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STAFF PAPER SERIES

WHERE DOES MINNESOTA'S GRAIN CROP GO?

AN ANALYSIS OF MINNESOTA ELEVATOR GRAIN SHIPMENTS

FOR THE PERIOD, 7/99 - 6/00

by
Jerry Fruin and Douglas G. Tiffany

DEPARTMENT OF APPLIED ECONOMICS

COLLEGE OF AGRICULTURAL, FOOD, AND ENVIRONMENTAL SCIENCES

UNIVERSITY OF MINNESOTA

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This study describes the movements of grain shipments from Minnesota to their final destinations.

A sample of approximately 100 (20 percent) of Minnesota grain elevators reported their monthly grain shipments by mode to each of nine destinations from July 1999 to June 2000. The researchers used this data to project grain shipments from Minnesota and each of six crop reporting districts by grain and by transportation mode to final destination.

Minneapolis and Mississippi River ports were the most important destinations, receiving 28.4percent of all shipments. Pacific Northwest export ports received 17.9 percent. Minnesota based corn, soybean, and wheat processors received 16.6 percent of shipments. Duluth-Superior received 10.5 percent and Mexico received 7 percent.

Rail was utilized for 494 million bushels (14.1 million tons) or 64percent of all grains. Rail shipments of 50 or more cars accounted for 47 percent of all elevator shipments. Both destination and modal percentages varied substantially by grain and by crop reporting district.

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EXECUTIVE SUMMARY

Introduction and Background

- A sample of about 100 (20%) Minnesota elevators reported their monthly grain shipments by mode to 9 destinations from July 1999 through June of 2000. We used the data from this sample to estimate total elevator shipments of all grain, corn, soybeans, and wheat from the state and from each of 6 Minnesota Crop Reporting Districts (CRD) that our sample size allowed. July 1999-2000 roughly corresponds to the 1999 crop year.
- We estimated that about 768 million (M) bushels or 21.5 M tons were shipped from Minnesota elevators to the 9 destinations. This included 418 M bushels of corn (11.7 M tons), 244 M bushels of soybeans (7.3 M tons), and 84.6 M bushels of wheat (2.4 M tons)
- Rail shipments accounted for 505 M bushels (14.1 M tons) or 64% of all grains. Truck shipments accounted for 263 M bushels (7.4 M tons) (Table 2).
- The total value of Minnesota elevator shipments based on 1999-2000 farmgate prices was $2.1 billion dollars. Corn accounted for $711 M, soybeans $1,109 M, and wheat $258 M. Note that the total farmgate value of Minnesota crops is substantially higher than $2.1 billion because much grain is fed or sold through channels other than elevators (Table 5).
- The authors compared their estimates from the sample with published secondary sources. They did not find any significant and/or unexplained inconsistencies between their estimates and the limited number of public data sources.

All Grain Destinations

- The most important destination for all grains shipped from Minnesota county elevators is **Minneapolis and the River**. This destination includes the river ports and rail switching area of the Twin Cities. It also includes downstream river ports in Minnesota as well as ports in northern Iowa that receive grains shipped on railroads in southern Minnesota. **Minneapolis and the River** was the destination for 270 M bushels (5.9M tons) or 27.5 % of total Minnesota elevator shipments. Shipments by rail to export ports in the **Pacific Northwest** accounted for 135 M bushels (3.8 M tons) or 17.8% of all shipments (Graph 1).
- **Minnesota Processors**, which includes soybean processors, ethanol and corn sweetener plants and flourmills, etc., were the third largest destination receiving 126 M bushels (3.7 M tons) or 17.2% of the total. Trucks accounted for over 88% of shipments to **Minnesota Processors**.
- **Duluth/Superior** received 80 M bushels (2.3 M tons) or 10.7% of Minnesota grain shipments. Rail shipments accounted for 79% of Minnesota elevator shipments to **Duluth/Superior**.

Individual Commodity Modes and Destinations

- Thirty-one percent of elevator shipments of corn are to the **Minneapolis and the River**, 29% go to the **Pacific Northwest**, and 10% to **Minnesota Processors**. Rail shipments account for 49% to **Minneapolis and the River**, 100% to the **Pacific Northwest**, and 8% to **Minnesota Processors** (Graph 28).

- Thirty-four percent of elevator shipments of soybeans go to **Minnesota Processors**, 21% to **Minneapolis and the River**, and 11% to **Duluth/Superior**. Rail shipments account for 12% of soybean shipments to **Minnesota Processors**, 52% to **Minneapolis and the River**, and 87% to **Duluth/Superior** (Graph 58).
- **Mexico** has become an important market for Minnesota soybeans and to a lesser extent corn. The Mexican market did not exist before NAFTA, but received over 38 M bushels of soybean and 15M bushels of corn in the 1999-2000 crop year. This is a rail market served by 50 and 100-car trains.
- **Duluth/Superior** has become an important market for Minnesota and North Dakota soybeans in the last few years. One reason for this is that the soybean growing area has expanded to the north and west from its traditional area in southern Minnesota as a result of the Freedom to Farm Bill and genetic improvements that have expanded the soybean growing area.
- Thirty-four percent of Minnesota wheat shipments go to **Duluth/Superior**, 31% to **Minneapolis and the River**, and 26% to **Chicago and Beyond**. Rail accounts for 56% of shipments to **Duluth/Superior**, 58% of shipments to **Minneapolis and the River**, and 99% of shipments to **Chicago and Beyond** (Graph 81).

Differences in Modes and Destinations by Crop Reporting Districts

- Destination and modal patterns vary greatly by CRD. This is due to combination of relative location, existing transportation infrastructure, and crop mix. The most striking example of these contrasts is between southeast Minnesota (CRD 9), which borders the Mississippi River, and CRD 7 in the southwestern corner of Minnesota. Seventy-eight

percent of all elevator shipments from CRD 9 are by truck to **Minneapolis and the River** while 88% of all CRD 7 shipments are by rail to the distant markets of the **Pacific Northwest**, **Mexico** and **Southeast Feed Markets** (Graphs 19 and 21).

- Sixty-seven percent of all shipments from northwest Minnesota (CRD 1) are to **Duluth/Superior** and **Minneapolis and the River** and 35% of all shipments are by truck while 31% of all shipments from western Minnesota (CRD 4) are by rail to the **Pacific Northwest** (Graphs 16 and 17).
- Fifty-four percent of all grain shipped from west central Minnesota (CRD 5) goes to **Minneapolis and the River** and 21% goes to **Minnesota Processors**. Fifty-six percent of all grain from CRD 5 is shipped by truck. Thirty-four percent of all grain shipped from south central Minnesota (CRD 8) goes to **Minneapolis and the River** and 32% to **Minnesota Processors**. Forty-three percent of all grain from CRD 8 is shipped by truck (Graphs 18 and 20).
- North Dakota elevators ship approximately 424 M bushels (11.9 M tons) of all grain or about 55% as much grain as Minnesota elevators. **Minneapolis and the River** and **Duluth/Superior** receive 26.5% and 15.7% of the total North Dakota shipments, respectively (Graph 100).

CHAPTER 1

BACKGROUND AND OBJECTIVES

The objective of this report is to analyze grain shipment survey data received from Minnesota grain elevators for the period July 1999 through June 2000. The monthly information, provided on a voluntary basis by the participating elevators, included the type of grain, the transportation mode and 9 destinations. A copy of the monthly survey form is included in Appendix A. The 8 general destinations (the ninth is other or unknown) and the transportation modal breakdown reported were selected by members of the Agricultural Transportation Database Advisory Committee in early 1999. This advisory committee is comprised of representatives from private firms, government agencies and interest groups participating in the Agricultural Transportation Database Consortium. There are approximately 20 members of the Consortium. A recent list of the Consortium membership is in Appendix A.

This information about transportation modal use and destinations of Minnesota grain elevators will be useful to transportation planners, policy analysts, and decision makers in both the public and private sectors. Similar data collected in the future should allow the development of reliable monthly or seasonal transportation demand indices and trends.

These results, used in conjunction with the concurrent study of animal feed consumption by county,[1] will be an aid in plant location studies and in determining future transportation needs for agricultural processing industries and the growing numbers of large scale livestock operations. In addition, these databases and methodologies will have transference to potential future studies on fertilizer and animal waste transportation needs.

CHAPTER 2

METHODS

Because the elevator monthly shipment data is proprietary, absolute confidentiality about individual elevator shipments has been maintained. This was accomplished by having the participating elevators mail the monthly survey form directly to the Upper Great Plains Transportation Institute (UGPTI) in Fargo, North Dakota for processing. The UGPTI is part of North Dakota State University. It has been processing similar monthly data from North Dakota elevators for 30 years and is required by law to maintain high standards of confidentiality. (All grain elevators in North Dakota are required by that state's laws to provide monthly grain reports to the UGPTI.) The UGPTI converts the number of rail cars and/or trucks, that the elevators reported shipping, to bushels for each mode for each grain.

Because of the proprietary nature of the data, the authors of this report did not have access to individual elevator reports. We were furnished a monthly list of the elevators reporting along with shipment data for each of Minnesota's 9 Crop Reporting Districts (CRDs). A map of CRD boundaries is in the Appendix. To estimate CRD and state totals we computed an expansion factor for each CRD for each month. This expansion factor for each CRD is the total grain elevator storage capacity in the CRD divided by the sum of the storage capacity of the elevators in the CRD that reported that month. The expansion factor formula is: (total CRD elevator storage capacity) ÷ (sum of storage capacity of reporting CRD elevators). The typical expansion factor was about 5. The actual elevators reporting differed somewhat each month, changing the expansion factor, so it was necessary to compute it monthly. This computed expansion factor has shortcomings, e.g., it does not account for differences in turnover rates, and

obsolete and little-used storage has the same weight as more modern and heavily-used facilities. However, previous studies have found this expansion method to be better than alternatives such as the number of elevators, percent of loadout capacity, etc.

To ensure confidentiality, results were reported only from CRDS that could be expected to have 10 or more elevators report each month. That is, data and surveys from CRD 2 (North Central District), CRD 3 (Northeast District) and CRD 6 (East Central District) were not expanded or included in this study. (These CRDs in total accounted for less than 2% of the corn, soybeans, and wheat produced in Minnesota.) To further ensure confidentiality, estimates of shipments by mode and/or destinations were generally made only if the reported shipments of a grain type from a CRD were 1 million or more bushels. However, estimates of all shipments were included in the all grains tables and graphs.

The number of elevators reporting each month by CRD and the percentage of storage capacity represented are shown in Table 1.

Reported monthly shipments by grain by mode by destination were expanded by the expansion factor for that month for that CRD. The results are reported in tabular form in Tables 2-12 and graphically in the following sections of this report. Computations and graphs are generally available in both bushels and tons. The annual dollar value of shipments of corn, soybeans, and wheat was also computed and is available in Table 5 and graphs 5, 58 and 82. Dollar value was computed using the average price farmers received for the 12 month period July 1999 to June 2000 as reported in *Minnesota Agricultural Statistics*. These prices were $1.70, $4.55 and $3.05 for corn, soybeans and wheat, respectively.

DESCRIPTION OF SURVEY FORM

A copy of the survey form is in Appendix A. Information about shipments of each of the five Minnesota principal grains and oil seeds, i.e., corn, soybeans, wheat, barley and oats, was requested along with a space for "other" commodities.

