stores, food service companies, schools, hospitals and other bulk food purchasers were willing to buy from local farmers.

MICHIGAN -- A 1978 report by the USDA found that 36 percent of Michigan farmers sold commodities through direct marketing, with a sales value of over $75 million. The Michigan Department of Agriculture has promoted Michigan produce through its Good Things are Growing in Michigan campaign. A recent study of the food system in Michigan found that 64 percent of the food consumed in Michigan was produced outside the state. Of the $11 billion which Michigan residents spent for food in 1980, $7.5 billion was spent for food produced outside the state. Transportation costs alone, according to a study accounted for $600 million of Michigan's food bill. But even more damaging, according to the study, were the effects of this system on Michigan's local economy. Calculating that 20 percent of the average Michigan retail dollar stayed inside the state in the hands of Michigan retailers, the study's authors estimated that a full $6 billion of the state's total, $7.5 billion food import bill left the state each year. In comparison, Michigan was only able to export $2.4 billion worth of food products leaving it with a net imbalance of trade.

There have even been some efforts to encourge direct marketing of local produce by other metropolitan areas. Pennsylvania's Chester County, for example, has established what may be the nation's only metropolitan agricultural commission. The Center for Neighborhood Technology in Chicago has published a major report on the Chicago food system, complete with recommendations on how to make the city more self-sufficient. Recommendations include the need for a regional food plan and efforts to protect metropolitan area farm land from urban sprawl.

Much useful information can be gleaned from national surveys of direct marketing activities in other states. In 1978, the U.S. Congress passed the Farmer-to-Consumer Direct Marketing Act intended to assess the extent of "direct marketing and its benefits" to consumers and farmers and to promote the development and expansion of direct marketing of agricultural commodities.

Since the passage of this act three national surveys were conducted by the USDA's Economic Research Service between 1978 and 1980. Each study reviewed direct marketing activities in selected states. States participating in the 1978 survey included Indiana, Michigan, New Jersey, North Carolina, Ohio and Pennsylvania. Colorado, Connecticutt, Delaware, Maryland, Massachusetts, New York, Rhode Island, Tennesee and Wisconsin particpated in the 1979 survey. The 1980 survey included California, Illinois, Missouri, Maine, New Hampshire, Vermont and Texas.

From the three surveys, the following implications can be drawn:

* About 15 percent of the farmers in each state participated in direct-marketing efforts.

* Substantial amounts of money changed hands. The total value of the produce sold was $260 million in both 1978 and 1979. The 1980 survey found that farmers sold products worth $120 million directly to consumers.

* Farmers involved in direct-marketing activities typically owned small farms located within 20 miles of major metropolitan areas, they farmed on a part-time basis, earning some off-farm income, grew several crops and had gross farm sales (direct and through other outlets) of less than $21,000 per year.

* In each survey, about 25 percent of direct-marketing farmers accounted for nearly two-thirds of all direct-market sales. Nonetheless, direct-marketing activities were important to both full-time and part-time farmers.

* Two-thirds of farmers participating in direct-marketing activities stated they did so because they received higher prices/income. The prices farmers received from fruit and vegetable sales generally fell between prices paid by wholesale buyers and retail food store prices.

* Consumers indicated that they frequented farmhouses, roadside stands, pick your own's, farm stores and farmers markets because of the lower prices. In one survey, consumers realized savings of 15 to 20 percent.

* The leading products sold, by dollar value, tended to be floral products (including bedding plants), apples, all varieties of berries, peaches, sweet corn, tomatoes, livestock and dairy products and honey, syrups and jams.

* Gross sales per acre of direct market fruits and vegetables over harvesting and marketing costs varied considerably.

* The 1980 survey showed that strawberries and other berries provided farmers the greatest return per acre over direct marketing costs. These items returned $3,000 to $4,000 per acre over expenses, while peaches and apples returned from $2,000 to $3,000.

VII. ANY ATTEMPTS TO EXPAND THE MARKET FOR MINNESOTA GROWN PRODUCE MUST BE AWARE OF A VARIETY OF POTENTIAL PROBLEMS.

A. Expanding the market for Minnesota-grown fresh produce will pose some new problems for farmers.

Farmers are largely unaccustomed to growing the principal speciality crops of asparagus, broccoli and cauliflower. The capital costs of planting these vegetables is often high and farmers may see little or no return for the first year or so, but substantial returns thereafter. Moreover, the cultivation of these crops implies a style of farming which is more labor intensive than cash grain farms and thus requires some operational adjustments for farmers.

Farmers are not currently organized to provide either reliable delivery of fresh produce or enough volume to generate much interest from wholesalers and retailers. Minnesota farmers are at a severe disadvantage in competing with national growers because they lack hydrocoolers (to cool the vegetables' field temperature after harvesting in order to prevent spoilage), packaging facilities and storage and shipping capacity. Farmers' traditional independence is an additional impediment, since it stands in the way of more cooperative approaches to these problems.

B. So far, the state's major agriprocessing companies have not had much interest in marketing fresh produce.

With the exception of the Owatonna Canning Company, the state's major agriprocessing companies have not publicly indicated any interest in fresh produce. And even the Owatonna firm's interest seems to have waned. Some companies even believe that by marketing fresh produce they would be competing with their own product lines in the canned and frozen markets.

C. Minnesota-grown fresh produce may or may not be cheaper or of a higher quality than shipped in produce.

We have heard of instances in which Minnesota-grown produce was priced lower than out-of-state produce. But likewise, we have also heard testimony in which it was more costly. The experience of other states suggests that savings of 15 to 20 percent are possible when fresh produce is purchased in direct marketing settings. Linda Lenzen, of Roots N' Fruits Coop, told our committee that even where Minnesota-grown produce is more expensive coop shoppers have been willing to pay the additional cost because they perceive some additional value. A debate is currently brewing over the nutritional value of locally-grown produce as opposed to shipped-in produce. The outcome of that debate is, as yet, undecided.

D. Encouraging the development of a fresh produce industry in Minnesota may or may not significantly affect our state's dependence on out-of-state growers.

While 85-90 percent of all fresh produce in Minnesota is shipped in, it is unclear just how much less dependent Minnesota could become were it to substitute homegrown produce for that which is produced elsewhere. The only known analysis of this question found that "the most that could be replaced by (Minnesota) field production in our season would be about 11 percent of shipped-in produce." That analysis, by Del Christenson of the Detroit Lakes Vo-Tec, found that after analyzing all out-of-state shipments by commodity, and month of delivery, Minnesota, at best, could replace only 1,686 carloads of produce. Of that total, 1,000 carloads or seven percent of all shipped-in produce were apples.

VIII BUT THESE PROBLEMS COULD BE OFFSET BY THE POTENTIAL ADVANTAGES OF ENCOURAGING THE DEVELOPMENT OF A FRESH PRODUCE INDUSTRY.

A. Encouraging the expansion of the market for Minnesota-grown fresh produce is likely to have small, but generally positive, effects on the state's economy.

While attempts to expand the market for Minnesota-grown produce are not likely to make a significant contribution to the state's economy, they would, nonetheless, offer some positive economic impacts. According to Luther Waters, an expanded fresh produce industry in Minnesota could help the state's economy in four areas:

1. Jobs: Vegetable crop production, harvesting, handling and distribution is a labor intensive (though often low-paying) industry. Fresh market production is more labor intensive than processed crops in some phases.

2. Value-added: The vegetable industry adds value to the product in processing (approximately seven times the farm value,) and value is added to the land where the product is produced for either fresh or processed crops. Value-added products increase farm land value. The per-acre value of vegetable crops greatly exceeds that of most crops.

3. Community stability: The vegetable industry is not a transient business. Large capital investments are required in production, handling and distribution. For example, a typical processing plant may cost up to $30 million, and a fresh market packing facility, $10 million. This means relatively permanent jobs in that industry and associated businesses as well as improved state revenues.

4. Diversification of farm enterprises: Farmers are more economically secure and better able to obtain operating capital if they have access to a greater number of markets, especially if some of these markets are guaranteed in the future through contracts with vegetable processing plants or other vegetable markets.

B. Efforts to expand the market for Minnesota-grown produce would not require protectionist efforts. In fact, such efforts would likely be self-defeating.

Self-reliance, attained by decreasing Minnesota's dependence on out-of-state produce is a desirable objective. "Self-sufficiency" is not. As Professor Maki told our committee, the longstanding economic strength of our state and region has been its capacity for commerce and trade. We are what we are because we are a trading center. There is a basic contradiction between the goals of trade and self-sufficiency. Moreover, according to Luther Waters, if a viable fresh produce industry is to develop and thrive in Minnesota it must depend on trade. Waters has written that:

> "Opportunities exist in three fresh market areas including direct-to-consumer sales, local wholesale markets in Minnesota and wholesale markets outside of Minnesota. For an industry to develop in Minnesota to the maximum extent possible, it is necessary that all three of these markets be served by Minnesota producers. Concentrating on only one of these markets creates a surplus of product in that market sector and drives the price down. If there is activity in all three market sectors there is the opportunity to move produce from one sector to another and remove some of the supply stress."

C. Though applicable to all farmers, this strategy seems most likely to help small farmers explore new production models.

Many of these new ventures, though applicable to larger farms seem most likely to be responsive to the problems of small family farms and special populations.

Small farmers need to find some other organizational model rather than continuing to try to emulate, on a smaller scale, larger farmers who specialize in one crop. Increasingly, many new organizational models are available, all of which use product diversity as their watchword.

The most interesting model to surface thus far has been developed by a nationally-known horticulturist, Booker T. Whatley of Alabama's Tuskegee Institute. Whatley believes a 25-acre family farm is capable

(over time) of generating a substantial yearly income. To do so however, Whatley recommends that farmers follow five essential criteria.

First, each crop component of the farm must produce an annual gross minimum income of $3,000. Second, the components of the farm must provide year-round income -- staggered crops yielding income at different periods of the year. Third, the components or crops must not compete with each other for labor. Fourth, the farm must provide year-round full employment for 2.5 people.

Finally, the farm should be a pick-your-own operation with a clientele membership club. This farm should actively market itself to about 1,000 urban consumers, who would pay a $25 annual membership to come to the farm and harvest produce at 60 percent of the supermarket price. This arrangement allows the farmer to plan production, anticipate demand and have a guaranteed market.

D. The market for Minnesota-grown produce can be expanded by supplementing major crops not replacing them.

Fresh market fruits and vegetables are grown so intensively that even a few acres can feed a sizeable population. Consequently, even a greatly expanded fresh produce industry in Minnesota would not require that many acres now devoted to cash grain crops be converted to this purpose. Given Minnesota's success with cash grain crops, this is good news.

E. The development of the fresh produce industry need not require heavy government subsidization.

State government is already actively promoting Minnesota-grown fresh produce through a statewide promotional campaign and informational activities designed to make consumers aware of the locations of farmers' markets and pick-your-own gardens. These are appropriate activities and could be supplemented with further research. State government need not subsidize the development of this industry much further.

IX. SOME FORECASTED NATIONAL TRENDS COULD FACILITATE A "RELOCALIZATION" OF THE FRESH PRODUCE INDUSTRY. SUCH TRENDS WOULD LIKELY ENCOURAGE THE DEVELOPMENT OF THE FRESH PRODUCE INDUSTRY IN MINNESOTA.

A. Problems with water quality and supply are gradually adding to the costs of production in the southwestern states. If such costs continue to increase, local products would gain a competitive advantage.

B. Any future escalation of energy and transportation costs would reduce the shipping advantage that southwestern states now enjoy in getting fresh produce to northern markets. Under such circumstances, local produce might cost much less than imported food and encourage more local growers to get into the market.

C. The growing emphasis on higher value-added goods represents an opportunity for Minnesota to turn an existing competitive disadvantage into a competitive advantage.

D. Major changes in existing price support programs may be forthcoming. It is conceivable that some of these changes could reduce the competitive advantage which cash grain crops now hold over fresh produce.

E. Some analysts suggest that we are begining to witness the break-up of the mass market as we have heretofore known it. If true, the impacts on a potential Minnesota fresh-produce industry could be considerable.

X. THE DEVELOPMENT OF A FRESH PRODUCE INDUSTRY IN MINNESOTA WOULD FACE SOME RATHER FORMIDABLE OBSTACLES.

A. Current tax policies encourage large farms over small farms and the use of machinery over labor. The unintended consequences of such policies discriminate against farmers interested in growing fresh produce.

B. Public price support programs and public and private farm loan programs also discriminate against the production of fresh produce because farmers are guaranteed a market for supported crops and, therefore, tend to grow them to the exclusion of other crops.

C. With some exceptions, farmers are not now organized to provide the volume which many grocers and supermarkets require.

D. Minnesota's short growing season is a problem in that consumers have come to expect year round availability of fruits and vegetables. This problem could be partially overcome if a viable greenhouse industry could emerge in Minnesota.

E. Consumers are, on the whole, ignorant of where their food comes from.

F. Minnesota farmers are at a severe disadvantage in terms of competing with out-of-state produce because we lack: a) hydro-coolers, b) packaging facilities, c) storage capacity.