Elevators recorded shipments as the number of truckloads or carloads received in one of nine destination columns on the survey. The destinations were defined as:

- **Duluth/Superior** - port elevators in the Duluth, Minnesota/Superior, Wisconsin area.
- **Minneapolis and River**. This column includes shipments to elevators in the Twin Cities rail switching area along with the Mississippi and Minnesota River ports such as Red Wing and Winona, and rail destinations on the Mississippi River in Iowa.
- **Pacific Northwest** includes the states of Oregon, Washington and Idaho. These destinations consist primarily of Columbia River and Seattle-Tacoma export elevators.
- **Chicago and Beyond**. This includes flour millers and corn and soybean processors in Illinois and eastern states as well as feed markets in the east and southeastern United States.
- **Kansas City and Beyond**. This include the milling and processing destinations and feeding operations on the central and high plains states such as Kansas, Colorado, and Oklahoma and Texas.
- **Mexico**. This destination is the points on, and/or beyond, the Mexican border.
- **Minnesota Processors**. This consists of locations in Minnesota other than Duluth and Twin City locations. It includes feedmills, feedlots and corn, soybean and other grain processors.
- **Southwest Feed Markets**. Domestic shipments to California, Arizona and New Mexico.

- **Other and Unknown**. Unknown destinations plus shipments to Iowa, Canada, Wisconsin and North and South Dakota.

The survey form required reporting elevators to report their shipments as rail or truck. Rail reporting was further divided by shipment sizes of 1-24 cars, 24-49 cars, 50-99 cars and 100+ cars. Grain transportation terminology sometimes refers to trains 50 cars or longer as shuttle trains or as unit trains.

CHAPTER 3

RESULTS

VOLUME ESTIMATES OF ALL GRAINS SHIPPED BY MINNESOTA ELEVATORS

Graphs 1-4 show the estimated quantities of all grains shipped from Minnesota to each of nine destination areas by mode. The detailed data for these graphs is available in Tables 2-5. The sample projection indicates that Minnesota elevators shipped 768 million bushels or 21.5 million tons of all grains during the 12-month period from July 1999 through June of 2000. Seven hundred forty-seven million bushels or over 97 percent of the shipments were corn, soybeans or wheat. Graph 1 shows shipments by mode in bushels. Graph 2 shows shipments by mode in tons. Graphs 3 and 4 show total shipments in bushels and tons.

Graphs 1-4 show that over 10.5% of Minnesota originated grain shipments were shipped through Duluth/Superior in the 12-month period. There was almost 4 times as much grain shipped to Duluth/Superior by rail as by truck. Minnesota grain shipped to Duluth/Superior is almost all exported although some may go to flour mills in the eastern United States by lake vessel or rail. Exports from Duluth-Superior are made both on ocean vessels (salties) that transverse the Great Lakes and St. Lawrence Seaway on their way to foreign ports, or on "lakers" that carry the grain through the Seaway. Their cargo is offloaded into elevators on the Gulf of St. Lawrence and then transferred to oceangoing ships.

The destination receiving the most shipments of Minnesota grain is **Minneapolis and River**. This destination includes the elevators in the Twin Cities rail switching areas, the Minnesota and Mississippi River ports including Savage, Minneapolis, St. Paul, Red Wing, Winona along with river ports in Iowa that have rail connections to southwest and south central

Minnesota. This destination received 28.4% (218 million bushels or 6.1 million tons) of Minnesota elevator grain shipments. As graph 1 shows, shipments to Minnesota and river ports were almost evenly split between the rail and truck modes.

The **Pacific Northwest** is the second largest destination for Minnesota grains. It received almost 17.9% of the shipments over the 12-month period. This grain is virtually all shipped by rail, predominantly in 100-car plus "shuttle" trains for export from ports in Washington and Oregon. The ultimate destinations are primarily the Pacific Rim countries such as China, Japan, Taiwan, and Korea.

About 7.4 percent of total grain shipments went to **Chicago and Beyond**. This destination includes processors and flourmills in Illinois and the east, and feedlots in the southeastern United States. Note, that due to the distances involved, this is primarily a rail market.

Kansas City and Beyond received about 3.5% of Minnesota shipments and is also rail market.

Mexico received 7 percent of Minnesota shipments. This is a market that has developed since the signing of NAFTA and did not exist for Minnesota shippers 10 years ago. These shipments are generally in trains of 50 cars or more and go directly to processors or feedlots in Mexico.

Minnesota Processors, which include soybean and ethanol plants, feed and flour mills, and local feedlots were the third largest recipients of Minnesota grain shipments with 16.6% of the total. These short distance shipments were predominantly by truck.

The **Southwest Feed Markets** (California, Arizona, New Mexico) received 3.2% of the shipments. This is also a rail market because of the distances involved. Shipments are generally made in trains of 50 or more cars.

Other or Unknown destinations accounted for 5.6% of Minnesota grain shipments. These destinations include Canada, and processing plants in Iowa and North and South Dakota. These markets are served by both rail and truck.

Estimated rail shipments of all grains during the 12-month period were greater than those shipments by truck by a factor of nearly 2 to 1, i.e., rail accounted for 66 percent of all shipments. The major Minnesota elevator truck destinations are the **Minneapolis and River** market and **Minnesota Processors**. Smaller quantities are trucked to Duluth/Superior and "other" destinations. The truck portion of **Other** includes shipments to processors in adjacent states and Canada and frequently may be "backhauls." A backhaul occurs when a trucker obtains a payload for his return trip rather than drives back empty. Examples of common backhauls include ag supply trucks that deliver to rural communities and return with grain, and trucks hauling potash from Canada that take back truckloads of corn. Note that in agricultural transportation it is sometimes difficult to distinguish between the "fronthaul" and the "backhaul."

Graph 2 shows Minnesota elevator shipments by destination by mode in tons rather than bushels. Graphs 3 and 4 show total estimated shipments from Minnesota elevators in terms of bushels and tons, respectively.

The ultimate disposition of the elevator shipments to **Minneapolis and River** is primarily barge shipments to Gulf of Mexico ports for exports. There are also some rail shipments to processors and feedlots in eastern states included in these estimates because the reporting

elevators sometimes do not know or control the final destination. The final destinations of most of the elevator shipments to the **Pacific Northwest** were Pacific Rim countries such as Japan and Korea. Shipments to **Minnesota Processors** include feed mills that provide feed to local farmers as well as flourmills and corn and soybean processing plants.

DOLLAR VALUE OF MINNESOTA GRAIN ELEVATOR SHIPMENTS

Graph 5 and Table 6 show the dollar value of Minnesota elevator shipments by destination. The dollar value is for corn, soybeans and wheat only and it is computed at the 1999 market year average prices reported in the 1999 *Minnesota Agricultural Statistics*.[2] The average annual prices were $1.70, $4.55 and $3.05, respectively.

Graphs 5 shows that the most important destinations in terms of the dollar value of grains were **Minneapolis and River**, the **Pacific Northwest**, and the **Minnesota Processors**. The most important rail destination was the **Pacific Northwest**, while the most important truck destination in terms of market value was the **Minnesota Processors** market. **Minneapolis and River** was the second most important market in dollar terms for both truck and rail.

SEASONALITY

The destination of Minnesota elevator shipments can vary greatly over the course of a year. The magnitude of monthly shipments varies throughout the year for a variety of reasons. These include harvest time pressures and the opening and closing of the water shipment routes on the Mississippi and Great Lakes. These seasonal variations are also impacted by periodic rail car shortages, barge rates, low water conditions, price fluctuations and changes in the relationships between various domestic and foreign markets and other factors.

For example, the summer and fall of 1999 witnessed heavy rail shipments of corn, because of the timing of the release of corn from storage in government loan programs. Similarly, low water conditions on the Great Lakes contributed to less grain being shipped from Duluth/Superior in the spring of 2000. Although seasonal patterns should appear each year, graphs based on a single year's data only tell part of the very complex relationships between transportation demand and grain markets.

Graph 6 shows the estimated monthly shipments of all grains from all Minnesota elevators by mode and in total. Monthly shipments vary greatly from low volumes in the winter months when navigation is closed on both the Great Lakes and Mississippi River and to peaks in summer and fall months. Table 3 records the monthly grain shipments by total, mode and destination.

Graphs 7 through 15 show the estimated monthly shipments patterns for each of the nine destinations recorded. Note the scale of the Y-axis when comparing graphs as this axis varies over the 9 graphs going from 0 to 45 M bushels for Minneapolis and from 0 to 7 M bushels for Kansas City. That is, equal heights of the bars on different graphs may not mean equal shipments.

Graph 7 shows projected shipments to **Duluth/Superior**. There were major rail movements in the summer and fall of 1999, followed by a winter lull when the Great Lakes were closed, followed by an increase in shipments when the Lakes opened in the spring. Note that truck shipments are smaller but much more constant throughout the year than rail.

Graph 8 shows elevator shipments to **Minneapolis and River** ports. Note the reduced shipments during December-March reflecting the closed shipping season on the river. This was

followed by an increase in shipments in June of 1999 due to low barge rates and related market opportunities. It should be noted that the data on the graphs are shipments from Minnesota elevators to river terminals--not shipments from river terminals. River terminals utilize their storage capacity to receive and store grain in the fall harvest season and often resulting inventories by rail throughout the winter.

Graphs 9-12 display shipment destinations that are primarily served by rail. More time periods of data are necessary to see if there are discernable seasonal patterns due to factors such as those listed earlier. For example, the spike in shipments to the **Pacific Northwest** in September of 1999 (Graph 9) was probably due to the late release of large amounts of Minnesota grain stocks from government programs in summer of 1999 rather than reflecting an annual pattern. The subsequent dip in shipments in October and November may be due to the redeployment of rail equipment to other routes in October to improve equipment utilization during a time of high demand. Rail shipments to the **Chicago and Beyond** were relatively high in October 1999, and those to **Kansas City and Beyond** spiked in October 1999. (See graphs 10 and 11.) Minnesota elevator shipments to **Chicago and Beyond** and **Kansas City and Beyond** were highest in the winter months. Rail shipments from Minnesota to these markets in the winter months occur because elevators and railroads are utilizing their grain handling capacity during the period when shipments on the Mississippi River and the Great Lakes are not possible.

Graph 12 shows estimated shipments to **Mexico**. More data is needed to determine if there is a seasonal increase in summer (because of a drawdown of available stocks nearer to Mexico earlier in the year) or whether any discernable seasonal pattern actually exists.

There are estimates of some grain being shipped by truck all the way to Mexico recorded on Graph 12 and Table 3. Although unexpected because such a long haul by truck would generally be considered uneconomical, these are probably backhauls resulting from a fronthaul of a high value product such as produce.

Graph 13 shows shipments to **Minnesota Processors**. Unlike shipments to most other locations, which have a seasonal pattern for one reason or another, shipments to processors are relatively constant from month to month. Most elevator shipments to processors are by truck because most are short distance movements. Graph 13, however, shows the rail movements to processors do occur on occasion when transportation economics warrant.

More observations are needed to determine if there is a seasonal pattern in shipments to the **Southwest Feed Markets** (Graphs 14). The spike in Aug-Oct.1999 may be related to the late release of grain from the government loan programs in 1999. Graph 15 shows shipments to **Other and Unknown** destinations. Shipments are largest during the harvest season.

MINNESOTA ELEVATOR SHIPMENTS OF ALL GRAINS BY CROP REPORTING DISTRICTS

Elevator grain shipments were estimated for each of the 6 CRDs for which there were sufficient elevators reporting to meet confidentiality and statistical requirements. Shipments from CRDS 2, 3, and 6 were not estimated. These CRDs produce less than 2% of the Minnesota grain crop. A map of CRD boundaries can be found in Appendix A.

Graphs 16-21 display elevator shipments from each CRD by mode in bushels. Graphs 22-27 show elevator shipments from each CRD in 2000 pound tons. The scale of the (Y) axis

may vary from graph to graph so that bars of equal height on separate graphs may not represent equal shipments.

CRD 1 in the northwest part of the state includes the Minnesota portion of the Red River Valley. Elevators in CRD1 ship primarily to **Duluth/Superior**, **Minneapolis and River** ports, **Chicago and Beyond**, and the **Pacific Northwest**. Rail shipments are somewhat greater than truck (Graphs 16 and 22). Wheat is the primary grain shipped from CRD1. Rail accounts for 65 percent of elevator grain shipments from CRD1.

Elevators in CRD 4 in west central Minnesota ship primarily by rail with the dominant destination (31%) being the **Pacific Northwest**. Truck shipments to Minnesota processors (16%) are also important in CRD 4. Over 75 percent of elevators grain shipments in CRD 4 are by rail (Graphs 17 and 23).

Elevators in CRD 5 in Central Minnesota (to the east of CRD 4) ship primarily to **Minneapolis and River** both by truck and rail. **Minneapolis and River** account for 59 percent of CRD 5 grain shipments. **Minnesota Processors** is the second most important destination receiving over 20 percent of the shipments almost all by truck (Graphs 18 and 24).

Elevators in CRD 7 (Graph 19 and 25) in southwest Minnesota ship primarily by rail with the largest markets being the **Pacific Northwest** (28%), **Mexico** (21%), and **Minneapolis and River** ports (16%). Over 87 percent of CRD 7 shipments are by rail.

CRD 8 ships the most grain to **Mississippi and River** ports (34%), **Minnesota Processors** (32%), and to the **Southwest Feed Markets** (12%). Shipments are 57% rail and 43% truck (Graphs 20 and 26). Elevators in CRD 9 in southeast Minnesota ship primarily to the **Mississippi and River** by truck. This accounts for 80 percent of total elevators shipments

(Graphs 21 and 27). Other studies have shown that up to 50 percent of the grain raised in CRD 9 is shipped directly from area farms to Mississippi River elevators.[3]

Note that both the major destinations and mode are influenced by location and crop and vary substantially from CRD to CRD. For example, CRD 4 in West Central Minnesota, an area with a large corn surplus,[4] ships primarily by rail to the Pacific Northwest export market. CRD 1, a wheat surplus area ships by both rail and truck to **Duluth/Superior** and **Minneapolis And River** ports and by rail to **Chicago and Beyond** east. CRDs 5 and 8 ship large quantities by truck to **Minnesota Processors**. CRD 7 in the southwest corner of the state ships primarily by rail to distant locations such as the Pacific Northwest and Mexico. Because of distance and the location of railroads, the shipments form CRD 7 to Minneapolis and the River are more likely to be to Mississippi River ports in Iowa than in Minnesota!

Finally, as noted earlier, CRD 9, which borders the Mississippi River, ships most of its grain by truck to Mississippi River terminals.

CHAPTER 4

CORN SHIPMENTS FROM MINNESOTA ELEVATORS

This section reviews the estimates of corn shipped from Minnesota elevators from July 1999 through June 30, 2000. Estimates by mode to each destination are shown in Table 5. Usually shipments would be primarily from the 1999 crop. However, because of the large 1998 corn crop and USDA program rules, shipments from Minnesota were delayed and much of the 1998 corn crop was not shipped until July-Sept. 1999.

Both the 1998 and 1999 Minnesota corn crops were about 1 billion bushels. Our expansion of the sample data estimates corn shipments during the 12-month period to be 418 million bushels. The concurrent feed surplus/deficit study estimated that 390 million bushels of corn are fed annually in a 12-month period.[5] About 200 million bushels are probably delivered directly from farms to processors and Mississippi River ports.[6] These direct deliveries and changes in yearend stocks are the major reasons for the difference between our estimate of elevator shipments and the annual production reported in *Minnesota Agricultural Statistics*.

Graphs 28 and 29 in bushels and tons show the relative importance of the 9 destinations for corn shipments. The most important is truck and rail to **Minneapolis and River** (31%) and by rail to the **Pacific Northwest** (29%). Truck shipments to **Minnesota Processors** account for 10% of annual shipments. Rail shipments of corn dominate except for **Minnesota Processors** and **Other and Unknown** destinations which receive substantial truck shipments.

Graph 30 and Table 6 show the value of the estimated corn shipments by mode to each market at the 1999 market year average farm price of $1.70 per bushel. It should be noted that

the 1995-1999 average market price was $2.23. In fact, the farm value of the 1999 Minnesota corn crop was the lowest since the 1993 marketing year.[7]

It should also be noted that, unlike soybeans and wheat, much of the corn crop is disposed of locally. Table 6 reflects the farm value of only about 45% of the Minnesota corn crop. The rest is fed locally or bypasses local elevators when it is trucked to terminals.

Graph 31 shows estimated Minnesota elevator corn shipments by month and mode. Since the estimated corn shipments comprise 56% of the estimated shipments of all grains, the seasonal pattern is quite similar to the statewide all-grain pattern exhibited in Graph 6. However, in this marketing year, the decline in corn shipments in January-March was greater than that for all grains.

Graphs 32-40 show monthly corn shipments by rail or truck to each of the destinations in bushels. Estimated shipments in tons as well as bushels can be found in Table 4. Graph 41 breaks down all corn shipments by size of train or truck. Thirty-eight percent of Minnesota elevator corn is shipped in 100 plus car trains. Twenty-nine percent is shipped by truck, 16% in 50-99 car trains, 8% in 25-49 car units and 9% in 1-24 car shipments.

Graph 42 shows corn shipments to each destination by train size in bushels. The primary shipment size to the **Pacific Northwest** is 100 plus car trains. The second most important destination for 100 car trains is **Minneapolis and River**. However, 1-24 car and 25-49 car shipments are almost as important. Fifty to ninety-nine car trains account for the most rail shipments to **Duluth/Superior**, **Chicago**, **Mexico** and the **Southwest**.

CORN SHIPMENTS FROM MINNESOTA ELEVATORS BY CROP REORTING DISTRICT

Graphs 44-49 show corn shipments from each CRD to destinations by mode in bushels. Graphs 50-55 show corn shipments in tons. The scale of the Y-axis (bushels or tons) varies, so equal heights on different graphs may not represent equal quantities.

Graph 44 shows that from the corn shipments from CRD 1 in northwest Minnesota are virtually all by truck. **Other Markets** can include North Dakota and Canada. Total shipments are only about 5 million bushels.

Corn shipments from CRD 4 (Graph 45) are primarily (58%) by rail to the **Pacific Northwest**.

Corn shipments from CRD 5, just east of CRD 4, are more evenly divided between the modes. Shipments are primarily to **Minneapolis and River**, **Duluth/Superior**, and **Other and Unknown**, **Minnesota Processors**, **Chicago and Beyond** (Graph 46).

Corn shipments from CRD 7, in southwest Minnesota are predominately to the **Pacific Northwest** by rail (Graphs 47). This is the largest single market destination (68.6 M bushels) from a CRD. Corn shipments from this CRD are primarily by rail.

CRD 8, south central Minnesota, is shown by Graph 48 to have the msot shipments to **Minneapolis and River**. These include Mississippi River ports in Iowa. Rail shipments of corn dominate from this CRD and include shipments to **Mexico** and the **Southwest Feed Markets**. Substantial truck shipments are made to **Minneapolis and River** and **Minnesota Processors**.

Elevators in CRD 9 (Graph 49) in southeast Minnesota use trucks to reach their major destinations at nearby Mississippi River ports.

CHAPTER 5

MINNESOTA ELEVATOR SOYBEAN SHIPMENTS

Estimated soybean shipments from Minnesota elevators to destinations are shown in bushels (Graph 56), tons (Graph 57) and value at the average 1999 market year farm price of $4.55 a bushel (Graph 58). This was the lowest average annual price since the 1986 crop-marketing year and lowest total farm value of the Minnesota soybean crop since 1993.[8]

Estimated soybean shipments from Minnesota elevators totaled 244.5 million bushels (Table 8 and 9).

Total production of soybeans in Minnesota was 285.6 million bushels in 1998 and 282.9 million in 1999. Seed use exceeds 7 million bushels per year. Some soybeans are moved directly from farms to processors and river terminals and are not represented in this survey.[9] **Minnesota Processors** are the largest market for soybeans taking more than 34 percent of the annual crop primarily by truck. **Minneapolis and River** ports receive another 21% of the crop by rail and truck followed by of **Duluth/Superior** and **Mexico**, which received 16 and 11 percent of the shipments. The latter two are relatively new destinations for Minnesota soybean. Few soybeans were shipped through **Duluth/Superior** as recently as 1995.[10] Mexico is relatively new as a major market for U.S. soybeans, let alone Minnesota. The development of this market for U.S. and Minnesota soybeans is one of the results of the NAFTA agreements.

Graph 59 shows estimated soybean shipments by month by mode. The seasonal variation is not as extreme as that of corn with neither rail nor truck shipments consistently dominant. One reason for less seasonality, is the relatively constant market for Minnesota soybeans form local processors.

Graphs 60 to 67 show the monthly shipments to markets that are estimated to receive more than 1 million bushels of soybeans per year. There is a strong seasonal pattern with the winter slowdown of shipments to **Minneapolis and River** ports that contrasts with the relatively constant movements to **Minnesota Processors**. The **Minnesota Processors** market is predominantly served by the truck mode because of the short distances involved

ELEVATOR SHIPMENTS OF SOYBEANS BY CROP REPORTING DISTRICT

Graphs 68-73 show elevator shipments from each CRD. The scale of the Y-axis varies from 12 to 45 million bushels. Graphs 74-79 show estimated shipments in tons. Destinations for soybeans are not as varied as for corn as most CRD ship most of their beans to 3 or fewer locations.

Note that CRD 1 in northwest Minnesota (Graph 68) ships 71% of their beans to **Duluth/Superior** with an 80/21 rail-truck split. Another 20% goes to Minneapolis with a similar rail/truck split. The largest market for soybeans from elevators in CRD 4 is **Minnesota Processors** (32% of the CRD totals) with the truck mode predominating. The second and third largest destinations are by rail to **Duluth/Superior**, 16% and the **Pacific Northwest**, 15%. Five other locations each receive at least 5% of the CRD's bean shipments.

Minneapolis and the River received 59% of CRD 5 shipments split between truck and rail while **Minnesota Processors** receive about 29% primarily by truck.

Mexico received 60% of the soybeans from CRD 7, almost all by rail, while **Minnesota Processors** received 20%, nearly 2/3 of which were by truck. **Minnesota Processors** received 85% of the soybean shipments from CRD 8 with the vast majority being by truck. **Minneapolis**

and River ports are the destination for 74% of CRD 9 soybeans. These beans are also shipped primarily by truck (88%).

CHAPTER 6

ESTIMATED WHEAT SHIPMENTS FROM MINNESOTA ELEVATORS

This section reviews the estimates of wheat shipments from country elevators during the 12 month period. Estimates by mode to each destination are shown in Table 1.

The 1998 Minnesota wheat crop was 80.4 M bushels and the 1999 crop was 79.2 M bushels. Estimated shipments from Minnesota elevators in the 1999 marketing year totaled 84.8 M bushels. Graph 80 (bushels) and Graph 81 (tons) show the relative importance of the various destination markets. Three markets account for over 90 percent of the estimated shipments. Thirty-four percent are to **Duluth/Superior**, 30.6% to **Minneapolis and River** ports and 25.8% to **Chicago and Beyond**. **Chicago and Beyond** is almost all by rail while the first two are balanced with about 55% shipped by rail and 45% by truck.