CONCLUSIONS

I. MINNESOTA AND ITS FARM SECTOR IS MISSING AN OPPORTUNITY TO PROFIT FROM EXPANDING THE MARKET FOR MINNESOTA GROWN FRESH PRODUCE.

By concentrating heavily on a few key crops and export sales of those commodities, Minnesota farmers may be missing an opportunity to take advantage of in-state and domestic markets for fresh produce.

Foreign exports are no longer a sure bet. "What used to be 'our' export markets simply aren't any more," says Richard Haskett, director of agricultural trade for the Minnesota Trade Office. "What's more, we may not be major producers of wheat, corn and soybeans at some point in the future. We have to diversify."

State Commissioner of Agriculture Jim Nichols agrees. Nichols views fruits and vegetables as a way to expand a $7 billion agricultural economy overly dependent on crops such as corn, soybeans and wheat. There is a chronic surplus of these staples, while demand for fresh produce, fueled by the fitness movement, is rising. Nichols believes that fresh vegetables can be a profitable supplement to foundering hog, grain and dairy farms.

Several key factors may encourage Minnesota farmers to develop the market for fresh produce.

Consumers' tastes are shifting. According to the USDA, people are now eating less than they did in the past, growing more of what they consume, substituting more lean meats (chicken, veal, fish) for beef and even eating less meat altogether. Fresh fruits and vegetables now occupy a central role in people's diets and, when given a choice, people tend to purchase fresh produce instead of canned or frozen products. Thus, there is a growing market for fresh produce which presents an opportunity for Minnesota farmers.

Minnesota could also gain from national trends which are stimulating a relocalization of the fresh produce market. Rising transportation costs -- currently about 25 percent of the wholesale price of produce shipped from California to Minnesota -- have eroded the comparative advantage West Coast growers have had over state farmers. Other cost factors, such as the future of federal water subsidies, the growing wage demands of migrant laborers and irrigation costs are also pushing vegetable production away from the southwestern states and closer to home.

There should be no question of Minnesota farmers' capacity to take advantage of these trends. Luther Waters, associate professor at the University of Minnesota's Horticultural Science Department, has identified 10 different factors which would promote growth in the fresh produce business. They are: 1) reliable supply of raw product, 2) consistent, high quality product, 3) satisfactory season length, 4) interested and knowledgeable growers, 5) attractive labor rates, 6) satisfactory pool of trained labor, 7) proximity to markets, 8) a satisfactory business climate, 9) quality educational and technical support systems, and 10) a high quality transportation system.

Minnesota already has many of these factors working in its favor.

Minnesota has consistently ranked in the top five states in terms of processing vegetables and the state's processing industry earns better than $500 million per year. Thus, there should be no doubt that Minnesota can provide enough demand or a quality product. Our growing season is certainly adequate for us to compete on a seasonal basis with other states. And the fact that vegetables grow best in a cooler environment could give us a slight advantage. In other cases, such as asparagus, the California growing season ends in May, the same month as Minnesota's begins. That phenomenon could give Minnesota a niche in the national asparagus market.

Minnesota has a knowledgeable and sophisticated farming community. Some farmers are already moving into specialty crop production. For those who are not knowledgeable about specialty crops, mechanisms already exist to provide further information. Minnesota's midwestern proximity to major northern tier markets could help its farmers gain access to markets in Detroit, Chicago, St. Louis and other major metropolitan areas. Luther Waters has identified in-state markets and urban centers as far away as the Atlantic and Gulf coasts as potential consumers of Minnesota produce. If University of Minnesota professor Wilbur Maki is correct, and the national produce market does shift away from the southwestern states, Minnesota could capitalize if its farmers begin now to create a fresh produce industry.

Interestingly enough, the opportunity to develop the market for fresh produce may be coming at the right time for many of Minnesota's farmers. National studies show that direct marketing activities are important to both full-time and part-time farmers. But part-time farmers tend to engage in such activities more heavily than other farmers. The number of part-time farmers in Minnesota continues to grow, making them logical candidates for specialty crop production. Many of the state's full-time farmers are also looking for a change. Over-capitalized, heavily in debt, with more land than they may be able to productively farm, many of these farmers may also be looking for new opportunities to diversify what they grow. Diversification can help many farmers spread their risk across several crops.

Specialty crops can constitute a farmer's principal crops or they can be added to existing crops. Either way, as national studies show, specialty crop production and direct marketing have the potential to be a valuable source of income for both large and small farmers.

II. OTHER STATES ARE EXPANDING THEIR MARKETS FOR LOCALLY GROWN FRESH PRODUCE. MINNESOTA SHOULD TOO.

Expansion of the fresh produce market represents a potential opportunity for Minnesota farmers. But many other states also recognize this prospect and some are much further along than Minnesota. New York, New Jersey, Ohio, Pennsylvania, Connecticut, Michigan and Illinois are just a few of the states in which a great deal of activity has already occurred.

One of the characteristics of states which have been successful in selling locally grown products has been intensive marketing. Such efforts are comparatively new for Minnesota. Other states launched such promotional campaigns years ago. The Good Things Are Growing In Michigan campaign, the Massachusetts Grown and Fresher program and efforts in Pennsylvania and other states were initiated long before Minnesota's program. Jim Nichols, Minnesota's Commissioner of Agriculture, acknowledges the problem. "Washington spends $3 million annually in Minnesota to promote its apples. Minnesota spends a tenth of that promoting its own apples," Nichols says. As a result, only nine percent of the apples sold here are Minnesota grown; the rest are imported. Likewise, Idaho has become synonymous with quality potatoes while Minnesota's Red River Valley potatoes are unheralded outside of Minnesota.

Recently, Minnesota has begun to step up its promotional activities. Clearly, such efforts should continue.

III. ALTHOUGH MINNESOTANS' DEMAND FOR FRESH PRODUCE IS CURRENTLY BEING MET, IT IS POSSIBLE TO INCREASE THE MARKET FOR MINNESOTA-GROWN PRODUCE.

So far as we can tell, Minnesotans' current demand for fresh produce is being met by out-of-state producers and some Minnesota growers.

If demand continues to grow there is reason to believe that production from in-state and out-of-state growers will keep pace. This is so even though it is often difficult for Minnesota-grown produce to compete with produce from other states. Years of experience, a year-round growing season, dependable volume and on-time delivery are major assets of the national production and distribution system.

On the other hand, mass production and marketing of produce can limit consumers' choices. Debate is growing over the value of produce which has been pre-harvested to meet the demands of the national marketing and distribution system as opposed to consumers' nutritional needs. Moreover, the debate between the merits of export maximization and import substitution is being revived with vigor.

Increasingly, the question appears to be whether the market for Minnesota-grown produce can be significantly expanded.

The Minnesota-grown campaign, fueled by a substantial grant from the state's Department of Agriculture and growers' organizations, should help to clarify the native demand for Minnesota grown fresh produce. The campaign encourages consumers to take a taste test of sorts and compare the quality and freshness of state grown produce against that which is shipped in from other states. Ralph Groschen, chairman of the Consortium of Growers' Associations backing the campaign, says that state farmers need an incentive to challenge the preeminence of west coast and southern producers. "We're trying to get retailers to seek out Minnesota produce," Groschen says. "The way we do that is by making the consumer more aware of local produce, so he'll ask for it."

How much latent demand for Minnesota grown goods can be stimulated via marketing efforts is, as yet, unknown. But certainly the growing numbers of pick-your-own operations and farmers markets is an encouraging sign.

Luther Waters has observed that marketing Minnesota-grown produce only within the state could flood the market, driving prices down and producers out of business. Thus, Minnesota must serve three market areas simultaneously: direct-to-consumer sales, local wholesale markets in Minnesota and wholesale markets outside of Minnesota. Only by serving all three markets can farmers succeed in relieving some of the stress caused by the potential of excess supply.

Much work remains to be done to serve each of these markets successfully.

IV. ENCOURAGING THE DEVELOPMENT OF A FRESH PRODUCE INDUSTRY IN MINNESOTA MAY NOT REDUCE IMPORTS OF FRESH PRODUCE FROM OTHER STATES, BUT WOULD HAVE A POSITIVE EFFECT ON THE STATE'S ECONOMY, IN GENERAL, AND FARMERS, IN PARTICULAR.

Today, over 85 percent of Minnesota's fresh produce is shipped in from other states. It is unlikely that that percentage will substantially decrease even if Minnesota can develop the market for fresh produce. In fact, the only known analysis suggests that "the most that could be replaced by Minnesota field production in our season would be about 11 percent of shipped in produce." Although that seems small, the multiplier effects of keeping those Minnesota dollars circulating within the state's economy could well be large.

Specialty crop production is no panacea. But it is likely to have a positive effect on the state's economy. Some new jobs will be added. Some additional value will be added to Minnesota products. Sizable capital investments may be made to establish storage, packing and distribution outlets. Farm enterprises may become more diversified. Some new revenue may flow into the state from out-of-state marketing activities.

As with any new endeavor some obstacles must be overcome. Expanding the market for Minnesota-grown produce will pose some new problems for farmers largely unaccustomed to growing specialty crops. So far, the state's major agriprocessing companies have not had much interest in marketing fresh produce. Today, Minnesota-grown produce may not be cheaper than other states' produce. With time, better organization, and greater efficiency, the price of Minnesota-grown produce could stabilize at competitive levels.

But these problems appear to be largely offset by the potential advantages of encouraging the development of a fresh produce industry. Beyond likely positive effects on the economy, efforts to expand the market for Minnesota-grown produce would not require protectionist efforts. In fact, such efforts would be self-defeating given the fact that this strategy depends heavily on trade with other states to succeed. (California growers tend to produce less in the summer anyway, largely in anticipation of greater home-grown efforts by client-state farmers.) Expanding production of fresh produce seems particularly attractive since it can be accomplished by supplementing major crops, <u>not</u> replacing them.

V. THE DEVELOPMENT OF A MINNESOTA-BASED FRESH PRODUCE INDUSTRY NEED NOT REQUIRE A SUBSTANTIAL INCREASE IN GOVERNMENT SUBSIDIZATION.

It seems unnecessary for state government to heavily subsidize the development of this industry. Some marginal investment may be required but largely this should remain in the hands of the private sector. Certainly the recent marketing efforts by the state Department of Agriculture should continue. But beyond that and some additional measures which we advocate in our recommendations, government can best assist by providing a supportive and nurturing environment in which agricultural innovation can flourish.

VI. THERE IS A CLEAR NEED FOR STATE GOVERNMENT TO REEXAMINE FEDERAL, STATE AND LOCAL POLICIES PERTAINING TO AGRICULTURE.

Although our study focused largely on fresh produce it could not help bumping into larger agricultural issues time and time again. In many ways, existing attitudes and policy incentives discourage farmers from exploring new crops and a more diversified production system on a smaller scale. For years farm size has been presumed to be a predictor of financial success. This tends to rule out experimentation with specialty crops since such crops are raised in a concentrated fashion on a limited number of acres.

Likewise, many existing policy incentives may indirectly affect specialty crop production. To the degree that price supports guarantee farmers a market for certain crops, farmers and farm loan institutions are more likely to raise those crops than crops without a guaranteed market. Many specialty crops tend to fall into the latter category. Tax incentives may also subtly discourage specialty crop production by favoring capital intensive means of cultivation over labor intensive modes which are required for fruits and vegetables. Moreover, tax incentives also tend to encourage large scale farms, effectively discriminating against ventures such as specialty crops which require a smaller scale.

As our background section indicates, a variety of other concerns can also be raised with respect to farm loan practices, farm tax policies and agricultural research priorities. Our ability to address these issues was limited. And our brief discussion of them in this report should in no way suggest that we are prepared to answer these questions. But we are convinced that it is critical that these questions <u>be</u> answered.

Even more important, in many ways, than the discussion of policy is the discussion of the problems that give rise to policy solutions. We would suggest that there are two fundamental questions from which any policy discussion should proceed. First, how should the United States deal with the fact that farmers' technological capacity to produce goods may exceed the national and international capacity to purchase them? Second, is our present agricultural production system ecologically sustainable long term?

Both of these problems and the existing framework of 'macro' agricultural policies must receive renewed attention by policymakers. They should be addressed by state government, perhaps through a committee appointed by the Governor with a truly statewide composition. Certainly further involvement by the Citizens League would be desirable.

If a committee were to be formed at the state level it should address the following topics:

A. The pros and cons of a general move away from government intervention and toward greater reliance on market forces in Minnesota and U.S. agriculture.

Government is heavily involved in agriculture through price supports, selective research, quality regulation, import/export restrictions, tax policies and consumer education. All of these programs have the potential for abuse. We have heard evidence that price supports distort the market and favor certain kinds of farming. The same thing has been alleged concerning a variety of other governmental interventions into the agricultural market.

In light of these charges, state government and others should examine the following questions:

1) Do price supports help Minnesota farmers in the world economy? Do they help Minnesota farmers in the domestic economy?

2) What can be done to prevent surpluses of agricultural commodities? What kinds of incentives can be introduced into the system to prevent them? Should they occur, how should they be dealt with?

3) What effect do existing agricultural tax policies have on rural communities and the family farm?

4) In light of current efforts to revamp Minnesota's tax code, should taxes to state farmers increase or decrease?

5) Is government sponsored agricultural research too concerned with the short-term, to the detriment of longer term interests?