Graph 82 and Table 11 show the value of the estimated wheat shipments by mode to each destination at the 1999 market year average farm price of $3.05 a bushel. This was the lowest average farm price since 1990 and the lowest total farm value of the crop since 1994.[11]

Graph 83 shows estimated Minnesota elevator wheat shipments by month and mode. The annual seasonal is not particularly pronounced because of the large rail shipments to Chicago in the winter months. Graphs 84-87 show the by month by mode estimated shipments to destinations estimated to receive more than 1 million bushels of wheat.

ESTIMATED SHIPMENTS OF WHEAT FROM MINNESOTA BY CRD

Only 3 CRDS (1, 4, and 5) are estimated to ship more than 1 million bushels of wheat. Graphs 88-90 show estimated shipments to destinations by mode. Graphs 91-93 show estimated

shipments in tons. **Duluth/Superior**, **Mississippi and the River** and **Chicago and Beyond** are the most important destinations for CRD 1. The same 3 destinations (in reverse order) are also the most important destinations for CRD 4. Only 1.8 million bushels of wheat is shipped from CRD 5 with 75% of that moving by truck.

CHAPTER 7

ESTIMATED SHIPMENTS OF OTHER GRAINS FROM MINNESOTA ELEVATORS

Graphs 94 and 95 show estimated shipments of barley from Minnesota elevators during the marketing year. Minnesota barley production was 22.3 M bushels in 1998 and 8.5 M bushels in 1999. Estimated shipments during the 12-month period totaled 15.3 M bushels. Sixty-six percent of the Minnesota barley crop was shipped to **Minneapolis and River** ports and 17% was shipped to the **Pacific Northwest**, from CRDs 1 and 4.

Graphs 96 and 97 show the estimated elevator shipments of oats by mode by destination in bushels and tons. Production of oats in Minnesota was 19.5 M bushels in 1998 and 17.7 million bushels in 1999. Estimated elevator shipments were 1.9 M bushels.

Graphs 98 and 99 show the estimated shipment of other crops in bushels or hundredweight and tons. Total estimated shipments were 3.8 M bushels or cwt. Production of the largest "other crops" in 1999 sunflowers at 1.6 M cwt, dry edible beans at 2.6 M cwt and rye at 0.78 M bushels.

CHAPTER 8

NORTH DAKOTA

North Dakota is a major grain producing state and consequently ships large quantities of surplus grain to domestic and export locations. Because of the geographic proximity of North Dakota and Minnesota, the surplus grain destinations and routes of Minnesota and North Dakota are frequently the same. In the period of July 1999 through June 2000, North Dakota elevators shipped about 424 million bushels of all grains,[12] or over 55% of that shipped from Minnesota elevators during the same time period, although the crop mix of the two states is much different. For example, corn accounts for 66% of Minnesota shipments versus 8.5% of North Dakota's, while wheat and durum account for 55% of North Dakota's shipments versus 11% of Minnesota's. However, the destination points and transportation routes used are frequently the same.

Grain flow data from North Dakota elevators are collected monthly and processed by the Upper Great Plains Transportation Institute in a manner similar to the Minnesota data reported here. The major differences in the two sets of data are that the North Dakota data are inclusive of all shipments because North Dakota elevators are mandated by law to report their shipping mode and destination while we relied on a sample of volunteering elevators.

Table 12 shows the quantities of grain shipped by mode to the 8 destinations reported by North Dakota elevators. Graph 100 shows the destinations by mode for all grains. **Minneapolis and the River** receives 26.5% or more than a quarter of all grain shipped from North Dakota. This destination does not include Iowa river ports. Seventy-three percent of North Dakota shipments to **Minneapolis and the River** are by rail. Some of these rail shipments may

eventually go to points further east than Minneapolis because the rail destination may be changed after leaving the shipping elevator. **Duluth/Superior** and the **Pacific Northwest** are also major destinations accounting for 15.7% and 10.6% of North Dakota shipments. However, **Other and Unknown,** which includes Canada and North Dakota, each receive 17.4% of elevator. The only destination where truck shipments predominate is **North Dakota** with over an 82% share.

Graph 101 shows the destination for wheat, North Dakota's most important export crop. The most important destination is **Minneapolis and the River** which receives 28.9% of shipments with near 73% rail shipments. **Other and Unknown** receive 22.4% of the wheat shipments of which 93% are by rail. **Other and Unknown** includes flourmills and processors throughout the country. **Duluth/Superior** and the **Pacific Northwest** received 16.4% and 13.5% of shipments primarily by rail, respectively.

Graph 102 shows the destinations of durum shipped from North Dakota elevators. **Minneapolis and the River** receives an even larger percentage of North Dakota durum than wheat.

Graph 103 shows North Dakota barley destinations. **Minneapolis and the River** received 43.4% of barley shipments. Because barley is used primarily for malting or feed, the export ports of **Duluth/Superior** and the **Pacific Northwest** receive very little barley.

Graph 104 shows the destination of North Dakota soybeans. Almost half goes to **Duluth/Superior** and over 20% to the **Pacific Northwest**. Unlike in Minnesota there is not a major soybean processor in North Dakota, so most beans are exported. Soybeans are a relatively new crop in North Dakota. The development of a soybean surplus in North Dakota and the Red

River Valley of Minnesota has caused the Port of Duluth-Superior to greatly increase soybean exports through the Great Lakes.

Graph 105 shows the destinations of North Dakota corn shipments. The most important market (32.2%) is the **Pacific Northwest** by rail, followed by **Other and Unknown,** which includes Canada and western states (24.8%). **Duluth/Superior** is third with 15.2%.

CHAPTER 9

ADEQUACY OF SAMPLE AND COMPARISON WITH OTHER DATA SOURCES

Tables 1 and 2 show the number of elevators and the percentage of capacity reporting each month by CRD and for the 6 CRDs with 98% of Minnesota grain production. We have not reported the consistency of the individual elevators from month to month, but most reported 10 or more times during the 12-month period. The 18.7% average sampling rate and the 23.0% average elevator capacity reported should be more than adequate for projections if the respondents are representative of Minnesota elevators.

Table 13 is a comparison of the average production of the 3 major crops for 1998 and 1999 with our estimated shipments for the period July 1999 through June 2000. Marketing years are generally considered to be October-September for corn and soybeans and July-June for wheat (as well as barley and oats). Farm shipments of part of the 1998 Minnesota corn crop were delayed because of the government loan programs and some transportation equipment shortages, so on-farm stocks were expected to be larger than usual at the beginning of the 1999 marketing year. Table 13 shows our estimated total shipments of corn, soybeans and wheat and the difference between average production and estimated shipments. The total difference between average production and shipments was 627.9 M bushels. This difference should be adjusted for grain fed on farms and/or processed by local feed mills, grain used for seed, and grain delivered directly from farms to processors and river terminals. After making these adjustments, the difference between production, estimated shipments, and other uses is 80.4 M bushels for the 3

major grains (5.8% of production). The difference is 69.6 M bushels for corn (6.9%), 17.7 M bushels for soybeans 6.2%) and –7.0 M bushels for wheat (-8.7%).

Table 14 shows production and estimated shipments for corn, beans and wheat by CRD. These numbers are consistent: all major areas produced more than shipped, and differences between production and shipments are consistent with our concurrent feed-use study, and/or the likelihood of shipments directly from farm to processors and river terminal markets.

Other data sources confirm the grain movement patterns gleaned from the elevator data. For example, the Minneapolis Grain Exchange reports receipts and shipments of grains by month by mode of members for the Minneapolis/St. Paul, Red Wing and Winona Area Elevators. The Minnesota Office of Freight, Railroads and Waterways also has a terminal elevator report that is more inclusive than the Grain Exchange report which is limited to members. The Grain Exchange Report reports about 85 percent of the Mn/DOT Terminal Report. For the 7/99-6/00 period, Mn/DOT and the Grain Exchange reported 360 M and 341 M bushels of receipts, respectively. The survey had 207 M bushels. This pattern is consistent, as the survey total should be substantially less than actual receipts because of grain receipts from North Dakota, South Dakota and farms that bypass their local elevator and haul directly to river terminals.

Our review found that rail shipments reported to **Minneapolis and River** ports are substantially greater than Grain Exchange receipts. This is possible for at least 2 reasons. First, some rail grain from southern Minnesota goes to Iowa river ports that are not included in the Mn/DOT or Grain Exchange Reports. The second reason is that the ultimate destination of some of the rail grain originating to the west of the Twin Cities is not known at the time of shipment and the final destination is really not the Twin Cities.

Our conclusion is that there are no significant and/or unexplained inconsistencies from the estimates derived from the sample of reporting elevators when compared with data from public data sources.

ENDNOTES

1. Tiffany, Douglas G. and Jerry E. Fruin, "Filling the Feed Troughs of Minnesota and Beyond."

2. *Minnesota Agricultural Statistics 2000*, U.S.D.A., National Agricultural Statistics Services and Minnesota Department of Agriculture, p. 91.

3. Friesen, Arthur, "Farm to Market Grain Movement in Minnesota," University of Minnesota Department of Agricultural and Applied Economics, Master's Thesis, Nov. 1995, p. 66.

4. Op. cit., Tiffany and Fruin, p. B-2.

5. Ibid., p. 19.

6. Op. cit., computed from Friesen, p. 57.

7. *Minnesota Agricultural Statistics*, various years.

8. Ibid.

9. Op. cit., Friesen, pp. 59-60.

10. *Minneapolis Grain Exchange Statistical Annual*, Minneapolis Grain Exchange, Minneapolis, MN, various years.

11. *Minnesota Agricultural Statistics*, various years.

12. Voehel, Kimberly and Charlie Cooper, *1999-2000 North Dakota Grain and Oilseed Transportation Statistics*, Upper Great Plains Transportation Institute, Department Publication No. 138, September 2000.

APPENDIX A

GRAIN SHIPMENTS BY DESTINATION & MODE

Please DO NOT Include Shipments to Local MN Elevators on this Report

INDIVIDUAL REPORTS CONFIDENTIAL

*If you operate more than one licensed grain facility that ships grain beyond your company, **please submit individual reports for each location.**

ELEVATOR	LOCATION	FAX	MONTH/ YEAR	ELEVATOR NUMBER

PLEASE LIST THE **NUMBER OF RAIL CARS/TRUCKS** SHIPPED DURING THE MONTH BY DESTINATION

COMMODITY	MODE		DULUTH/ SUPERIOR	RIVER/GULF TWIN CITIES-WINONA	PNW/ OREGON, WA, & IDAHO	CHICAGO & BEYOND	KANSAS CITY & BEYOND	MEXICO	MN FEED USE/ PROCESSORS	SW FEED MKT (CA/AZ)	OTHER & UNKNOWN
CORN	RAIL:	1-24 CARS	111	121	131	141	151	161	171	181	191
		24-49	112	122	132	142	152	162	172	182	192
		50-99	113	123	133	143	153	163	173	183	193
		100+ CARS	114	124	134	144	154	164	174	184	194
	TRUCK		115	125	135	145	155	165	175	185	195
SOYBEAN	RAIL:	1-24 CARS	211	221	231	241	251	261	271	281	291
		24-49	212	222	232	242	252	262	272	282	292
		50-99	213	223	233	243	253	263	273	283	293
		100+ CARS	214	224	234	244	254	264	274	284	294
	TRUCK		215	225	235	245	255	265	275	285	295
WHEAT	RAIL:	1-24 CARS	311	321	331	341	351	361	371	381	391
		24-49	312	322	332	342	352	362	372	382	392
		50-99	313	323	333	343	353	363	373	383	393
		100+ CARS	314	324	334	344	354	364	374	384	394
	TRUCK		315	325	335	345	355	365	375	385	395
BARLEY	RAIL:	1-24 CARS	411	421	431	441	451	461	471	481	491
		24-49	412	422	432	442	452	462	472	482	492
		50-99	413	423	433	443	453	463	473	483	493
		100+ CARS	414	424	434	444	454	464	474	484	494
	TRUCK		415	425	435	445	455	465	475	485	495
OATS	RAIL:	1-24 CARS	511	521	531	541	551	561	571	581	591
		24-49	512	522	532	542	552	562	572	582	592
		50+ CARS	513	523	533	543	553	563	573	583	593
	TRUCK		514	524	534	544	554	564	574	584	594
OTHER	RAIL:	1-24 CARS	611	621	631	641	651	661	671	681	691
		24-49	612	622	632	642	652	662	672	682	692
		50+ CARS	613	623	633	643	653	663	673	683	693
	TRUCK		614	624	634	644	654	664	674	684	694

Please complete information in this report last day of each month and forwarded within 10 days to either:

Minnesota Department of Agriculture, Ag Certification Division, 90 W Plato Blvd., St. Paul, MN 55107-2094, or Fax: (651)297-2504,

or

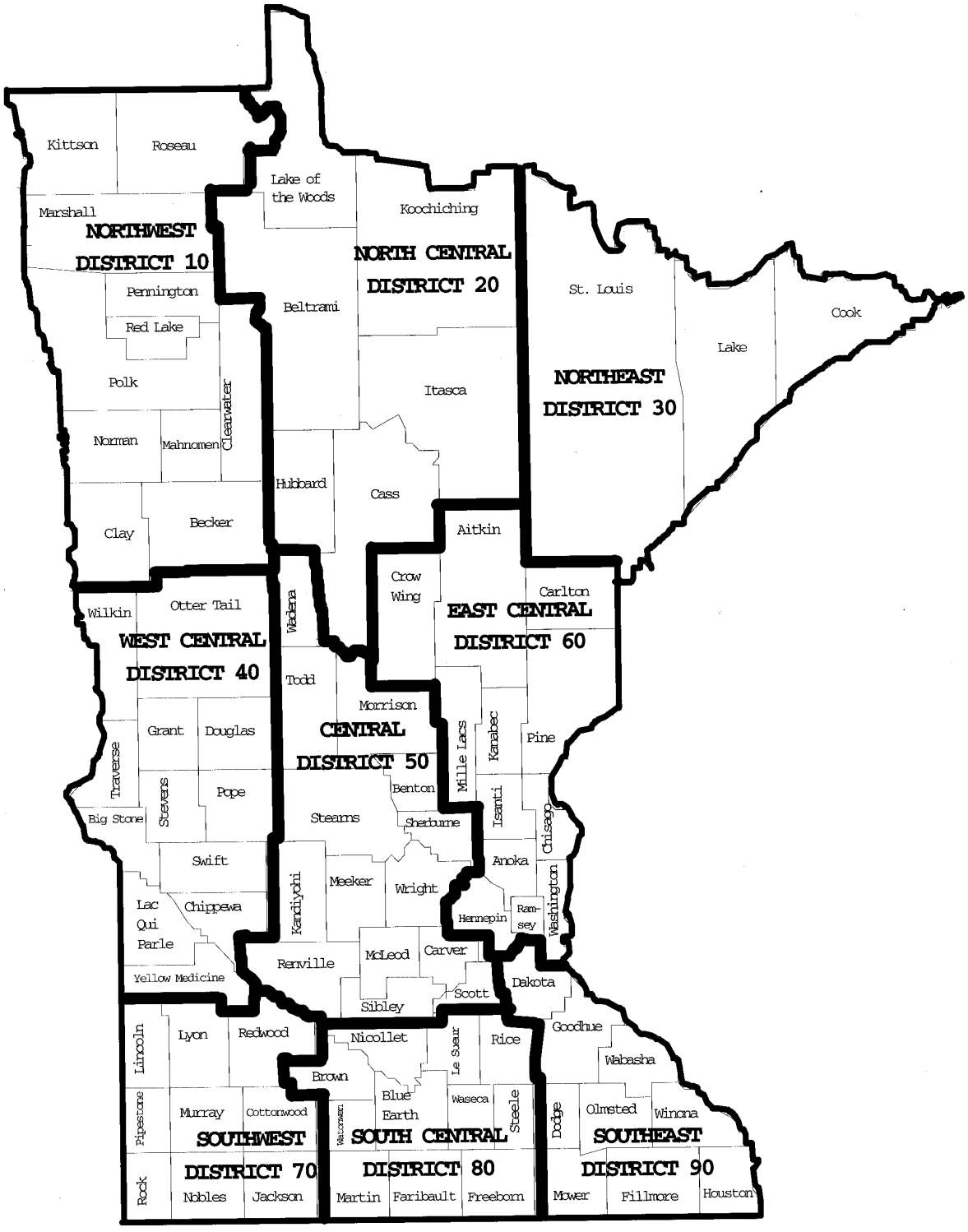
Minnesota Grain & Feed Association, 852 Grain Exchange - 400 S 4th St., Minneapolis, MN 55415, or Fax: (612)339-5673.

For questions concerning this form, please call the Upper Great Plains Transportation Institute at P: (701)231-6427.

Minnesota Agricultural Transportation Database Consortium:

Minnesota Grain and Feed Association
Minnesota Department of Transportation
University of Minnesota Department of Applied Economics
Minnesota Department of Agriculture
Association of Minnesota Counties
Canadian Pacific Railway
Cenex Harvest States Cooperative
Dakota Minnesota & Eastern Railroad
I & M Rail Link
Minnesota Corn Research and Promotion Council
Minnesota Northern Railroad
Minnesota Regional Development Commissions
Minnesota Soybean Research and Promotion Council
Minnesota Trucking Association
Seaway Port Authority of Duluth
Twin Cities & Western Railroad

Minnesota's Crop Reporting Districts



APPENDIX B
TABLES

TABLE 1
ELEVATORS REPORTING BY MONTH

NUMBER OF ELEVATORS REPORTING BY MONTH

	ELEVATORS>													AVE.
	10000 BU. CAP													FOR
MONTH		Jul-99	Aug-99	Sep-99		Nov-99	Dec-99	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	YEAR
CRD1	95	18	33	32	28	24	22	26	28	23	27	25	18	25.3
CRD4	96	15	19	18	18	18	19	26	24	21	20	21	16	19.6
CRD5	96	15	18	12	14	13	12	14	15	18	13	10	8	13.5
CRD7	85	13	18	16	18	16	18	18	19	19	17	14	10	16.3
CRD8	101	12	19	14	19	19	16	14	18	14	14	13	13	15.4
CRD9	76	12	13	12	12	11	8	13	15	14	12	12	11	12.1
TOTAL	549	86	121	104	109	102	95	113	120	109	103	96	76	102.8

PERCENTAGE OF ELEVATORS REPORTING BY MONTH

CRD1		20.9%	27.3%	30.8%	25.7%	23.5%	23.2%	23.0%	23.3%	21.1%	26.2%	26.0%	23.7%	26.7%
CRD4		17.4%	15.7%	17.3%	16.5%	17.6%	20.0%	23.0%	20.0%	19.3%	19.4%	21.9%	21.1%	20.4%
CRD5		17.4%	14.9%	11.5%	12.8%	12.7%	12.6%	12.4%	12.5%	16.5%	12.6%	10.4%	10.5%	14.1%
CRD7		15.1%	14.9%	15.4%	16.5%	15.7%	18.9%	15.9%	15.8%	17.4%	16.5%	14.6%	13.2%	19.2%
CRD8		14.0%	15.7%	13.5%	17.4%	18.6%	16.8%	12.4%	15.0%	12.8%	13.6%	13.5%	17.1%	15.3%
CRD9		14.0%	10.7%	11.5%	11.0%	10.8%	8.4%	11.5%	12.5%	12.8%	11.7%	12.5%	14.5%	15.9%
AVERAGE		15.7%	22.0%	18.9%	19.9%	18.6%	17.3%	20.6%	21.9%	19.9%	18.8%	17.5%	13.8%	18.7%

PERCENT OF ELEVATOR CAPACITY REPORTING BY CRD

	BUSHEL													
	CAPACITY	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	12 Mon Ave
CRD1	35,761,000	0.17122	0.34733	0.30631	0.28962	0.25749	0.23733	0.28774	0.33352	0.29499	0.29770	0.27726	0.21378	0.27619
CRD4	57,228,000	0.20752	0.23814	0.24430	0.21240	0.22905	0.28769	0.34256	0.34534	0.29341	0.31469	0.32012	0.22354	0.27156
CRD5	40,863,250	0.23182	0.28449	0.19357	0.19188	0.22911	0.17948	0.30211	0.36037	0.37068	0.23371	0.14908	0.11573	0.23683
CRD7	70,799,000	0.21562	0.25687	0.20817	0.25305	0.20817	0.25003	0.27510	0.27236	0.28061	0.24160	0.22877	0.14466	0.23625
CRD8	94,676,000	0.14428	0.20230	0.13866	0.21846	0.24898	0.22447	0.21079	0.23588	0.19216	0.14786	0.14436	0.14156	0.18748
CRD9	48,237,000	0.18446	0.18571	0.15345	0.15345	0.14456	0.12065	0.16404	0.20092	0.20559	0.18492	0.18492	0.15078	0.16946
STATE(6 CRDS)		0.19249	0.25247	0.20741	0.21981	0.21956	0.21661	0.26372	0.29140	0.27290	0.23675	0.21742	0.16501	0.22963

TABLE 2
JULY 1999-JUNE 2000 SHIPMENTS OF ALL GRAIN FROM MINNESOTA ELEVATORS

DESTINATION	12 MONTHS ALL GRAINS BUSHELS RAIL	12 MONTHS ALL GRAINS BUSHELS TRUCK	12 MONTHS ALL GRAINS BUSHELS TOTAL	12 MONTHS ALL GRAINS TONS RAIL	12 MONTHS ALL GRAINS TONS	12 MONTHS ALL GRAINS TONS TOTAL	PERCENT of TOTAL SHIPMENTS
DULUTH-SUPERIOR	63,345,207	16,935,877	80,281,084	1,773,666	474,205	2,247,870	10.46%
MINNEAPOLIS & RIVER	111,079,397	107,092,624	218,172,021	3,110,223	2,998,593	6,108,817	28.42%
PACIFIC NORTHWEST	137,741,941	7,446	137,749,387	3,856,774	209	3,856,983	17.94%
CHICAGO & BEYOND	56,188,465	303,367	56,491,833	1,573,277	8,494	1,581,771	7.36%
KANSAS CITY & BEYOND	26,347,750	324,027	26,671,777	737,737	9,073	746,810	3.47%
MEXICO	53,245,628	579,933	53,825,560	1,490,878	16,238	1,507,116	7.01%
MINNESOTA PROCESSERS	14,618,611	112,644,770	127,263,381	409,321	3,154,054	3,563,375	16.58%
SOUTHWEST FEED MARKETS	23,308,447	1,068,867	24,377,314	652,637	29,928	682,565	3.18%
OTHER	19,200,762	23,640,664	42,841,426	537,621	661,939	1,199,560	5.58%
TOTAL SHIPMENTS	505,076,374	262,597,575	767,673,949	14,142,138	7,352,732	21,494,871	100.00%