B. The potential to substitute insurance programs (such as those currently employed by Canada) for current price support programs.

Income insurance programs guarantee farmers that their revenue per acre will not fall below some percentage of expected revenues. If revenue from the crop was less than the insured level, as a result of low yield or low prices, the farmer would be reimbursed from his policy. The system is designed to discourage overproduction by requiring farmers to pay additional premiums for larger acreage. Farmers would find it unprofitable to expand production beyond what would maximize profits.

Participation in the Canadian system is voluntary, but over 75 percent of Canada's grain farmers participate. Participants pay two percent of their annual grain sale proceeds into a stabilization fund. The maximum contribution per farmer per year is $900. The Canadian government then doubles the farmer's contribution.

A key provision of the program is that while farmers' contributions into the fund are tax deductible, any benefits from the program are taxable income. If a farmer's production costs exceed his receipts in

a given year, the public-private stabilization fund pays him enough to insure that his income will not fall below a pre-established five-year average.

The Canadian's stabilization fund has been solvent since it was first established in 1976. Farmers had contributed $172.5 million to the fund between 1976-1980, while the Canadian government contributed $345 million. During that time the fund earned interest of $38.7 million. By 1980, the fund had paid out $367.8 million in benefits to farmers. It ended the decade with a $188 million surplus.

Although the Canadian revenue insurance program is governmentally run, there is no reason why such a system could not be either publicly or privately administered.

RECOMMENDATIONS

I. A NUMBER OF STEPS SHOULD BE TAKEN NOW TO BROADEN THE MARKET FOR MINNESOTA GROWN PRODUCE.

A. Marketing efforts must be maintained and broadened.

1. The Minnesota Department of Agriculture's promotional campaign should continue. But it should also help the public distinguish true quality in fresh produce by differentiating between cosmetic appearances, nutritional value and shelf-life or storage capacity.

2. The Minnesota Department of Agriculture, together with such groups as the Farm Bureau, the Farmers Union, the World Trade Center and the Department of Economic Development should develop the market for Minnesota products (wild rice, Christmas trees, popcorn, maple syrup, sweet corn, fresh produce) in other states, thereby stimulating Minnesota production.

3. The Minnesota State Legislature should encourage the development of grower coops to market Minnesota-grown produce. Towards that end, the Legislature should provide limited amounts of seed money or start-up capital to initiate these enterprises just as it did some years back to stimulate Health Maintenance Organizations (HMOs) development.

4. Producers' coops should be used to market Minnesota-grown produce to consumers all over Minnesota.

5. Local governments should license fresh fruit and produce vendors in the downtown areas during the season. City and town councils should also consider this idea for major shopping centers or local festivals.

B. Further education about growing and using fresh produce should be made available to potential growers and consumers.

1. More Minnesota AVTI's should offer courses on specialty crop production. (Only two AVTI's do so today.) The Minnesota Agricultural Extension Service should continue to help new and existing growers learn more about fresh produce by training agricultural extension agents in specialty crop production, and holding educational forums. The College of Agriculture at the University of Minnesota should include courses on smaller-scale agriculture as part of its curriculum.

2. Local neighborhood groups should encourage the development of a "homegrown" food-preserving activities to can, freeze and dry produce. Neighborhood groups should consider approaching churches for permission to make use of underutilized church kitchens during off-peak hours. Such activities could use sweat equity to can large quantities of fresh produce largely for home consumption.

There would be several foreseeable impacts of such an arrangement. Canning locally-grown produce might encourage people to grow more produce. A "homegrown" canning enterprise such as this could be started by 4-H groups, neighborhood groups or low-income groups.

3. The Minnesota Food Association, a nonprofit research organization specializing in food issues, should encourage neighborhood groups in major Minnesota central cities and suburbs to develop consumer coops or buying and preserving clubs. There might even be food exchanges of locally grown produce where local gardeners could exchange some of their excess produce for the products of others gardens. Some of the surplus might be contributed to local food shelves.

4. The Minnesota Food Association should encourage local firms to make surplus land available to their employees for gardening activities.

5. Metro area grocers and coops should educate consumers on how to handle, store, and preserve produce at home so that buying "fresh" is more often seen as a feasible option.

C. Ways must be found to re-establish direct-marketing links between farmers, buyers and consumers.

1. The Minnesota Food Association should encourage major institutional buyers such as hotels, hospitals, schools, colleges and state facilities to develop direct relationships with Minnesota farmers that would allow them to buy fresh Minnesota-grown produce when it is price-competitive with produce from other states.

2. The Minnesota Food Association should encourage metro area grocers to allow farmers to hold farmers markets in their parking lots. North Carolina grocers have found that fresh produce is a "drawing card" and can lead to increased sales for the chain as well as farmers.

3. The Minnesota Food Association should encourage grocery stores to continue carrying homegrown products in season.

4. Metropolitan area neighborhood groups should consider engaging in contractual arrangements with farmers to provide them with selected food needs. Typically, such arrangements would be with farmers living within or on the fringes of the metropolitan area. The contracts might provide for payment on delivery or be made on a pre-paid basis in much the same way as Health Maintenance Organization's (HMO's) now operate in the health field. One farmer might well provide food for a one or two block area. Such relationships could lead to lower food prices for consumers and greater predictability for farmers.

5. Creative types of marketing efforts should be encouraged including non-traditional auctions. For example, livestock auctions could be made available to the general public. The public could be allowed to bid for various portions of the animals, which would be delivered to them at a later date completely dressed and ready to eat.

   A Dutch Clock Auction is another good idea. A Dutch Clock Auction is an electronic auction that can be used to market large volumes of fresh produce, flowers, and other products very quickly. Growers would bring their goods to market where prospective buyers could inspect them prior to the bidding process. Unlike traditional auctions, the first purchaser to bid obtains the product. Another difference is that a Dutch Clock Auction starts with high bids and then moves to lower ones. Buyers must bid quickly if they hope to purchase the product, and this process brings farmers a higher return than they might otherwise have enjoyed. In the event that no one bids on the product and the seller considers the asking price too low, he can cancel the sale electronically.

   A Dutch Clock Auction might help overcome some problems which we have touched on in our study. First, it minimizes the need, in the short run, to organize farmers to produce the volume often required by major purchasers. Second, it would facilitate grower/bulk purchaser relationships which, over time, might result in direct contracting arrangements. Finally, it provides a centralized, easily accessible location for bulk purchasers to acquire their goods.

   A number of groups should consider creating non-traditional auctions. They include city governments (especially St. Paul), county fair boards, farmers markets as well as private entrepreneurs.

C. Capital investment in the fresh produce industry is needed.

1. The Minnesota Commissioner of Energy and Economic Development should establish a limited program to finance needed investments in fresh produce "infrastructure" such as hydrocoolers, packing and storing facilities. Resources for this program could come from funds allocated to the department for new business development and assistance. A series of loans could be made to groups of growers on the condition that they agree to work together and repay the loans over time.

2. The Minnesota Legislature should provide development assistance to specialty crop growers. Such funds should facilitate the development of specialty crop production and other ventures likely to stimulate a more diversified state agriculture sector. Public dollars could be used to document the existence of alternative small farm models in Minnesota, fund the creation of a communication network among small farmers to develop and share information about new farm technology and stimulate the development of other innovative small farm models. At least one of these model farms should have a client membership club.

D. New research priorities may be needed.

1. The University of Minnesota should review its current agricultural research budget and priorities and determine whether some existing monies should be reallocated towards horticultural research.

2. The Minnesota Legislature should decentralize its present agricultural research process and insure that funds are awarded on a competitive basis. Existing subsidies should be allowed to go to a variety of organizations, as well as the University of Minnesota. Individual growers, growers associations, academic institutions or even businesses should be allowed to participate in a competitive bidding process to allocate available funds. The Department of Agriculture should set up a public-private committee to distribute research dollars through the use of requests for proposals (RFPs).

II. MINNESOTA SHOULD TAKE THREE BASIC STEPS TO STRENGTHEN ITS AGRICULTURAL ECONOMY.

A. Minnesota should develop new domestic markets in case foreign demand continues to slacken or otherwise fails to improve.

At present, Minnesota is too dependent on foreign exports as a means of marketing its products. Most market analysts argue that the international market is none too good today and shows little signs of improving. Forecasts from the U.S. Department of Agriculture indicate that the value of U.S. agricultural exports has fallen from a high of $44 billion in 1981 to about $37 billion by year-end 1983. Professor Wilbur Maki has shown that agricultural exports accounted for fully 41 percent of Minnesota's total exports in 1977. But he points out that that percentage could fall to as low as 25 percent without improvement in the world market for U.S. grain.

Minnesota needs to redouble its efforts to establish back-up domestic markets for its major commodites.

Just as Michigan sells its berries; Vermont, its maple syrup; Idano; its potatoes; and Florida, its oranges, Minnesota needs to market its leading products to other states. We should be doing more to promote the sale of Minnesota fresh produce and sweet corn, Harralson apples, Red River Valley potatoes, turkeys, wild rice, Christmas trees and other well-known Minnesota products.

Some of these new markets should be in Minnesota. Others need to be in other states.

B. Minnesota should convert surplus raw products into other products, preferably those of a higher value-added nature.

A second part of Minnesota's long term agricultural strategy should be to convert some existing products into higher value-added commodities. For example, rather than simply growing apples, Minnesota farmers might consider producing apple pies. Dairy farmers might consider producing yogurt. According to Professor Maki, Minnesota currently does little of this.

Ironically, Minnesota enjoys a natural advantage in this area. Maki states, "you can't find corn any cheaper than it is here in Minnesota prior to the cost of transporting it. One way to exploit that natural market is to convert those low cost materials into higher value products which can be sold at a lower price." As an example, Maki suggests that Minnesota explore the development of wet corn milling plants.

A recent report by the Governor's Advisory Commission on Agriprocessing (February 1983) has identified a number of areas that lend themselves to value-added production. These areas should be pursued.

C. Minnesota should divert some farm land into the production of other commodities.

Longer term, Minnesota needs to encourage a more sustainable, diversified agricultural economy by developing markets for many new products. Fresh vegetables are the best example of the kind of new market development that is needed.

For farmers, the development of a fresh produce industry holds the potential for a better return per acre than they may currently enjoy. According to Richard Dethmers, former executive director of the Governor's Rural Development Council, studies show that a farmer can earn as much from eight acres of vegetables as he would from 100 acres of wheat.

National surveys confirm that direct marketing of fresh produce was important to both full-time and part-time farmers as a means of supplementing their income. Although few people expect fruits and vegetables to replace many acres of existing Minnesota field crops, many observers feel that produce may be a welcome supplement to farm income and provide a valuable way to help farmers spread their risk. Raising fruits and vegetables can provide grain farmers with a steady summer cash flow when their traditional crops are receiving low prices.

Ironically, although Minnesota is known as a predominantly agricultural state, it may be failing to take advantage of some significant new agricultural opportunities. Minnesota farmers should explore a wide variety of new agricultural ventures including:

* Nursery and flower products -- the success of Bachman's, now the nation's largest retail florist, with over $48 million in sales, is indicative of this fast growing market. According to a recent article in Citibusiness (December 21, 1983).

* Aquaculture - Americans are eating more fish and shellfish (13.0 pounds per capita in 1980 versus 10.3 pounds in 1960). As a result, U.S. aquaculture is a growing industry. Today, aquaculture produces more than 40 percent of our oysters, most of our catfish and crawfish, nearly all of our rainbow trout and smaller quantities of several other fish. Total value to U.S.

producers was about $374 million in 1982. Total U.S. production is almost 400 million pounds -- a substantial increase over 1975's production of 130 million pounds.

A 1982 report for the Governor's Council on Rural Development concluded that "Minnesotans can economically raise fish for home consumption and in some cases for supplemental income." The most likely varieties seem to be rainbow trout, catfish, and carp.

Other fruitful areas for investigation include the seed industry, perennial grasses, biogenetics, and lupine beans.

None of these products are "sure bets". Like any other business enterprise, they are frought with risk. Many of the markets for these products are undeveloped. But with so many changes occurring in the markets for traditional crops these new areas deserve careful consideration.

III. RECOMMENDATIONS ON OTHER AGRICULTURAL ISSUES.

A. Because of the urgency of the present agricultural situation in Minnesota, Governor Perpich has already appointed a committee to take a broad look at agriculture in Minnesota and make recommendations. The committee, largely comprised of members of the State Department of Agriculture and the State Planning Agency, is expected to release its report this fall. The Governor should appoint a second committee to follow-up on the work and recommendations of the first.

The follow-up group should have participation by legislative leadership, agricultural groups and the University of Minnesota's Department of Agriculture and Applied Economics.

The follow-up study should analyze the following issues (unless already addressed by the first group): 1) the impacts of federal and state agricultural tax policies, 2) the environmental effects of present-day agricultural production methods, 3) the impacts of current price support programs on state farmers in national and world markets. Since changes in price support programs seem imminent, this committee should explore alternatives such as the potential substitution of revenue insurance for price supports. If the committee finds that revenue insurance is desirable, it should recommend that the Legislature seek waivers from the federal government to implement a pilot program in Minnesota on a trial basis.