TABLE 3
ALLGRAIN SHIPMENTS BY MONTH BY DESTINATION IN BUSHELS

MODE	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL
DATE	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	YTD
DULUTH-SUPERIOR	13,137,218	12,251,605	11,529,542	6,549,596	8,825,789	819,636	884,912	404,201	1,451,906	563,085	3,211,681	3,716,037	63,345,207
MINNEAPOLIS & RIVER	11,598,719	16,195,698	6,431,370	11,068,615	12,171,055	3,236,550	2,511,278	6,850,977	6,469,139	12,338,477	11,545,686	10,661,833	111,079,397
PACIFIC NORTHWEST	13,233,068	8,639,605	21,056,174	2,690,199	6,728,382	9,516,971	11,918,461	10,450,238	6,131,116	10,467,526	10,943,660	25,966,543	137,741,941
CHICAGO & BEYOND	1,884,790	5,743,613	3,202,031	6,289,081	2,829,974	9,377,928	7,024,910	8,467,110	4,505,134	721,313	2,998,056	3,144,526	56,188,465
KANSAS CITY & BEYOND	50,341	3,107,746	0	6,430,466	3,470,810	1,667,710	4,232,793	3,399,679	1,979,710	14,649	1,993,847	0	26,347,750
MEXICO	16,278,834	5,085,266	3,655,782	44,083	1,546,069	2,930,634	2,407,056	2,178,454	2,409,149	3,794,651	7,625,907	5,289,743	53,245,628
MINNESOTA PROCESSERS	90,083	2,640,058	1,377,264	1,169,616	2,879,255	224,146	4,734,620	494,394	723,564	0	159,508	126,103	14,618,611
SOUTHWEST FEED MARKETS	137,390	7,581,918	5,616,283	3,567,063	1,285,654	30,322	0	211,929	979,928	1,114,604	2,737,564	45,792	23,308,447
OTHER	635,559	1,509,840	5,467,574	1,181,909	1,532,615	1,314,390	1,124,756	2,383,135	870,722	1,330,616	797,539	1,052,106	19,200,762
TOTAL	57,046,000	62,755,348	58,336,019	38,990,629	41,269,601	29,118,288	34,838,786	34,840,119	25,520,533	30,344,921	42,013,448	50,002,683	505,076,209
MODE	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK
DATE	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	YTD
DULUTH-SUPERIOR	1,736,792	2,532,814	1,386,483	1,177,778	747,005	585,734	759,789	951,873	1,263,262	1,190,094	1,698,335	2,905,919	16,935,877
MINNEAPOLIS & RIVER	11,829,579	13,914,940	7,198,541	15,466,062	6,850,177	1,892,401	1,181,213	1,743,203	2,798,842	7,233,726	9,301,130	27,682,811	107,092,624
PACIFIC NORTHWEST	0	3,466	0	3,981	0	0	0	0	0	0	0	0	7,446
CHICAGO & BEYOND	22,729	117,835	12,656	23,884	7,971	20,198	0	12,011	9,619	0	76,465	0	303,367
KANSAS CITY & BEYOND	4,546	103,120	54,843	47,768	15,941	8,079	9,954	12,011	32,062	3,696	16,098	15,908	324,027
MEXICO	0	371,527	0	0	0	0	0	0	208,406	0	0	0	579,933
MINNESOTA PROCESSERS	11,730,866	8,927,320	8,247,014	8,050,848	7,519,653	9,504,728	8,453,453	10,223,645	9,825,831	8,978,820	10,338,367	10,844,224	112,644,770
SOUTHWEST FEED MARKETS	0	0	0	7,961	0	8,079	191,825	0	6,412	342,595	91,335	420,658	1,068,867
OTHER	1,350,525	1,763,334	1,236,640	6,084,495	294,434	527,791	1,133,083	1,426,544	1,531,392	955,615	3,106,409	4,230,400	23,640,664
TOTAL	26,675,036	27,734,355	18,136,177	30,862,778	15,435,181	12,547,010	11,729,316	14,369,287	15,675,827	18,704,547	24,628,139	46,099,921	262,597,575
DATE	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	YTD
MODE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
DULUTH-SUPERIOR	14,874,010	14,784,419	12,916,024	7,727,374	9,572,794	1,405,370	1,644,700	1,356,074	2,715,168	1,753,179	4,910,016	6,621,957	80,281,084
MINNEAPOLIS & RIVER	23,428,297	30,110,637	13,629,911	26,534,677	19,021,232	5,128,951	3,692,491	8,594,180	9,267,981	19,572,203	20,846,816	38,344,644	218,172,021
PACIFIC NORTHWEST	13,233,068	8,643,070	21,056,174	2,694,180	6,728,382	9,516,971	11,918,461	10,450,238	6,131,116	10,467,526	10,943,660	25,966,543	137,749,387
CHICAGO & BEYOND	1,907,518	5,861,448	3,214,687	6,312,965	2,837,944	9,398,125	7,024,910	8,479,121	4,514,753	721,313	3,074,522	3,144,526	56,491,833
KANSAS CITY & BEYOND	54,886	3,210,866	54,843	6,478,234	3,486,751	1,675,789	4,242,747	3,411,690	2,011,772	18,345	2,009,945	15,908	26,671,777
MEXICO	16,278,834	5,456,793	3,655,782	44,083	1,546,069	2,930,634	2,407,056	2,178,454	2,617,555	3,794,651	7,625,907	5,289,743	53,825,560
MINNESOTA PROCESSERS	11,820,950	11,567,378	9,624,278	9,220,464	10,398,908	9,728,874	13,188,073	10,718,039	10,549,395	8,978,820	10,497,875	10,970,327	127,263,381
SOUTHWEST FEED MARKETS	137,390	7,581,918	5,616,283	3,575,025	1,285,654	38,401	191,825	211,929	986,506	1,457,199	2,828,899	466,450	24,377,314
OTHER	1,986,084	3,273,174	6,704,214	7,266,404	1,827,049	1,842,181	2,257,840	3,809,680	2,402,114	2,286,232	3,903,948	5,282,507	42,841,426
TOTAL	83,721,036	90,489,704	76,472,195	69,853,407	56,704,782	41,665,298	46,568,102	49,209,405	41,196,360	49,049,468	66,641,587	96,102,604	767,673,949

TABLE 4
JULY 1999-JUNE 2000 SHIPMENTS OF CORN, SOYBEANS, AND WHEAT FROM MINNESOTA ELEVATORS

BUSHELS

	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS
	CORN	CORN	CORN	SOYBEAN	SOYBEAN	SOYBEAN	WHEAT	WHEAT	WHEAT	3 CROPS	3 CROPS	3 CROPS
DESTINATION	RAIL	TRUCK	TOTAL	RAIL	TRUCK	TOTAL	RAIL	TRUCK	TOTAL	RAIL	TRUCK	TOTAL
DULUTH-SUPERIOR	23,929,725	407,222	24,336,947	23,188,408	3,456,591	26,644,999	16,044,768	12,747,375	28,792,143	63,162,901	16,611,188	79,774,089
MINNEAPOLIS & RIVER	63,639,560	65,684,491	129,324,051	27,174,309	24,802,300	51,976,609	14,896,742	10,991,237	25,887,979	105,710,611	101,478,027	207,188,639
PACIFIC NORTHWEST	121,546,680	0	121,546,680	13,324,470	0	13,324,470	324,905	0	324,905	135,196,054	0	135,196,054
CHICAGO & BEYOND	18,611,528	0	18,611,528	15,542,679	16,098	15,558,777	21,762,407	68,446	21,830,853	55,916,614	84,544	56,001,158
KANSAS CITY & BEYOND	18,182,241	0	18,182,241	4,913,331	0	4,913,331	2,783,007	51,693	2,834,700	25,878,579	51,693	25,930,272
MEXICO	15,178,962	371,527	15,550,489	37,939,520	208,406	38,147,926	0	0	0	53,118,482	579,933	53,698,415
MINNESOTA PROCESSERS	3,816,718	37,966,538	41,783,256	10,380,721	73,066,491	83,447,212	421,173	125,936	547,109	14,618,611	111,158,965	125,777,576
SOUTHWEST FEED MARKETS	22,076,323	774,692	22,851,015	0	258,716	258,716	0	0	0	22,076,323	1,033,408	23,109,731
OTHER	11,837,888	14,199,249	26,037,137	3,136,004	6,483,625	9,619,629	3,276,651	1,078,502	4,355,153	18,250,543	21,761,376	40,011,919
TOTAL	298,819,624	119,403,718	418,223,342	135,599,442	108,292,227	243,891,669	59,509,653	25,063,189	84,572,842	493,928,718	252,759,135	746,687,853

TONS

	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS
	CORN	CORN	CORN	SOYBEAN	SOYBEAN	SOYBEAN	WHEAT	WHEAT	WHEAT	3 CROPS	3 CROPS	3 CROPS
DESTINATION	RAIL	TRUCK	TOTAL	RAIL	TRUCK	TOTAL	RAIL	TRUCK	TOTAL	RAIL	TRUCK	TOTAL
DULUTH-SUPERIOR	670,032	11,402	681,435	695,652	103,698	799,350	449,254	356,926	806,180	1,814,938	472,026	2,286,964
MINNEAPOLIS & RIVER	1,781,908	1,839,166	3,621,073	815,229	744,069	1,559,298	417,109	307,755	724,863	3,014,246	2,890,989	5,905,235
PACIFIC NORTHWEST	3,403,307	0	3,403,307	399,734	0	399,734	9,097	0	9,097	3,812,138	0	3,812,138
CHICAGO & BEYOND	521,123	0	521,123	466,280	483	466,763	609,347	1,917	611,264	1,596,751	2,399	1,599,150
KANSAS CITY & BEYOND	509,103	0	509,103	147,400	0	147,400	77,924	1,447	79,372	734,427	1,447	735,874
MEXICO	425,011	10,403	435,414	1,138,186	6,252	1,144,438	0	0	0	1,563,197	16,655	1,579,851
MINNESOTA PROCESSERS	106,868	1,063,063	1,169,931	311,422	2,191,995	2,503,416	11,793	3,526	15,319	430,083	3,258,584	3,688,667
SOUTHWEST FEED MARKETS	618,137	21,691	639,828	0	7,761	7,761	0	0	0	618,137	29,453	647,590
OTHER	331,461	397,579	729,040	94,080	194,509	288,589	91,746	30,198	121,944	517,287	622,286	1,139,573
TOTAL	8,366,949	3,343,304	11,710,254	4,067,983	3,248,767	7,316,750	1,666,270	701,769	2,368,040	14,101,203	7,293,840	21,395,043