B. Because of the social and economic importance of agriculture to our state's economy, the Citizens League should give high priority to the creation of another committee to analyze the impacts of governmental intervention in the agricultural market. Have such interventions been effective? Would less government intervention or a different kind of intervention help? How, in Professor Glen Nelson's words, could farmers be encouraged to base their production decisions on market forces? Would a public-private insurance system similar to that employed in Canada stimulate greater reliance on market forces?

C. State agencies such as the Minnesota Department of Agriculture and the Department of Energy and Economic Development should obtain answers to the following research questions:

* What do imports of fresh produce cost Minnesotans? (i.e., What economic impacts are there of importing commodities which could be produced in our state?)

* How much less would we have to import if we grew more fresh produce in season, in Minnesota? In what other product areas might policies favoring import substitution be effective?

* Where else should growers look if they seek to market Minnesota-grown produce or other major crops outside the state?

* What kind of barriers or disincentives might inhibit potential growers from entering the fresh produce market?

* What is the public cost of agricultural research at the University of Minnesota? How much of this research is devoted to fresh produce as opposed to other, more traditional crops such as cash grain.

WORK OF THE COMMITTEE

The Citizens League Board of Directors programmed a study on urban agriculture in June, 1982. The committee began its work on February 15, 1983 and completed final action on its report in the summer of 1984. Forty people signed up for the committee. Of these, approximately 18 participated, in varying degrees, in the preparation of the final report. Their long hours of hard work and dedication are gratefully acknowledged. Committee members included:

Janet Hagberg, Chair
Gary Dodge
Ann Duff
Joanne Englund
Don Gamble
Scotty Gillette
Allen Jaisle
Frank Jewett
Charles Lutz
Wayne Nelson
Irma Sletten
Romi Slowiak
Julie Smendzuik-O'Brien
William Smith
Raymond Swanson
Robert Teetshorn
Ted Tonkinson

The Committee was assisted by David Hunt, Donna Keller and Joann Latulippe of the Citizens League staff.

The Citizens League Board of Directors gave the committee the following charge:

> "Determine if the state's economy can be strengthened by a policy of relying more in coming years on Minnesota-grown fresh produce, instead of fresh produce imported from other states."

The charge noted that persons knowledgeable about this area have suggested that widespread development of the fresh vegetable business would require that an entire system be simultaneously developed that included production, harvesting, handling and marketing. The charge asked the Committee to explore the magnitude of this task and recommend a policy framework which would facilitate the development of the market for fresh produce. The Committee was asked to evaluate the the respective roles, if any, of large and small private sector entrepreneurs and the public sector.

In attempting to address its charge, the Urban Agriculture Committee met 24 times for an average of two hours per session. A total of 27 resource persons appeared before the committee, lending their time and expertise to its deliberations. They included:

Bryce Backstrom		Bob's Produce Ranch
Marshall Braman	President	Timberdoodle Farms
Richard Broeker	Executive Assistant	Mayor Latimer
Dr. Norman Brown	Director	Ag. Extension, U of M
Del Christianson	Instructor	Detroit Lakes Vo-Tec

Richard Dietz	Vice President - Finance and Control	Yoplait, U.S.A.
Dr. Jerry Fruin	Assistant Professor	Ag & Applied Economics, U of M
Richard Haskett	Director - Marketing & International Trade	MN Department of Agriculture
Anne Kanten	Assistant Commissioner	MN Department of Agriculture
Donald Knutson	Congressional Rep.	MN Farmers Union
Lynnda Lenzen	President	Roots & Fruits
Wilbur Maki	Professor	Department of Agriculture
James Mason		Wilder Forest
Darrell Napton		Geography Department, U of M
Glen Nelson	Professor	Ag & Applied Economics, U of M
Roger Norris	President	Fastgrow, Inc.
Charles Rauenhorst	Project Managaer	Rural Ventures, Inc.
Dr. Phillip Raup	Professor	Ag & Applied Economics, U of M
Al Rutan	Owner of greenhouse	
Robert Scarier		Bob's Produce Ranch
Geraldine Smith	President	Bryant & Regina
Romi Slowiak	Staff	Metropolitan Council
Margo Stark	Research Director	St. Paul Food Resources
Ken Taylor	Managing Director	St. Paul Food Resources
Jan Walsh	Board Member	DANC, Distributors Alliance of North Country
Michael Witt	Produce Manager	Super Valu Stores, Inc.

There were three phases of the committee's work. The first phase was devoted primarily to testimony from key resource people from the community. The second phase was concerned with issue identification. The third and final phase involved issue resolution.

After months of reviewing drafts prepared by staff, the committee took final action on its report on August 23, 1984. The report was then submitted to the Citizens League Board of Directors for their consideration on September 25, 1984.

BACKGROUND

I. THE STRUCTURE OF U.S. AGRICULTURE UNDERWENT A MAJOR TRANSFORMATION AFTER THE SECOND WORLD WAR.

A. From being heavily labor intensive, U.S. agriculture became heavily capital intensive -- thereby reducing the amount of human labor needed to produce the nation's food.

B. The food distribution system which primarily served only local and regional markets began to serve national and international markets. By 1977 farm exports totalled $23 billion compared to only $787 million in 1934. Adjusting for price inflation, farm exports increased about sixfold.

C. The creation of national and international markets was facilitated by cheap energy, which permitted long distance transportation and technological innovations such as improved refrigeration.

D. As a result of these trends, many local or regionalized direct marketing efforts such as truck farms and farmers markets slowly began to die off.

E. The biggest change in post World War II agriculture, however, was a dramatic change in productivity and higher crop yields.

Between 1910-1914 and 1937-1941 crop production per acre increased only eight percent. As table 1 illustrates, significant changes in crop yields have occurred between 1920 and 1981. Most of these increased yields were obtained after the end of WWII.

TABLE 1

CROP YIELD INCREASES FROM THE 1920s TO 1981

ITEM	1920s (PER ACRE)	1981 (PER ACRE)	% INCREASE 1920s = 100
Wheat, bushels	14	34.5	246
Corn, bushels	26.8	109.9	410
Sorghum for grain, bushel	16.7	64.1	384
Soybeans for beans, bush.	12.7*	30.4	239
Cotton, lbs.	154.0	546.0	355

*For 1924-1930

SOURCE: "The Dynamics of Soil Erosion in the United States: A Critical View", Theodore W. Schultz, University of Chicago, March, 1982

F. Several factors influenced these major increases in agricultural productivity. Improvements in agricultural research, irrigation, automation, and the widespread use of chemical fertilizers all contributed to this trend.

G. There were four major results of these trends:

1. Because productivity per acre had increased so substantially, fewer acres were needed to produce the same or even greater amounts of food. Consequently, the number of acres in production declined.

2. Land values per acre increased dramatically.

3. Crops were relocated onto the soils best suited for their production and which were not susceptible to soil erosion. As a result, specialized crop regions increased their competitive advantage.

Tables 2 and 3 illustrate this trend for corn and cotton.

TABLE 2

CHANGES IN THE COTTON AREA HARVESTED AND ITS RELOCATION BETWEEN 1926 AND 1981

Area	1926* (Millions of Acres)	1981# (Millions of Acres)	1926 (Share of Acres in %)	1981 (Share of Acres in %)
7 Southeast states	13.54	1.1	29	8
Arizona, California & New Mexico	.44	2.2	1	16
Other states	33.00	10.5	70	76
U.S. total	47.00	13.8	100	100

*Yearbook of Agriculture, p. 838, Table 251
#Crop Production, 1982 Annual Summary, USDA, Jan. 15, 1982, p. B-28

TABLE 3

CHANGES IN THE CORN AREA HARVESTED
AND ITS RELOCATION BETWEEN 1931 AND 1981

Area	1931* (Million Acres)	1981# (Million Acres)	Percent Change	1931 (Share of Acres in %)	1981 (Share of Acres in %)
Best corn belt area@	37.5	51.6	+37	36	62
Rest of corn area	67.5	31.4	-53	64	38
U.S. total	105.0	83.0	-21	100	100

*Yearbook of Agriculture, 1932, p. 609, Table 47
#Crop Production, 1981 Annual Summary, USDA, Jan. 15, 1982, pp. B-16-17
@Iowa, Illinois, Minnesota, Indiana, Wisconsin, Ohio, Michigan

4. Massive shifts occurred in the number of people employed on the farm. This caused a major decrease in the number of farms and an increase in the number of acres in production per farm. As a result, farming became much more centralized. In 1930, 25 percent of the U.S. population were farm people; they are now less than three percent of the total. Since 1930, approximately 30 million people have moved out of agriculture.

II. AN EXTENSIVE SUPPORT SYSTEM HAS GROWN UP AROUND THE POST WORLD WAR II AGRICULTURAL PRODUCTION SYSTEM.

The characteristics of this system are:

* Government price support
* A substantial farm loan and insurance industry
* A growing farm implement industry
* Government tax policies which favor big farms, thereby stimulating the continued concentration of farm land
* Publicly supported agricultural research performed at major universities
* Major growth in the food processing industry (agribusiness)
* Substantial growth of major chemical/fertilizer companies

III. DESPITE ITS MANY SUCCESSES, CRITICS CHARGE THAT THE POST WORLD WAR II AGRICULTURAL SYSTEM CANNOT BE SUSTAINED OVER TIME.

A. The present food system has had many notable achievements:

1. The U.S. food system is the most productive per-worker in the world.

2. Productivity increases have been substantial.

3. The present U.S. food system has been successful in keeping the cost of food to the average consumer to a minimum. (Food costs to the U.S. consumer amount to 20.1 percent of all consumption

expenditures as opposed to as much as 80 percent in some developing countries.)

4. The food industry is the nation's largest business. It represents over $531 billion in assets, $120 billion in annual sales, and 18 million employees. Its work force is larger than the steel, car, and transport industries put together.

5. The U.S. food system has been able to supply more and more people with a much larger selection of foodstuffs -- including products out of season in a given area; products unable to be grown in a given area and products from other countries.

6. The U.S. food system has been able to overcome regional food shortfalls.

7. The U.S. food system has supplied local farmers with additional national and international markets for their crops.

8. Huge national surpluses have been used to feed disadvantaged people in third world countries. (The U.S. has contributed over $27 billion worth of food aid in the last 25 years.)

9. Agriculture has been the largest single contributor to the U.S. balance of payments in the last 10 years. (Food exports brought in $40 billion in 1979/80.)

B. However, the present U.S. food system exhibits many problems which, its critics argue, may make it unable to sustain itself over time.

1. Prime agricultural farm land is slowly being eroded or lost altogether to urban development.

2. The quality of the soil that continues to be used for agricultural production is being depleted through compaction and its organic content is being reduced by fertilizers.

   Because soil is a complex mixture composed of up to 20 percent by weight of living organisms, and these organisms are killed by heavy application of fertilizer and pesticides, there has been a steep reduction in the organic matter content of the U.S. soil. Tillage also reduces soil organic matter by increasing oxidative loss. From 20 percent to 60 percent of the organic matter in soil can be lost after 40-50 years of cultivation.

3. U.S. agriculture is heavily dependent upon scarce and costly energy.

   * Farming uses more petroleum than any other single industry in the U.S.

   * Although the U.S. food system may have the largest net output worldwide, it is the least efficient food system in the world in terms of energy use per food calorie output. On the average, the U.S. food system consumes 6.4 units of commercial

energy to put one unit of food energy on our dinner plate. To feed all the world with a U.S. type food system, it would take up to 60 percent of the total amount of commercial energy in use globally.

* The total amount of energy being used by the U.S. food system is continuing to increase at a substantial rate, with off-the-farm food processing and transportation energy utilization accounting for most of the increase.

* Transporting fresh produce around the country uses about 475 million gallons of fuel each year. It costs almost $1.00 for every mile that a truck moves fruits and vegetables. For every $2.00 we spend to grow food, we spend another $1.00 moving it around. These high energy costs dictate that U.S. consumers will spend a great deal (over 36 million in 1982) on transportation and imported oil.

4. Present day agricultural specialization encourages crop monoculture -- the growing of a single variety over a widespread area. Monoculture decreases natural genetic diversity and aids in the development of a kind of "pest cycle."

5. Fertilizer and pesticide use have increased and so have the negative side effects of their use -- including air and water pollution and the generation of solid waste.

6. Irrigational techniques used to support the present U.S. food system are wasteful and so intensive as to cause subsidence, or sinking of the land area in some areas.

   * With current irrigational practices, less than half the water delivered for irrigation is consumed by crops. The rest is lost to such things as seepage, evaporation, and overwatering.

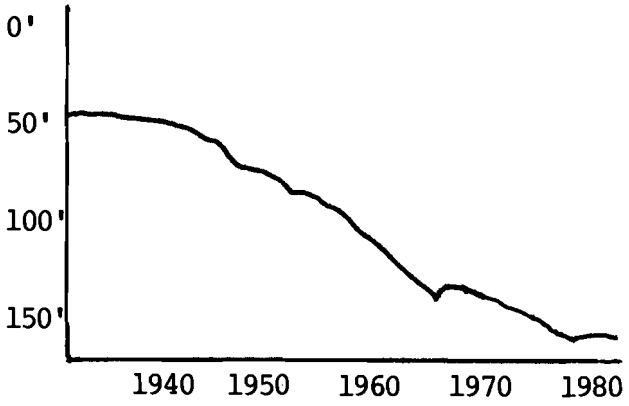
   * Increasingly, it is not simply surface water that is being used for irrigation. Groundwater irrigation rose from about 11 million acre feet in 1945 to over 56 million acre feet in 1975. Current estimates are that more than half the irrigation water now comes from groundwater sources.

   * Most of the groundwater in the U.S. has accumulated over centuries in huge underground reservoirs called aquifers. While this water is theoretically replaceable, the spread of irrigation has meant that in many areas groundwater is being used at a rate exceeding replenishable levels. If groundwater storage was compared to banking practices, by the early 1980s an estimated 25 percent of our groundwater withdrawals were overdrafts.

   * The worst problems are in the high plains region of Texas, Oklahoma, New Mexico, Kansas and Arizona -- areas that contain 20 percent of the west's irrigated land and produce crops worth more than $5 billion annually. In these states, it has been estimated that less than 25 percent of the groundwater

that is used yearly is replaced. Sometime in the next 30 years, water withdrawals in these areas will become impractical and there is no other source of water currently available.

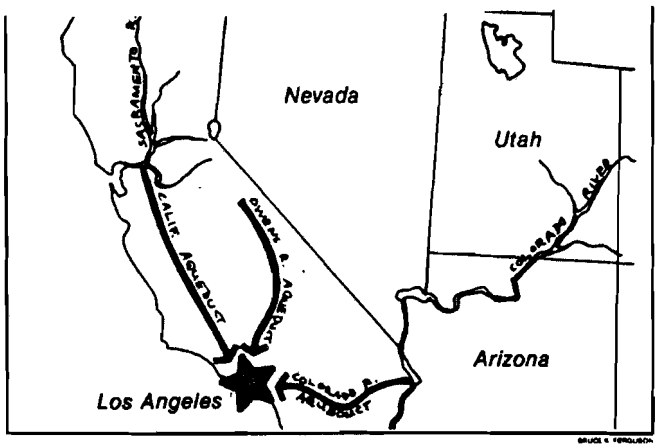
* The best example of this phenomenon is the Ogallala Aquifer which stretches from Nebraska to Texas in the U.S. high plains. The 225,000 square miles of land overlying in the aquifer comprise one of the nation's richest agricultural regions. All told, the region supplies 25 percent of the nation's cotton, 38 percent of the grain sorghum, 16 percent of the wheat and 13 percent of the corn. Forty percent of the nation's grain-fed beef is fattened here. As the chart shows, the water level in the aquifer has fallen precipitously in the last 30 years. At the present rate of withdrawal (1.2 million gallons per day) the entire supply is expected to last another 40 years.



SOURCE: The Futurist, April, 1983

* Another example may indicate that the national food distribution system is more fragile than is commonly supposed. California, whose market share of the nation's fresh produce market exceeds 50 percent, may soon experience difficulties obtaining enough water for its crops. For years, California has been able to draw more than its share of the Colorado River which flows through Arizona. Legal disputes over the water produced the longest oral argument in the history of the U.S. Supreme Court. By 1985, however, the $1.7 billion Central Arizona project will have been completed and Arizona will be able to divert 390 billion gallons of water that would have flowed into California to the Phoenix and Tucson areas. Without diversion that water would have flowed to California's Imperial Valley with its more than three million acres of fruit and vegetables worth more than $1 billion per year. Once Arizona begins to divert the water for its own uses, California will have to bring water down from the Sacramento River in the northern part of the state. But there could be problems with that, too, since such a move

would be bound to prompt an urban-rural conflict over water usage between the populous Los Angeles and the state's agricultural users.



SOURCE: The Futurist, April, 1983

* Excessive mining of groundwater can also cause subsidence, or sinking of the land surface. As water tables are lowered, the ground compacts and sinks. According to the U.S. Geological Survey, significant subsidence has occurred in Louisiana, Texas, Arizona, New Mexico, and California. In California's San Joaquin Valley, where farmers mine nearly 1.5 million acre feet (489 billion gallons) of groundwater yearly, the land has sunk as much as 29 feet over the last 50 years.

7. Trends in Post World War II agriculture have had a variety of errects on the nation's farmers.

   * Since 1920, more than two thirds of all U.S. farms have disappeared, while average farm size has tripled. The number of U.S. farms declined from a peak of nearly seven million in 1920, to nearly two million in 1980. Today, 20 percent of all farms produce 80 percent of the nation's food and fiber. In fact, the largest seven percent of U.S. farmers receive 51 percent of the total gross income from the sale of farm products.

   * In the last decade, the number of large farms (those with sales over $200,000) increased almost fourfold. Part of the explanation for this trend is that current tax laws and subsidy programs help larger operations. For example, nearly one half ($3.25 billion) of the total U.S. farm subsidy payments went to only 10 percent of our food producers -- the largest who participated. The smallest farmers who make up half the total, received only 10 percent of the payments.

* The percentage of the food manufacturing assets owned by the 50 largest firms nearly doubled between 1950 and 1978. In 1950, these firms owned 35.9 percent of all of the U.S. manufacturing assets. By 1978, according to the USDA their market share had increased to 63.7 percent.

* Farm debt is now over $160 billion -- an increase of over 650 percent in the last 20 years. That's an average of over $68,000 for every U.S. farmer.

* In 1980, U.S. farm income fell by an estimated 33 percent -- the largest one year drop in 50 years.

* Farm income has declined because cash receipts have not kept pace with expenses. As a result, it has been estimated that over 1,000 farmers leave farming each week in the United States -- and the capital costs to get into the agriculture market are so high as to prevent new growers from entering the market.

* As agribusiness achieves vertical integration -- from farm to processing to supermarket -- it fixes prices and limits production to the optimum profit level on each operation. The cost of food to the consumer goes up at 10 or 20 percent per year while the farmers' share of the food dollar remains fixed. During the 1970s, U.S. consumers saw a rapid increase in food prices. According to the Bureau of Labor Statistics in Washington, food price levels increased 57 percent from 1970 to 1976. Eighty-seven percent of that increase was caused by higher costs associated with marketing the food. These costs include off-farm labor, packaging, machinery, transportation, advertising, energy expenses and profits. As a result, for every dollar consumers spent on food, farmers received 31 cents. The remaining 69 cents went to the food processing and marketing industries. The more processed the product the lower the percentage received by the farmer.

BACKGROUND ABOUT AGRICULTURE IN MINNESOTA

AGRICULTURAL PRODUCTION IN MINNESOTA

I. THE SALE OF MEAT ANIMALS AND FEED GRAINS ARE THE LARGEST SOURCES OF REVENUE FOR MINNESOTA FARMERS.

According to a recent report by the St. Paul Food Resources Project, Minnesota farmers received almost $6.9 billion in 1981 for cash sales of farm products. Of that total, the largest percentage share (approximately 51 percent or $3.5 billion) came from the sale of crops. Another $3.4 billion was received by farmers for livestock, dairy products, and poultry. The top eight commodity groups for Minnesota in 1981 ranked in order of value of production, and their percent of total cash sales by farmers were:

TABLE 4

Commodity	Cash Receipts from Farm Marketings	Percent of Total
Meat animals	$1,782,074	26 percent
Feed Grains	1,433,914	21 percent
Dairy Products	1,307,395	19 percent
Oil Crops	1,084,573	16 percent
Food Grains	557,307	8 percent
Poultry and Eggs	308,486	5 percent
Sugarbeets	198,362	3 percent
Vegetable Crops	165,036	2 percent

SOURCE: Minnesota Agricultural Statistics, 1983, reported in "Food and Agriculture in Minnesota, 1983" St. Paul Food Resources Project

In the table, meat animals include cattle and calves, hogs, sheep and lambs. Feed grains include corn, oats, barley, and hay when they are produced as meal for animals. "Oil crops" includes soybeans, flaxseed, and sunflowers. And "food grains" are wheat and rye. Sales in these eight categories represent nearly 100 percent of Minnesota cash receipts from state agricultural product sales. Cattle and calves account for for the largest percent of sales (54 percent) among meat animals. Feedcorn remains Minnesota's single largest crop with almost $1.7 billion in 1981 sales.

II. MINNESOTA'S AGRICULTURAL PRODUCTION SYSTEM RAISES HIGH RETURN CROPS IN RELATIVELY SMALL QUANTITIES WHILE LOWER VALUE FEED CROPS COMPRISE THE MAJORITY OF THE STATE'S CROPLAND.

Table 5 gives the farm value per acre planted for food crops and for crops not grown for direct human consumption in 1981. (Farm value is defined as the estimated receipts farmers would get if 100 percent of the crops produced were actually sold. Farm value does not include production

costs.) The table shows that while feed crops make up almost 59 percent of Minnesota cropland, they offer smaller values per acre than crops bringing a higher return which are raised less frequently. According to the St. Paul Food Resources Project, acreage devoted to feed crops has increased 12 percent since 1966, while "the already low acreage devoted to growing vegetables decreased by 10 percent."

TABLE 5

MINNESOTA FARM VALUE PER ACRE - 1980

Crop	Acres Planted (in 000s)	Farm Value (in 000s)	$ Per Acre
FOOD CROPS:			
Carrots	1.5	3,216	2,144
Onions	.9	1,581	1,860
Potatoes	79	78,853	996
Green Peas	67	20,118	302
Sweet Corn	113	32,852	291
Dry Beans	110	28,521	259
OTHER CROPS:			
Sugarbeets	260	194,922	750
Feed Corn	7,580	1,675,575	221
Hay	2,860	615,540	215
Soybeans	4,500	842,160	187
Barley	1,050	132,664	126
Sunflowers	735	91,161	124
Oats	1,600	166,667	104
Flax	115	8,970	78

SOURCE: "Food and Agriculture in Minnesota - 1983", St. Paul Food Resources Project, p.4

III. MINNESOTA'S AGRICULTURAL PRODUCTION SYSTEM CONTINUES TO DISPLAY A GREAT DEAL OF DIVERSITY.

Minnesota is the nation's top producer of sweet corn, sugar beets, and wild rice and ranks in the top 10 in the production of 25 other basic foodstuffs. (See table 6)

TABLE 6

HOW MINNESOTA AGRICULTURE RANKS NATIONALLY

National Ranking	Products
1st	Sweet corn, sugar beets, wild rice
2nd	Turkey, cheese, manufactured dairy products, oats, spring wheat, sunflower seeds.
3rd	Green peas, rye, butter, hogs
4th	Barley, milk, sheep and lambs
5th	Corn, soybeans
6th	Total red meats, total vegetables
7th	Carrots, dry edible beans, total wheat
8th	Cattle and calves
9th	Irish potatoes
10th	Storage onions

SOURCE: U.S. Department of Agriculture, (As reported in the Minneapolis Star and Tribune, August 24, 1983.)

Red meats included in the ranking are beef, veal, pork, lamb and mutton. The total vegetable category includes fresh and processed (canned or frozen) vegetables. Irish potatoes are all white-fleshed potatoes. Although the list does not include honey, Minnesota ranked seventh nationally in the production of this product before the USDA stopped reporting such rankings.

IV. IT IS POPULARLY BELIEVED THAT AGRICULTURE IS A MONOLITHIC INDUSTRY. BUT IN FACT, AGRICULTURE INCLUDES TEN DIFFERENT INDUSTRIES. MINNESOTA RANKS IN THE TOP TEN IN SALES IN AT LEAST SIX OF THESE TEN INDUSTRIES.

A new series of reports on the Minnesota economy and its component parts was released in October of 1982 by the School of Management and the Department of Geography at the University of Minnesota. One report, in particular, illustrates the comparative strength of Minnesota's agricultural economy.

According to the report, there are 10 major industries in the agriculture and agricultural services sector. Table 7, which has been extracted from the report, shows national and Minnesota figures for the amount of sales and the number of farms in each sector. (See Table 7)

TABLE 7

	U.S. 1978 Sales (mil.)	U.S. No. of Farms (in 1978)	MN 1978 Sales (mil.)	MN No. of Farms (in 1978)
In terms of sales and number of farms, the two leading industries in the U.S. and Minnesota in 1978 were livestock and animal specialty farms, and cash grain farms.				
1. Livestock (except poultry, dairy & animal specialty) farms; & animal specialty farms	$37,461	730,400	$1,246	23,664
2. Cash grain farms	24,468	525,600	1,641	36,616
A second size class based on national sales includes dairy farms, poultry/egg farms, and the agricultural services industry.				
3. Dairy farms	12,547	166,600	850	17,776
4. Poultry & egg farms	8,806	41,900	307	947
5. Agriculture services	7,251	NA	108	NA
In a third class, nationally, are five industries much smaller than the rest. One of them - general farms - ranks fourth in Minnesota even though it ranks eighth nationally.				
6. Fruits & nut farms	4,499	57,500	5	119
7. Sugar crop/irish potato/ field crop (except cash grain) farms	3,935	84,900	149	3,037
8. General crop farms; & general livestock farms	3,909	66,500	256	4,643
9. Vegetable & melon farms	3,112	25,600	19	473
10. Horticultural specialty farms	2,850	26,600	43	445

SOURCE: School of Management & Dept. of Geography, University of Minnesota, October, 1982

From the table, it can be readily seen that cash grain farms with over $1.6 billion in sales are the biggest contributor to the state's economy. Livestock farms with over $1.2 billion in sales and dairy farms with $850 million in sales are the second and third largest contributors.