TABLE 5

JULY 1999-JUNE 2000 VALUE OF SHIPMENTS OF CORN, SOYBEANS, AND WHEAT FROM MINNESOTA ELEVATORS

	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	PERCENT
	CORN	CORN	CORN	SOYBEANS	SOYBEANS	SOYBEANS	WHEAT	WHEAT	WHEAT	3 CROPS	3 CROPS	3 CROPS	of
	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	TOTAL
DESTINATION	RAIL	TRUCK	TOTAL	RAIL	TRUCK	TOTAL	RAIL	TRUCK	TOTAL	RAIL	TRUCK	TOTAL	VALUE
DULUTH-SUPERIOR	$40,680,532	$692,277	$41,372,810	$105,507,255	$15,727,490	$121,234,745	$48,936,543	$38,879,493	$87,816,037	$195,124,330	$55,299,261	$250,423,591	12.05%
MINNEAPOLIS & RIVER	$108,187,252	$111,663,634	$219,850,887	$123,643,106	$112,850,464	$236,493,570	$45,435,064	$33,523,272	$78,958,337	$277,265,422	$258,037,371	$535,302,793	25.75%
PACIFIC NORTHWEST	$206,629,355	$0	$206,629,355	$60,626,338	$0	$60,626,338	$990,959	$0	$990,959	$268,246,652	$0	$268,246,652	12.90%
CHICAGO & BEYOND	$31,639,597	$0	$31,639,597	$70,719,191	$73,246	$70,792,437	$66,375,340	$208,762	$66,584,102	$168,734,129	$282,007	$169,016,136	8.13%
KANSAS CITY & BEYOND	$30,909,809	$0	$30,909,809	$22,355,656	$0	$22,355,656	$8,488,171	$157,664	$8,645,835	$61,753,637	$157,664	$61,911,300	2.98%
MEXICO	$25,804,236	$631,595	$26,435,831	$172,624,816	$948,248	$173,573,064	$0	$0	$0	$198,429,052	$1,579,843	$200,008,895	9.62%
MINNESOTA PROCESSERS	$6,488,420	$64,543,114	$71,031,534	$47,232,280	$332,452,535	$379,684,815	$1,284,577	$384,104	$1,668,681	$55,005,277	$397,379,754	$452,385,031	21.76%
SOUTHWEST FEED MARKETS	$37,529,749	$1,316,976	$38,846,725	$0	$1,177,159	$1,177,159	$0	$0	$0	$37,529,749	$2,494,134	$40,023,884	1.93%
OTHER	$20,124,409	$24,138,723	$44,263,133	$14,268,820	$29,500,493	$43,769,314	$9,993,786	$3,289,431	$13,283,217	$44,387,015	$56,928,648	$101,315,663	4.87%
TOTAL SHIPMENTS	$507,993,360	$202,986,321	$710,979,681	$616,977,461	$492,729,635	$1,109,707,096	$181,504,441	$76,442,727	$257,947,168	$1,306,475,262	$772,158,682	$2,078,633,945	100.00%

TABLE 6
JULY 1999-JUNE 2000 CORN SHIPMENTS FROM MINNESOTA ELEVATORS

DESTINATION	12 MONTHS CORN BUSHELS RAIL	12 MONTHS CORN BUSHELS TRUCK	12 MONTHS CORN BUSHELS TOTAL	12 MONTHS CORN TONS RAIL	12 MONTHS CORN TONS TRUCK	12 MONTHS CORN TONS TOTAL	12 MONTHS CORN VALUE RAIL	12 MONTHS CORN VALUE TRUCK	12 MONTHS CORN VALUE TOTAL	PERCENT of TOTAL SHIPMENTS
DULUTH-SUPERIOR	23,929,725	407,222	24,336,947	670,032	11,402	681,435	$40,680,532	$692,277	$41,372,810	5.82%
MINNEAPOLIS & RIVER	63,639,560	65,684,491	129,324,051	1,781,908	1,839,166	3,621,073	$108,187,252	$111,663,634	$219,850,887	30.92%
PACIFIC NORTHWEST	121,546,680	0	121,546,680	3,403,307	0	3,403,307	$206,629,355	$0	$206,629,355	29.06%
CHICAGO & BEYOND	18,611,528	0	18,611,528	521,123	0	521,123	$31,639,597	$0	$31,639,597	4.45%
KANSAS CITY & BEYOND	18,182,241	0	18,182,241	509,103	0	509,103	$30,909,809	$0	$30,909,809	4.35%
MEXICO	15,178,962	371,527	15,550,489	425,011	10,403	435,414	$25,804,236	$631,595	$26,435,831	3.72%
MINNESOTA PROCESSERS	3,816,718	37,966,538	41,783,256	106,868	1,063,063	1,169,931	$6,488,420	$64,543,114	$71,031,534	9.99%
SOUTHWEST FEED MARKETS	22,076,323	774,692	22,851,015	618,137	21,691	639,828	$37,529,749	$1,316,976	$38,846,725	5.46%
OTHER	11,837,888	14,199,249	26,037,137	331,461	397,579	729,040	$20,124,409	$24,138,723	$44,263,133	6.23%
TOTAL SHIPMENTS	298,819,624	119,403,718	418,223,342	8,366,949	3,343,304	11,710,254	$507,993,360	$202,986,321	$710,979,681	100.00%

TABLE 7
JULY 1999-JUNE 2000 CORN SHIPMENTS BY MONTH BY DESTINATION IN BUSHELS

DESTINATION	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	YEAR TOTAL	PERCENT
MODE	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	OF TOTAL
DULUTH-SUPERIOR	7,350,784	6,813,151	6,604,562	1,767,049	868,750	0	0	0	0	0	0	525,429	23,929,725	5.72%
MINNEAPOLIS & RIVER	6,792,269	10,192,254	953,063	4,575,395	7,344,887	3,090,019	328,752	0	3,913,983	9,199,331	9,347,156	7,902,452	63,639,560	15.22%
PACIFIC NORTHWEST	11,368,492	8,310,395	17,656,752	1,893,267	5,196,705	8,725,700	10,270,211	9,818,486	4,231,676	9,609,492	10,926,283	23,539,219	121,546,680	29.06%
CHICAGO & BEYOND	0	3,434,048	1,404,514	3,155,445	1,184,659	6,003,922	1,643,760	1,785,179	0	0	0	0	18,611,528	4.45%
KANSAS CITY & BEYOND	0	1,057,687	0	4,796,277	3,396,023	0	2,314,414	2,677,769	1,931,576	14,649	1,993,847	0	18,182,241	4.35%
MEXICO	8,215,582	370,877	2,508,061	0	1,184,659	0	0	0	0	1,113,295	1,786,487	0	15,178,962	3.63%
MINNESOTA PROCESSERS	90,083	0	0	0	710,796	224,146	2,327,564	178,518	0	0	159,508	126,103	3,816,718	0.91%
SOUTHWEST FEED MARKETS	0	7,252,709	5,434,133	3,549,876	1,184,659	0	0	0	940,372	1,098,646	2,615,928	0	22,076,323	5.28%
OTHER	0	728,018	5,467,574	331,322	695,000	752,492	144,651	1,487,649	0	908,214	797,539	525,429	11,837,888	2.83%
TOTAL	33,817,211	38,159,138	40,028,660	20,068,631	21,766,139	18,796,278	17,029,352	15,947,602	11,017,607	21,943,627	27,626,748	32,618,632	298,819,624	71.45%
MODE	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	
DULUTH-SUPERIOR	4,873	196,909	9,045	110,950	85,445	0	0	0	0	0	0	0	407,222	0.10%
MINNEAPOLIS & RIVER	7,787,069	8,262,754	3,532,008	7,676,894	4,515,761	25,982	3,557	67,598	567,121	5,344,810	5,759,528	22,141,408	65,684,491	15.71%
PACIFIC NORTHWEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
CHICAGO & BEYOND	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
KANSAS CITY & BEYOND	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
MEXICO	0	371,527	0	0	0	0	0	0	0	0	0	0	371,527	0.09%
MINNESOTA PROCESSERS	4,726,819	2,229,160	2,776,764	2,048,310	2,926,486	2,910,026	3,197,509	3,099,850	3,368,356	3,851,116	2,955,263	3,876,878	37,966,538	9.08%
SOUTHWEST FEED MARKETS	0	0	0	0	0	0	188,507	0	0	79,241	86,285	420,658	774,692	0.19%
OTHER	1,018,459	884,234	203,509	3,362,642	170,890	99,599	714,905	1,052,597	1,127,368	412,054	1,924,157	3,228,837	14,199,249	3.40%
TOTAL	13,537,220	11,944,584	6,521,326	13,198,796	7,698,582	3,035,607	4,104,478	4,220,045	5,062,845	9,687,221	10,725,233	29,667,781	119,403,718	28.55%
MODE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	
DULUTH-SUPERIOR	7,355,657	7,010,060	6,613,607	1,877,999	954,195	0	0	0	0	0	0	525,429	24,336,947	5.82%
MINNEAPOLIS & RIVER	14,579,338	18,455,008	4,485,071	12,252,289	11,860,648	3,116,001	332,309	67,598	4,481,104	14,544,141	15,106,684	30,043,860	129,324,051	30.92%
PACIFIC NORTHWEST	11,368,492	8,310,395	17,656,752	1,893,267	5,196,705	8,725,700	10,270,211	9,818,486	4,231,676	9,609,492	10,926,283	23,539,219	121,546,680	29.06%
CHICAGO & BEYOND	0	3,434,048	1,404,514	3,155,445	1,184,659	6,003,922	1,643,760	1,785,179	0	0	0	0	18,611,528	4.45%
KANSAS CITY & BEYOND	0	1,057,687	0	4,796,277	3,396,023	0	2,314,414	2,677,769	1,931,576	14,649	1,993,847	0	18,182,241	4.35%
MEXICO	8,215,582	742,404	2,508,061	0	1,184,659	0	0	0	0	1,113,295	1,786,487	0	15,550,489	3.72%
MINNESOTA PROCESSERS	4,816,902	2,229,160	2,776,764	2,048,310	3,637,282	3,134,172	5,525,073	3,278,368	3,368,356	3,851,116	3,114,771	4,002,981	41,783,256	9.99%
SOUTHWEST FEED MARKETS	0	7,252,709	5,434,133	3,549,876	1,184,659	0	188,507	0	940,372	1,177,887	2,702,213	420,658	22,851,015	5.46%
OTHER	1,018,459	1,612,252	5,671,083	3,693,963	865,890	852,091	859,556	2,540,246	1,127,368	1,320,268	2,721,696	3,754,266	26,037,137	6.23%
TOTAL	47,354,431	50,103,722	46,549,986	33,267,426	29,464,720	21,831,885	21,133,829	20,167,647	16,080,452	31,630,848	38,351,981	62,286,413	418,223,342	100.00%

TABLE 8

JULY 1999-JUNE 2000 SOYBEAN SHIPMENTS FROM MINNESOTA ELEVATORS

	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	12 MONTHS	PERCENT
	SOYBEANS	SOYBEANS	SOYBEANS	SOYBEANS	SOYBEANS	SOYBEANS	SOYBEANS	SOYBEANS	SOYBEANS	of
	BUSHELS	BUSHELS	BUSHELS	TONS	TONS	TONS	VALUE	VALUE	VALUE	TOTAL
DESTINATION	RAIL	TRUCK	TOTAL	RAIL	TRUCK	TOTAL	RAIL	TRUCK	TOTAL	VALUE
DULUTH-SUPERIOR	23,188,408	3,456,591	26,644,999	695,652	103,698	799,350	$105,507,255	$15,727,490	$121,234,745	10.92%
MINNEAPOLIS & RIVER	27,174,309	24,802,300	51,976,609	815,229	744,069	1,559,298	$123,643,106	$112,850,464	$236,493,570	21.31%
PACIFIC NORTHWEST	13,324,470	0	13,324,470	399,734	0	399,734	$60,626,338	$0	$60,626,338	5.46%
CHICAGO & BEYOND	15,542,679	16,098	15,558,777	466,280	483	466,763	$70,719,191	$73,246	$70,792,437	6.38%
KANSAS CITY & BEYOND	4,913,331	0	4,913,331	147,400	0	147,400	$22,355,656	$0	$22,355,656	2.01%
MEXICO	37,939,520	208,406	38,147,926	1,138,186	6,252	1,144,438	$172,624,816	$948,248	$173,573,064	15.64%
MINNESOTA PROCESSERS	10,380,721	73,066,491	83,447,212	311,422	2,191,995	2,503,416	$47,232,280	$332,452,535	$379,684,815	34.21%
SOUTHWEST FEED MARKETS	0	258,716	258,716	0	7,761	7,761	$0	$1,177,159	$1,177,159	0.11%
OTHER	3,136,004	6,483,625	9,619,629	94,080	194,509	288,589	$14,268,820	$29,500,493	$43,769,314	3.94%
TOTAL SHIPMENTS	135,599,442	108,292,227	243,891,669	4,067,983	3,248,767	7,316,750	$616,977,461	$492,729,635	$1,109,707,096	100.00%