Comparing Minnesota's performance to other states in each of the 10 sectors shows that Minnesota ranks in the top 10 states in 1978 sales (millions) in at least six of the 10 categories. Table 8 portrays each sector and Minnesota's national ranking in that sector.

TABLE 8

Sector	National Ranking 1978 Sales (Millions)	National Ranking Number of Farms
Cash grain farms	4	4
Sugar crop, irish potato & other field crops	9	9
Vegetable and melon farms	20	19
Fruit & tree nut farms	34	37
Horticultural specialty farms	17	21
General farms - primarily crop & primarily livestock	2	2
Livestock farms	9	10
Dairy farms	5	2
Poultry & egg farms	9	13
Agricultural services	18	--

SOURCE: School of Management & Department of Geography, University of Minnesota, October, 1982

Minnesota is not as competitive as other states in vegetable and melon farms, horticultural specialty farms (which produce flowers, ornamentals, and certain fruit specialties), fruit and nut farms and agricultural services.

V. THE MAJORITY OF MINNESOTA FARMERS' INCOME IS DERIVED FROM THE SALE OF PRODUCTS FOR DIRECT HUMAN CONSUMPTION. BUT THE MAJORITY OF THE STATE'S FARMLAND IS DEVOTED TO FEED CROPS AND OTHER CROPS.

According to Minnesota Agricultural Statistics, 60 percent of Minnesota farmers' income in 1981 came from the sale of farm products for direct human consumption. These products include livestock, poultry, dairy, wheat, rye vegetables and dry beans. Sales of livestock, poultry and dairy sales accounted for 50 percent of all sales for direct human consumption. Food crops (wheat, rye and others) accounted for 10 percent of 1981 Minnesota cash receipts from farm marketings. Other crops accounted for the remaining 40 percent.

Between 1972 and 1981 five major crops -- oats, hay, soybeans, wheat and corn -- dominated agricultural production in Minnesota. Collectively, these crops accounted for 89 percent of all harvested cropland in 1972 and 85 percent in 1981. (See table 9)

TABLE 9

MINNESOTA'S MAJOR CROP AS A PERCENTAGE OF HARVESTED CROPLAND 1972 - 1981

Crop	1972	1981
Oats & Hay	32 percent	19 percent
Corn	29 percent	30 percent
Soybeans	19 percent	20 percent
Wheat	9 percent	16 percent
Other Crops	11 percent	15 percent

SOURCE: Minnesota Agricultural Statistics, 1983
(Total acreage of harvested farmland in 1972 was 17.6 million acres. In 1981, it was 22.5 million acres.)

In 1982, 23.8 million acres, or 76 percent of total Minnesota farmland, was devoted to crop production. Table 10 shows how Minnesota crop acreage is divided between crops grown primarily for animal food and indirect human consumption and those food crops grown primarily for human consumption.

TABLE 10

ACRES PLANTED FOR MINNESOTA CROPS - 1981

Crop	Acres Planted	% of Total Acres Planted	% of Crop Farm Value
FOOD CROPS:			
Food Grains	3,770,000	16%	17%
Vegetable Crops	260,950	1%	4%
Dry Beans	110,000	*	1%
TOTAL FOOD	4,140,950	17%	22%
OTHER CROPS:			
Feed Crops	14,020,000	59%	41%
Oil Crops	5,310,000	22%	31%
Sugarbeets	259,000	1%	3%
Seed Crops	72,000	*	*
TOTAL OTHER	19,661,000	82%	75%
TOTAL ACRES PLANTED ALL CROPS	23,801,950	99%	97%

SOURCE: 1983 Minnesota Agricultural Statistics as reported in "Agriculture in Minnesota - 1983", St. Paul Food Resources Project

Minnesota's dependence on its feed crops is shown by the fact that the farm value of these crops is nearly twice that of its food crops. A majority (59 percent) of Minnesota's crop land is used in the production of feed grains such as corn, oats, barley and hay. These crops account for a full 41 percent of the total value of all Minnesota production. In contrast, food crops such as wheat, rye, vegetables, and dry beans, represent 17 percent of crop acreage but only 22 percent of farm value.

VI. MINNESOTA HAS FEWER FULL-TIME FARMERS TODAY THEN IT DID IN THE PAST.

A October 1982 profile of part-time farmers in Minnesota shows that off-farm work has become more frequent in the last 25 years. According to research conducted by Professor Philip Raup and Jean Sussman of the University of Minnesota, the percentage of Minnesota farmers with off-farm employment has increased from 36 percent in 1954 to 45 percent in 1978. In 1954, 15 percent of Minnesota farmers were employed off the farm for 100 days or more. By 1978, the percentage of farm operators working off-farm for 100 days or more had more than doubled to 32 percent.

The region of the state which had the greatest percentage of farmers working off the farm for at least 100 days in 1978 included most of the metropolitan area, St. Cloud and northeastern Minnesota. Nearly 42 percent or more of the farmers in this region spent more than 100 days in off-farm work in 1978.

Raup's study found that Minnesota tended to have fewer part-time farmers than most other midwestern states. In 1978, 14 percent of Minnesota farmers were farming on a part-time basis compared with 18 percent in Wisconsin and 31 percent in Michigan. Kansas had the same percentage of part-time farmers as Minnesota did. Only 10 percent of Iowa's farmers farm part-time.

Raup's work established several key points about the relationships between full-time and part-time agriculture. (See Table 11) First, the proportion of the total value of agricultural products sold by part-time operators is less than the proportion of the land they operate. Second, the value of agricultural products sold per acre of Minnesota agricultural land is lower for part-time operators. Third, the value of livestock and livestock products sold per acre of farmland is smaller on part-time operations than on full-time operations. Fourth, crop value per acre of harvested cropland in Minnesota is less than that on full-time farms.

TABLE 11

PERCENTAGE OF LAND IN FARMS AND VALUE OF AGRICULTURAL PRODUCTS SOLD, BY MINNESOTA FULL-TIME AND PART-TIME FARMS, 1978

	Full-Time	Part-Time
Percentage of land in farms	86%	14%
Percentage of value of agricultural products sold	91%	9%
Value of agricultural products sold per acre of farmland.	$167	$101
Value of livestock and livestock products sold per acre of farmland ($)	$90	$57
Value of crops sold per acre of harvested cropland ($).	$110	$94

SOURCE: "A Profile of Part-time Farming", J. Sussman, P. Raup, Agricultural Extension Service, University of Minnesota, 1982.

Based on the kinds of crops they grow, Minnesota's part-time and full-time farm operators are fairly similiar. Total crop and livestock shares are nearly equal for Minnesota's part-time and full-time farmers although the distribution among the products varies. Sussman and Raup found that whereas dairy and grain sales are more important to full-time operators than part-time operators, part-time operators tended to concentrate more in poultry and cattle and calves. Part-time operators also tend to rely on a wider range of crops than full-time operators. (See table 12)

TABLE 12

CROPS AND LIVESTOCK BY PERCENTAGE OF VALUE OF AGRICULTURAL PRODUCTS SOLD, BY FULL-TIME AND PART-TIME MINNESOTA FARMS 1978

Percentage	Full-Time	Part-Time
All crops	46.2	43.5
Grain	40.1	34.0
Forage	1.4	3.9
Vegetables	.8	1.6
Fruits and Nuts	.1	.2
Nursery Products	.8	3.0
Other Crops	3.0	.8
All Livestock and Livestock Products	53.9	56.4
Poultry	5.9	14.8
Dairy	17.9	6.5
Cattle, Calves	16.6	20.6
Pigs, Hogs	12.8	11.9
Sheep, Lambs	.2	.8
Other Livestock	.5	1.8

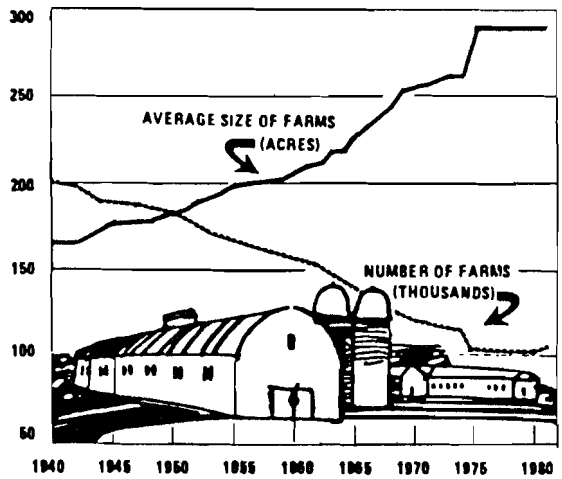
SOURCE: "A Profile of Part-Time Farming", J. Sussman, P. Raup, Agricultural Extension Service, University of Minnesota, 1978

The Sussman-Raup study showed that part-time farmers accounted for 21 percent of the forage crop sales within Minnesota in 1978, 15 percent of all in-state vegetable sales, 16 percent of fruits and nut sales, 27 percent of all nursery sales, 19 percent of all poultry sales, 10 percent of all cattle and calve sales, 22 percent of all sheep sales and 27 percent of the sales of other livestock in Minnesota in 1978. Despite their contributions to in-state sales in these areas, the products for which sales from part-time farms are most important do not contribute substantially to the total sales of agricultural products in Minnesota.

VII. MINNESOTA HAS FEWER FARMS TODAY THAN IT DID 10 YEARS AGO BUT THE TYPICAL FARM IS MUCH LARGER TODAY THAN IT WAS THEN.

In 1935, Minnesota had approximately 234,000 farms. By 1984, however, the U.S. Census Bureau listed only 94,385 farms in Minnesota. (According to the Census Bureau a farm is defined as any agrarian entity that has gross revenues of more than $1,000 annually from the sales of agricultural or horticultural products.) Minnesota lost an average of 1500 farms per year over the last decade. The average farm size in 1940 was about 170 acres. In 1981, the average size of a Minnesota farm had grown to 291 acres. (See graph below) But average farm size can be a misleading statistic. What is really going on, according to Professor Philip Raup is that small, hobby-size farms around urban areas are increasing sharply and the number of giant farms is also increasing while, at the same time, the number of middle-sized family farms is decreasing. Based on his review of key county census reports from southern Minnesota and the Red River Valley, Raup believes that the number of farms with more than 500 acres is increasing. Meanwhile, the number of medium-size family farms (defined as farms between 180 and 500 acres) have declined sharply. According to Raup, family farms provide the economic base for most rural towns.

MINNESOTA FARM NUMBERS & AVERAGE FARM SIZE



NOTE: Farm definition changed in 1974.

SOURCE: Department of Agriculture, July, 1981-June 1982.

VIII. THE VALUE OF MINNESOTA FARM HOLDINGS HAS INCREASED SUBSTANTIALLY, BUT SO HAS FARM DEBT.

According to research by the St. Paul Food Resources Project, the per acre value of Minnesota farm land and buildings in 1981 was more than five times their 1970 value. Farm holdings per acre increased from $226 to $1231 during this period. (The price of an acre of farmland was one of the most significant factors in this increase, and it, in turn, was fueled by rapid increases in U.S. exports.)

Despite the impressive nature of these gains, they have been substantially offset, particularly in recent years, by the rapid growth of farm debt. The debt loads carried by Minnesota farmers nearly doubled between 1978 and 1982 -- increasing by 79 percent from $5.8 to $10.4 billion. Of the 13 midwestern states, Minnesota ranks number one in terms of outstanding Commodity Credit Corporation loans and ranks third in total debt. (See Table 13)

According to a state survey sponsored by the Department of Agriculture in 1984, half of Minnesota's farmers have serious financial problems and 13,000 farmers may be forced out of business within the next two years. (The latter estimate is based on a debt to asset ratio of 70 percent or higher.) The survey found that roughly 25 percent of Minnesota farmers report debt to asset obligations of more than 70 percent, while an additional 26 percent have debt to asset ratio's in the 40 to 70 percent range.

Minnesota Agriculture Commissioner Jim Nichols, in releasing the survey, was quoted as saying that "the two most shocking things about the results is the debt that is out there (in rural Minnesota), and farmers' perceptions of their financial condition." According to Nichols over $4 billion in debt, often unsecured, is held by small town merchants and banks on farmers who are likely to go under. Of the more than 600 responses to the survey, 54 percent said they expect to quit farming in five years. Nichols remarks were contained in a St. Paul Dispatch and Pioneer Press story by Lee Egerstrom on September 7, 1984.

TABLE 13

COMMODITY CREDIT CORPORATION LOANS, BY STATE, JANUARY 1, 1981

State (millions)	Total Debt Amount (millions)	1981	Percent CCC
Illinois	$ 302	$ 8,840.5	3.4
Indiana	166	5,780.2	2.9
Iowa	626	12,561.3	5.0
Kansas	212	6,561.3	3.3
Kentucky	20	3,256.3	.6
Michigan	87	3,209.9	2.7
Minnesota	662	8,397.9	7.9
Missouri	107	5,366.2	2.0
Nebraska	630	7,913.7	8.0
North Dakota	235	3,780.1	6.2
Ohio	92	4,254.8	2.2
South Dakota	210	3,807.9	5.5
Wisconsin	153	5,304.7	2.9
13-state total	3,502	78,893.0	4.4
United States	79.6	48.5	

SOURCE: United States Department of Agriculture, Economic indicators of the Farm Sector, State Income and Balance Sheet Statistics, 1980; Economic Research Service, Statistical Bulletin 678, November 1981.

IX. MASSIVE INCREASES IN THE COST OF FARMING HAVE VIRTUALLY ELIMINATED ANY NET INCREASE IN FARM INCOME.

Cash receipts from national farm marketings reached $6.9 billion in 1981, a new high. But while cash receipts and total production were rising, farm production expenditures skyrocketed to $9.9 billion in 1981. Although 1981 cash receipts increased by 4.8 percent over 1980, production expenses rose by 40.3 percent. As a result of these trends, 1981 net farm income continued to fall.

Minnesota farmers' realized gross income increased steadily during the 1970s but rising production expenses prevented farmers from seeing much of an increase in net farm income. Although farmers realized net income did show a rapid increase in 1973 and 1974 (from 922.3 million in 1972 to $1.8 billion in 1973) it declined below the $1 billion mark by 1976.

In 1981, the average Minnesota farmer's realized net income was $14,945. Without adjusting for inflation, that figure represented a decline in realized net income from 1973 ($15,760) and 1980 ($16,191) levels. Rising farm expenses contributed much to this decline, with nearly five-fold increases in farm-mortgage debt, and the costs of fertilizer and operation and repair of farm equipment up by almost 400 percent.

One of the largest components of farmers expenses is the use of energy. Rapidly rising energy expenses show up repeatedly in the costs of gasoline, other petroleum fuels, oil, agricultural chemicals and commercial fertilizer. (See table 14) Between 1977 and 1981 gas prices increased 172 percent, diesel fuel prices increased 252 percent, regular gasoline (bulk rate) increased by 228 percent. According to the Minnesota Department of Agriculture, an estimated 33 percent of the energy needed for crop production is used to produce fertilizer. In 1981, Minnesota consumption of fertilizer totaled 2.5 million tons, a seven percent increase from the year before.

The cost of irrigation is also increasing. Irrigation is Minnesota's most rapidly increasing use of water. Although the most recent estimates show that little more than one percent of the state's cropland is irrigated, irrigated acreage in Minnesota has increased from 77,800 acres in 1974 to an estimated 272,000 acres by 1978. This figure was predicted to double or triple by 1990.

X. THE VALUE OF MINNESOTA FARMLAND INCREASED DURING THE 1970'S BUT HAS DECLINED IN RECENT YEARS.

According to a recent survey of Minnesota farm real estate values by Matthew Smith and Philip Raup of the University of Minnesota's Department of Agriculture and Applied Economics, the value of Minnesota's 23 million acres of farmland fell by 10 percent in the year ending last July. That marks the second straight year in which a decline in farmland value occurred, as well as the second straight year for a double-digit decline.

As table 14 indicates, the annual percentage change per acre in Minnesota farmland value increased most dramatically in the early 1970s as a result of major increases in foreign exports. In recent years, with declines in foreign sales and the value of exported goods, the value of Minnesota farmland has declined.

TABLE 14

MINNESOTA FARMLAND VALUE, ANNUAL PERCENTAGE CHANGE PER ACRE

Year	Percentage Change per Acre
1972-73	20
1973-74	42
1974-75	24
1975-76	27
1976-77	19
1977-78	12
1978-79	17
1979-80	8
1980-81	17
1981-82	-10
1982-83	-10

SOURCE: St. Paul Pioneer Press, February 26, 1984

XI. AGRICULTURE HAS MADE AND CONTINUES TO MAKE AN IMPORTANT CONTRIBUTION TO MINNESOTA'S ECONOMY.

The evidence of agriculture's importance to the Minnesota economy is unusually strong. According to the Minnesota Department of Agriculture for example:

* Total Minnesota farm income in 1981 was over $7 billion.

* The food industry employs one out of every ten state workers.

* Over 662,000 Minnesotans, about one-third of the state's wage earners are employed in jobs related to farm production.

* Agricultural industries accounted for $4.2 billion in purchases. Food products manufacturing industry spent $5.6 billion. This is a total of $9.8 billion spent, or 21 percent of all in-state purchases of the state's private business sector.

* Agriculture accounts for 40 percent of the state's total economic activity.

* The value of Minnesota land resource can be measured by the economic activity it generates. Minnesota's land based economic activity includes:

- agriculture	$5.4 billion
- mining	$1.2 billion
- recreation	$1.3 billion
- forestry	$1.3 billion

* Minnesota food products are marketed 10 percent in-state, 40 percent domestic, and 50 percent international.

* Farm products account for 40 percent of Minnesota exports.

Agriculture's role in Minnesota has been traditionally measured by its sales and purchases, the work force it supports, and its contribution to the state's economic base. But University of Minnesota Professor Wilbur Maki has contended that these traditional measures fail to accurately portray the true significance of the agricultural economy. For example, Maki has shown that agriculture-related exports originate from farm and factories in three-fourths of Minnesota's 87 counties. If the farm and food product exports were eliminated, total industry employment and income would be reduced 25-30 percent, depending upon the indices used and the particular stage in the export-trade cycle. So agriculture, Maki contends supports a much larger proportion of the Minnesota economy than represented by its 8.5-10 percent share of Minnesota employment.

As important as agriculture is to Minnesota's economy, Maki believes that its influence is declining somewhat. This is not due, he says to agriculture itself, but rather may be attributed to the fact that other economic sectors, especially high-tech businesses have grown so fast. Evidence of this phenomenon includes the following:

* Agricultural exports which constituted 41 percent of the state's total net exports in 1977, were expected to fall below 30 percent in 1983.

* In 1971, virtually half of all business transactions in the metropolitan area were agriculturally related. By 1980, only one-third of such transactions were agriculturally related.

XII. BUT MINNESOTA'S FARM SECTOR NOW FACES SIGNIFICANT PROBLEMS.

The agricultural portion of the state's economy exhibits the following problems:

A) In the early to mid 1970s, Minnesota farmers profited handsomely by selling their products overseas. But today Minnesota finds itself heavily dependent on agricultural exports at a time when foreign demand is low and uncertain of rebounding.

B) Many state farmers are heavily dependent upon federal subsidies which are likely to be reduced in the future.

C) Minnesota's agricultural production system is based on old patterns of food consumption which are now in the process of changing.

D) Most of Minnesota's agricultural exports leave the state as raw materials at a time when there is increasing demand for high value products.

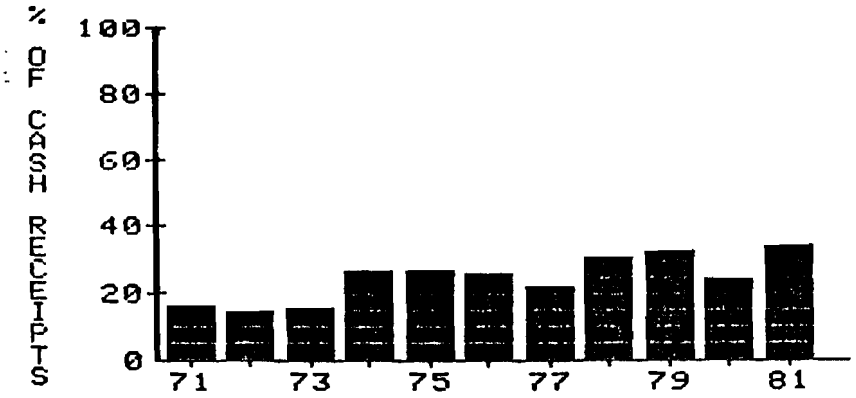
Each of these issues deserves further comment.

A. <u>In the early to mid-1970s. Minnesota farmers profited handsomely by selling their products overseas. But today Minnesota finds itself heavily dependent on agricultural exports at a time when foreign demand is low and uncertain of rebounding.</u>

In 1973, Minnesota's international exports as a percent of total farm sales was only 15 percent. By 1981 however, international exports had reached 34 percent of total farm sales. The early 1970s (1973-77) proved to be a period of strong export growth in which the value of Minnesota's exports grew 35 percent. But the value of Minnesota exports increased even faster (60 percent) from 1977-81 (not adjusted for inflation). Table 15A shows how Minnesota's international export sales fluctuated during the 1970s as a proportion of overall Minnesota farm sales.

TABLE 15A

MINNESOTA RAW EXPORT SALES AS PERCENT OF CASH RECEIPTS FROM MARKETINGS - 1971 - 1981



SOURCE: U.S. Export Trade, as reported in "Food and Agriculture in Minnesota - 1983", St. Paul Food Resources Project

Since the early 1970s, Minnesota farmers have been buffeted by the harsh winds of international competition just like the rest of U.S. farmers. According to Jim Nichols, the Minnesota Commissioner of Agriculture, the total value of U.S. farm exports sold abroad has dropped from $44 billion in 1980 to $35 billion in 1983, a decline of $9 billion in only three years. No major increases in foreign exports are expected near term.

Minnesota is now heavily dependent on foreign exports. Minnesota ranked fifth among all states in direct farm exports in 1981, continuing its 5.5 percent share of U.S. exports. In 1981, Minnesota's agricultural exports (based on the state's production) totaled $2.3 billion or about one-third of Minnesota's cash farm receipts. (Table 15B shows the components of these export sales.) The production from one out of every three acres of state farmland is exported and recent figures (from Jim Nichols) suggest that it may now be as high as one in two. One of every six Minnesota farm workers depends on agricultural exports for a job.

TABLE 15B

1982 Estimates* of the Value of Minnesota Farm Exports

Feedgrains	$833.6 mil.
Soybeans	$672.6 mil.
Wheat	$341.6 mil.
Sunflower Seed/Oil	$176.4 mil.
Hides & Skins	$ 65.3 mil.
Live Animals & Meat	$ 54.0 mil.
Vegetables	$ 52.8 mil.
Dairy Products	$ 42.3 mil.
Lard & Tallow	$ 28.1 mil.
Poultry Products	$ 15.0 mil.
Fruits	$ 0.5 mil.
Other	$ 61.9 mil.
TOTAL	$2,344.1 mil.

SOURCE: Minnesota Agricultural Statistics, Minnesota Department of Agriculture

* Note: the export figures shown above are derived from Minnesota's contribution to U.S. production and /or sales. As such they are not actual export figures.

What has been the economic impact of Minnesota's dependence on foreign exports? Two things seem certain. In good economic times, when exports are increasing, the influx of foreign dollars into the state's economy magnified by the multiplier effect disproportionately increases employment and the value of farmland. In bad economic times however, these effects occur in reverse, causing wide swings in agriculturally related employment and fluctuations in land values.

Real declines in foreign exports will affect Minnesota in many ways, according to Wilbur Maki. Maki believes that agriculture faces serious challenges in the 1980s and "no Minnesota business or taxpayer is immune from the implications." Maki forecasted that agriculture's 41 percent share of Minnesota's 1977 total net exports could have dropped below 25 percent in 1983 without an increase in world demand for U.S. grain. Maki argues that when the farm sector is in decline, as it was in 1981-83, and farm purchasing dries up, agriculture's real importance to the state's economy becomes evident. Maki attributes part of the reason for Minnesota's 1982 tax shortfall to problems in the agricultural sector.

B. Many state farmers are heavily dependent upon federal subsidies which are likely to be reduced in the future.

National price supports are coming increasingly under fire. Opponents argue that the programs are too costly and a growing contributor to the national deficit. Total U.S. farm support program outlays have increased from a little over $600 million in 1975 to more than $20 billion in 1983. What is most surprising however, is the speed with which these subsidies have grown. Federal spending for farm programs

rose from $4 billion in fiscal 1981 to $20 billion in fiscal 1983. (That doesn't even include the distribution of $9.4 billion of commodities in the Payment-In-Kind Program.)

But the most damaging critique made yet is that the programs are ultimately counterproductive to the best interests of the nation's farmers. In a September 8, 1983 editorial to the Wall Street Journal, Susan Lee summarized the argument this way:

> "The U.S. is the biggest player in the world market. When world prices fall below government-set target prices, Americans keep their output at home -- they store rather than sell. Of course, when the biggest supplier sits on the sidelines, world prices are higher than they might otherwise be. Higher prices, in turn, encourage other nations to produce and export more."
>
> "That's not the end of it. Price supports become capitalized in the value of domestic farm land. That is, farm land becomes valuable because the price of its output is guaranteed. Higher land values, however, increase production costs for new farms and result in crop prices too high to be competitive in the world market.
>
> "Thus, when the government raises price supports to protect farmers from low world prices, two undesirable things happen: The U.S. not only allows other nations to increase their market share, but renders its own exports less competitive."

G. Edward Schuh, the former chairman of the University of Minnesota's Department of Agricultural and Applied Economics agrees. "The reason these programs are counterproductive is that they do not take account of the significant changes in the U.S. economy, in the international economy, nor the way the U.S. relates to the rest of the world," Schuh says. In an interview with Wayne Nelson of Citibusiness in August, 1983, Schuh reiterated that current programs keep the price of U.S. grain too high, thereby guaranteeing surpluses. Price support programs set a price floor for U.S. produced grain, Schuh observes, which creates an umbrella for other exporters: namely, non-recourse loans.

Non-recourse loans are available to producers for a period of nine months. They finance planting and harvesting. Loan levels per bushel are set for various commodities in advance. If market prices are below these levels after harvest when the loans come due, farmers simply surrender the grain and the loan is forgiven. In the 1980s the result has been grain too expensive for many foreign customers and more government surplus stocks, Schuh said.

In recent testimony before the congressional Joint Economic Committee, Schuh advocated a gradual phase-out of domestic commodity programs "as we now know them."

Even farmers are begining to have second thoughts about price-supports. For example, both the Montana Grain Growers Association (part of the National Association of Wheat Growers) and

the American Farm Bureau Federation are considering seeking farm price-support reductions. The reason? Some farmers believe that price supports set a floor beneath U.S. prices which encourages foreign competitors to get into the market.

According to Knud Grosen, the President of the Montana Grain Growers Association, the U.S. has been cutting back production while countries like Argentina and Canada have been increasing their production to fill the gap. Canada has grown 6.4 million new acres of wheat in the last several years. Australia has gone from 1.8 million acres of feed grain (corn, barley, oats) in 1982 to 2.4 million in 1983.

As a result, U.S. farmers have already lost considerable market share, especially in corn and wheat. U.S. share of wheat and flour sales has dropped from near 50 percent in 1981-82 to 38 percent in February 1984. Likewise the U.S. share of the international corn market was 61 percent in 1984, versus 72 percent in 1979-80.

C. Minnesota's agricultural production system is based on old consumption patterns which are now in the process of changing.

There are several points to be made about this phenomenon:

1) Minnesota farmers received nearly 50 percent of their 1981 cash receipts from the sale of livestock, poultry and dairy products. However, U.S. consumption of beef declined by 11 percent from 1975-80.

2) Consumer consumption trends show that Americans are substituting more fish and poultry for beef. By contrast, Minnesota farmers do not raise fish commercially and poultry production in the state, is only now beginning to increase again.

3) Consumers are eating substantially more fresh fruits and vegetables today than ever before. Minnesota is heavily dependent on other states for these dietary components. (Research shows that as much as 86 percent of the state's supply of fresh fruits and vegetables came from outside Minnesota.)

4) Minnesota farmers have successfully grown some fruits and vegetables for the frozen and canned markets. But national trends indicate that these markets are either stable or declining while the market for fresh produce has grown substantially.

D. Most of Minnesota's agricultural exports leave the state as raw materials at a time when there is increasing demand for higher value goods.

According to an analysis by the St. Paul Food Resources Project, over 81 percent of Minnesota's 1981 international exports of agricultural products left the state as raw material. Of Minnesota's total exports, approximately $1.3 billion left Minnesota as raw commodities, while an additional $306 million of processed farm products were also exported. Minnesota's exports were made up of: 40 percent fats and oils (mostly soybean and sunflower oils); 26 percent meat, poultry and eggs; 11 percent grain products (flour and other grain); and seven percent processed fruits and vegetables.

After his election in 1982, Governor Perpich appointed Ralph Hofstad, of Land O' Lakes, to chair a commission examining the potential for expanding the agriprocessing industry in Minnesota. The rationale for the formation of the committee was a 1980 report indicating that while Minnesota was a stellar performer as a commodity producer it lagged behind most other midwestern states in agriprocessing. The Hofstad commission reported in 1983 and urged several legislative initiatives to facilitate more agriprocessing in Minnesota.

XIII THERE ARE GROWING CONCERNS ABOUT AGRICULTURAL PRACTICES AND POLICIES AT BOTH THE NATIONAL AND STATE LEVELS.

A. There are legitimate concerns about whether the present agricultural production system can or should be sustained.

Critics charge that the food system which has evolved since World War II cannot be sustained over time. Its very intensity, they say, is depleting too many valuable natural resources. Erosion, compaction and a lower organic content within soils are the results of this system.

According to the Minnesota Soil and Water Conservation Board's March 1982 report, if erosion in Minnesota continues at its present rate, we will lose 100 million tons of top soil every year. The Board estimates that we will only be able to replace one inch of this top soil every 30 years. If these trends continue, the Board warns, Minnesota will not be able to keep up its present rate of agricultural exports in the future.

Water is another problem. Irrigational techniques are often wasteful and so extensive that some regions of the country are literally "mining" groundwater reserves. Although Minnesota is blessed with substantial water reserves, Minnesota's agricultural production system is currently the second largest water user in the state. If the present use rate continues, agriculture will be the number one user by 1990.

Beyond the detrimental effects which the system has on natural resource "inputs", its "outputs" also have deleterious effects. The continued use of fertilizers and pesticides contributes to air and water pollution. Recent research indicates that livestock production in Minnesota produces 38 million tons of animal wastes which eventually run off into Minnesota waters. The cost of an effective runoff system to deal with these wastes would cost about $398 million, according to the Minnesota Soil and Water Conservation Board. Yet these "costs" are rarely discussed.

Present day agricultural specialization encourages crop monoculture -- the growing of a single variety over a widespread area. (In Minnesota corn was planted on 5.6 million acres in 1964 and 6.5 million acres last year.) Crop monoculture tends to decrease the genetic diversity in nature which, long term, may limit the effectiveness of biogenetic hybridization. Farmers' ability to spread their risk is also imperiled by concentrating so heavily on one or two major crops.

The post-World War II agricultural production and distribution system has had major impacts on the nation's farmers. Encouraged to constantly increase crop volumes, farmers expanded the size of their farms and substitute capital (machinery) for labor. Soon there was not enough work for many family members and they left to find employment in the city. For significant numbers of farmers cash receipts have not kept pace with expenses, thereby limiting farm income and increasing farm debt. The costs of production are so high today that it is difficult for new farmers to enter the market. Only a small minority of farmers are thriving under this system.

Aside from the economic impacts' policies encouraging farm consolidation have had significant social impacts. Little or no gains in economic efficiency have been achieved yet there has been a decidedly negative effect on rural families and communities. According to a recent U.S. Department of Agriculture report, most economies of scale are achieved at relatively modest farm sizes. Recent studies also indicate that consolidation beyond medium-sized commercial farms and increases in absentee, investor-ownership of farm land contribute to the deterioration of rural communities.

Nor have consumers always benefitted from the agricultural production system. Although food costs have been held down, critics charge that growers increasingly must sacrifice food quality and nutrition to the demands of the national marketing and distribution system. This system, they charge, has more of an interest in whether the hide of a tomato is tough enough to stand cross-country travel than whether it tastes good.

The seriousness of these trends makes change inevitable. No one at this juncture can know just how or in which direction the agricultural economy will evolve. But it is clear that the agricultural economy is at a crossroads, a major turning point. As a result, the nation's basic agricultural policies must be reexamined.

B. <u>There are concerns about whether price supports are counter-productive.</u>

Not withstanding the relationship of prices to farm income levels, a growing number of economists fear that price supports have kept U.S. commodity prices at artificially high levels that encourage foreign competitors to increase production and undercut the U.S. in world markets. Some farm groups are even beginning to agree with this perspective. Most recently, former Minnesota governor and U.S. secretary of agriculture Orville Freeman presented a proposal to wean American farmers from federal crop subsidies.

C. <u>There are concerns about farm loan practices.</u>

A variety of new questions are being asked of farm loan practices. Critics charge that federal loan agencies tend to assist large farmers at the expense of smaller farmers. Others contend that "easy money" loan practices may be driving up the price of land. Still others insist that farm loan programs tend to assist farmers who grow crops for which price supports are readily available, thereby discouraging

the production of crops not subsidized by price supports. While such practices may be reduce the risk to lenders, they may indirectly contribute to surplus production.

The President's Private Sector Survey on Cost Control in the Federal Government, commonly known as the Grace Commission, has recommended several changes in the way the U.S. government aids, subsidizes and sanctions farm lending.

The Grace Commission notes that a variety of federally sanctioned financing programs were created to provide financial aid to economically devastated farmers during the Depression. These mechanisms, including access to the nation's bond markets at favorable interest rates, are still in existence today although the financial picture for many farmers has brightened considerably. For example, American agriculture now has assets of nearly $1.2 trillion, making it the nation's single largest industry. Combined assets of the nation's largest manufacturers, as reported in the Fortune 500 list, total $1.6 trillion. But in terms of shareholder equity, America's 2.3 million farmers have more than $800 billion in equity, beating the Fortune companies by more than $200 billion.

Consequently, the Grace Commission has recommended "privatizing" or turning federally sanctioned programs and institutions over to private enterprise.

D. <u>There are concerns about whether the U.S. or Minnesota should continue to rely so heavily on foreign agricultural sales.</u>

There is increasing evidence that policies promoting massive exports of American farm products have only worsened the crisis in U.S. farming. From 1970 to 1983, the value of farm exports went from $7 billion to more than $40 billion. But farm income has actually declined, farmers' debt-interest costs are about equal to their income, and the cost of federal support programs is high. Critics charge that American exports end up subsidizing foreign countries, discouraging them from investing in their own self-sufficiency while depleting American topsoil and water resources. Contrary to popular notions, critics charge that the bulk of U.S. exports go to the more developed nations that can afford them, rather than to feed the hungry.

E. <u>There are mounting concerns with respect to farm tax policies.</u>

Charles Davenport and Michael Boehlje, the authors of <u>The Effects of Tax Policy on American Agriculture</u> (Washington D.C., USDA, 1982) have concluded that tax policies have had the following effects on U.S. agriculture:

* Tax policy has exerted upward pressure on the price of farmland.

* Tax laws have encouraged expansion of individual farms.

* Tax laws appear to impose taxes on labor while allowing tax breaks for capital investments.

* Tax shelter aspects of farm tax laws have stimulated the production of tax-sheltered crops. (To the exclusion of other, non-tax-sheltered crops.)

* Tax laws encourage the incorporation of some farm operations.

F. There are concerns about agricultural research priorities and how they are determined.

Although the land-grant college system funded with USDA monies has helped to make American agriculture the most productive in the world, it has come increasingly under fire. Critics such as Stephen Budiansky of The Atlantic Monthly, charge that the agricultural research system has "largely ignored the genetic revolution, systematically excluded the country's best research institutions and discouraged thousands of the ablest students from pursuing careers in agricultural research." Worse still, agricultural experiment stations have focused more and more narrowly on solving practical problems important to relatively few farmers while neglecting the basic research on which all farmers ultimately depend.

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WHAT THE CITIZENS LEAGUE IS

Formed in 1952, the Citizens League is an independent public affairs education and research organization in the Twin Cities metropolitan area.

Volunteer research committees of the Citizens League develop reports which explain the problem at length, make findings and conclusions on what needs to be accomplished, and propose specific workable solutions.

Over the years, the League's research reports have been among the most helpful and reliable sources of information for governmental and civic leaders, and others concerned with the problems of our area.

The League is supported by membership dues of individual members and membership contributions from businesses, foundations and other organizations throughout the metropolitan area.

You are invited to join the League, or, if already a member, invite a friend to join. An application blank is provided for your convenience.

RESEARCH PROGRAM

* Four major studies are in progress regularly.

* Each committee works an average of 2 hours every week, normally for 6-10 months.

* Annually over 250 resource persons made presentations to an averge of 25 members per session.

* A fulltime staff of eight provides direct committee assistance.

* An average in excess of 100 persons follow committee hearings with summary minutes prepared by staff.

* Full reports (normally 40-75 pages) are distributed to 1,000-3,000 persons.

CL PUBLICATIONS

* Minnesota Journal - eight pages; published every two weeks; mailed to all members; public affairs news, analysis and commentary.

* CL Matters reports activities of the Citizens League; meetings, publications, studies in progress, pending issues.

* Public Affairs Directory - 40 pages containing listings of Twin Cities area agencies, organizations and public officials.

PUBLIC AFFAIRS ACTION PROGRAM

* Members of League study committees are called on frequently to pursue the work further with governmental or nongovernmental agencies.

* The League routinely follows up on its reports to encourage, out to the larger group of persons involved in public life, an understanding of current community problems and League proposals for improvement.

COMMUNITY LEADERSHIP BREAKFASTS
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* Public officials and community leaders discuss timely subjects in the areas of their competence and expertise for the benefit of the general public.

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* St. Paul luncheons are held every other Thursday from noon to 1 p.m. at the Landmark Center.

* South Suburban breakfasts are held the last Thursday of each month from 7:30 - 8:30 a.m. at the Lincoln Del, 494 and France Avenue South, Bloomington.

* An average of 35 persons attend the 64 breakfasts and luncheons each year.

* Each year several Q & A luncheons are held throughout the metropolitan area featuring national or local authorities, who respond to questions from a panel on key public policy issues.

* The programs attract good news coverage in the daily press, television and radio.

SEMINARS

* At least six single-evening meetings a year.

* Opportunity for individuals to participate in background presentations and discussions on major public policy issues.

* An average of 100 persons attend each session.

INFORMATION ASSISTANCE

* The League responds to many requests for information and provides speakers to community groups on topics studied.

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