TABLE 9

JULY 1999-JUNE 2000 SOYBEAN SHIPMENTS BY MONTH BY DESTINATION IN BUSHELS

DESTINATION	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00		PERCENT
MODE	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL	TOTAL	OF TOTAL
DULUTH-SUPERIOR	3,363,810	2,212,620	137,726	4,692,906	4,756,154	410,289	866,540	43,569	814,131	563,085	3,211,681	2,115,897	23,188,408	9.51%
MINNEAPOLIS & RIVER	2,918,600	3,985,230	3,917,551	4,750,665	3,483,991	146,532	84,247	4,847,060	546,630	1,139,576	1,065,694	288,531	27,174,309	11.14%
PACIFIC NORTHWEST	0	0	3,290,131	779,744	1,445,640	791,271	1,576,622	631,752	1,546,848	858,034	0	2,404,429	13,324,470	5.46%
CHICAGO & BEYOND	0	2,024,044	1,346,658	1,833,843	0	1,948,872	2,106,174	3,932,110	1,256,087	0	1,094,891	0	15,542,679	6.37%
KANSAS CITY & BEYOND	0	2,024,044	0	1,559,489	0	0	698,046	631,752	0	0	0	0	4,913,331	2.01%
MEXICO	8,063,251	4,714,389	1,147,720	0	361,410	2,930,634	2,407,056	2,178,454	2,326,087	2,681,356	5,839,420	5,289,743	37,939,520	15.56%
MINNESOTA PROCESSERS	0	2,640,058	1,377,264	1,169,616	2,168,459	0	2,407,056	315,876	302,391	0	0	0	10,380,721	4.26%
SOUTHWEST FEED MARKETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
OTHER	197,871	0	0	28,879	0	410,289	842,470	501,044	674,565	0	0	480,886	3,136,004	1.29%
TOTAL	14,543,533	17,600,386	11,217,052	14,815,142	12,215,654	6,637,886	10,988,210	13,081,617	7,466,740	5,242,050	11,211,686	10,579,485	135,599,442	55.60%
	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TOTAL	
DULUTH-SUPERIOR	445,480	817,913	502,022	569,240	79,706	64,125	222,296	102,094	64,125	92,399	193,176	222,716	3,456,591	1.42%
MINNEAPOLIS & RIVER	1,822,833	2,852,299	2,278,083	6,524,370	1,091,973	1,009,968	288,653	831,762	1,009,968	1,252,926	2,378,473	4,252,823	24,802,300	10.17%
PACIFIC NORTHWEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
CHICAGO & BEYOND	0	0	0	0	0	0	0	0	0	0	16,098	0	16,098	0.01%
KANSAS CITY & BEYOND	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
MEXICO	0	0	0	0	0	208,406	0	0	208,406	0	0	0	208,406	0.09%
MINNESOTA PROCESSERS	6,845,851	6,449,732	5,214,280	5,875,515	4,523,317	6,377,228	5,122,767	7,050,463	6,377,228	4,959,959	7,252,131	6,851,182	73,066,491	29.96%
SOUTHWEST FEED MARKETS	0	0	0	0	0	0	0	0	0	258,716	0	0	258,716	0.11%
OTHER	186,374	582,243	776,236	2,217,251	47,824	285,356	331,785	261,239	285,356	310,459	676,114	461,341	6,483,625	2.66%
TOTAL	9,300,539	10,702,188	8,770,621	15,186,376	5,742,819	7,945,083	5,965,502	8,245,559	7,945,083	6,874,459	10,515,992	11,788,063	108,292,227	44.40%
	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	
DULUTH-SUPERIOR	3,809,291	3,030,533	639,749	5,262,146	4,835,860	555,712	1,088,836	145,663	878,255	655,483	3,404,856	2,338,614	26,644,999	10.92%
MINNEAPOLIS & RIVER	4,741,433	6,837,530	6,195,635	11,275,034	4,575,964	364,667	372,900	5,678,823	1,556,599	2,392,502	3,444,168	4,541,355	51,976,609	21.31%
PACIFIC NORTHWEST	0	0	3,290,131	779,744	1,445,640	791,271	1,576,622	631,752	1,546,848	858,034	0	2,404,429	13,324,470	5.46%
CHICAGO & BEYOND	0	2,024,044	1,346,658	1,833,843	0	1,948,872	2,106,174	3,932,110	1,256,087	0	1,110,989	0	15,558,777	6.38%
KANSAS CITY & BEYOND	0	2,024,044	0	1,559,489	0	0	698,046	631,752	0	0	0	0	92	0.00%
MEXICO	8,063,251	4,714,389	1,147,720	0	361,410	2,930,634	2,407,056	2,178,454	2,534,493	2,681,356	5,839,420	5,289,743	4,913,331	2.01%
MINNESOTA PROCESSERS	6,845,851	9,089,790	6,591,544	7,045,132	6,691,776	6,544,067	7,529,823	7,366,339	6,679,619	4,959,959	7,252,131	6,851,182	38,147,926	15.64%
SOUTHWEST FEED MARKETS	0	0	0	0	0	0	0	0	0	258,716	0	0	83,447,212	34.21%
OTHER	384,246	582,243	776,236	2,246,130	47,824	757,690	1,174,255	762,284	959,921	310,459	676,114	942,227	9,619,629	3.94%
TOTAL	23,844,072	28,302,573	19,987,673	30,001,518	17,958,473	13,892,914	16,953,712	21,327,176	15,411,823	12,116,509	21,727,678	22,367,548	243,891,669	100.00%

TABLE 10

JULY 1999-JUNE 2000 WHEAT SHIPMENTS FROM MINNESOTA ELEVATORS

DESTINATION	12 MONTHS WHEAT BUSHELS RAIL	12 MONTHS WHEAT BUSHELS TRUCK	12 MONTHS WHEAT BUSHELS TOTAL	12 MONTHS WHEAT TONS RAIL	12 MONTHS WHEAT TONS TRUCK	12 MONTHS WHEAT TONS TOTAL	12 MONTHS WHEAT VALUE RAIL	12 MONTHS WHEAT VALUE TRUCK	12 MONTHS WHEAT VALUE TOTAL	PERCENT of TOTAL VALUE
DULUTH-SUPERIOR	16,044,768	12,747,375	28,792,143	449,254	356,926	806,180	$48,936,543	$38,879,493	$87,816,037	34.04%
MINNEAPOLIS & RIVER	14,896,742	10,991,237	25,887,979	417,109	307,755	724,863	$45,435,064	$33,523,272	$78,958,337	30.61%
PACIFIC NORTHWEST	324,905	0	324,905	9,097	0	9,097	$990,959	$0	$990,959	0.38%
CHICAGO & BEYOND	21,762,407	68,446	21,830,853	609,347	1,917	611,264	$66,375,340	$208,762	$66,584,102	25.81%
KANSAS CITY & BEYOND	2,783,007	51,693	2,834,700	77,924	1,447	79,372	$8,488,171	$157,664	$8,645,835	3.35%
MEXICO	0	0	0	0	0	0	$0	$0	$0	0.00%
MINNESOTA PROCESSERS	421,173	125,936	547,109	11,793	3,526	15,319	$1,284,577	$384,104	$1,668,681	0.65%
SOUTHWEST FEED MARKETS	0	0	0	0	0	0	$0	$0	$0	0.00%
OTHER	3,276,651	1,078,502	4,355,153	91,746	30,198	121,944	$9,993,786	$3,289,431	$13,283,217	5.15%
									0	0.00%
TOTAL SHIPMENTS	59,509,653	25,063,189	84,572,842	1,666,270	701,769	2,368,040	$181,504,441	$76,442,727	$257,947,168	100.00%

TABLE 11
JULY 1999-JUNE 2000 WHEAT SHIPMENTS BY MONTH BY DESTINATION

DESTINATION MODE	Jul-99 RAIL	Aug-99 RAIL	Sep-99 RAIL	Oct-99 RAIL	Nov-99 RAIL	Dec-99 RAIL	Jan-00 RAIL	Feb-00 RAIL	Mar-00 RAIL	Apr-00 RAIL	May-00 RAIL	Jun-00 RAIL	YEAR RAIL	PERCENT OF TOTAL
DULUTH-SUPERIOR	2,422,623	3,225,834	4,623,319	89,641	3,200,885	409,347	0	360,632	637,776	0	0	1,074,711	16,044,768	18.97%
MINNEAPOLIS & RIVER	1,671,951	1,703,969	522,498	298,803	0	0	1,942,571	1,543,957	1,648,590	1,983,612	1,132,836	2,447,954	14,896,742	17.61%
PACIFIC NORTHWEST	0	0	0	0	0	0	0	0	324,905	0	0	0	324,905	0.38%
CHICAGO & BEYOND	1,859,619	195,111	427,499	1,284,852	1,630,357	1,379,651	3,262,524	2,704,742	3,249,047	721,313	1,903,165	3,144,526	21,762,407	25.73%
KANSAS CITY & BEYOND	0	0	0	0	0	1,637,388	1,145,619	0	0	0	0	0	2,783,007	3.29%
MEXICO	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
MINNESOTA PROCESSERS	0	0	0	0	0	0	0	0	421,173	0	0	0	421,173	0.50%
SOUTHWEST FEED MARKETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
OTHER	221,789	572,325	0	821,708	837,615	0	0	304,284	144,402	374,528	0	0	3,276,651	3.87%
TOTAL	6,175,984	5,697,240	5,573,316	2,495,004	5,668,856	3,426,386	6,350,714	4,913,615	6,425,893	3,079,453	3,036,002	6,667,191	59,509,653	70.36%
	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TOTAL	
DULUTH-SUPERIOR	1,259,164	1,479,869	835,297	481,665	378,604	440,311	537,492	849,779	1,199,137	1,097,696	1,505,159	2,683,203	12,747,375	15.07%
MINNEAPOLIS & RIVER	1,450,084	1,795,250	1,037,794	688,661	1,072,046	1,349,209	706,703	621,570	759,881	561,784	370,253	578,002	10,991,237	13.00%
PACIFIC NORTHWEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
CHICAGO & BEYOND	0	0	0	0	0	8,079	0	0	0	0	60,367	0	68,446	0.08%
KANSAS CITY & BEYOND	0	0	0	3,981	7,971	4,040	0	0	0	3,696	16,098	15,908	51,693	0.06%
MEXICO	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
MINNESOTA PROCESSERS	0	10,397	0	0	0	0	56,404	0	0	59,135	0	0	125,936	0.15%
SOUTHWEST FEED MARKETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
OTHER	13,637	79,712	63,280	11,942	0	0	3,318	33,030	25,650	3,696	430,620	413,616	1,078,502	1.28%
TOTAL	2,722,885	3,365,228	1,936,371	1,186,249	1,458,620	1,801,638	1,303,917	1,504,379	1,984,668	1,726,007	2,382,498	3,690,730	25,063,189	29.64%
	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	
DULUTH-SUPERIOR	3,681,787	4,705,703	5,458,616	571,306	3,579,488	849,658	537,492	1,210,411	1,836,913	1,097,696	1,505,159	3,757,914	28,792,143	34.04%
MINNEAPOLIS & RIVER	3,122,035	3,499,219	1,560,292	987,464	1,072,046	1,349,209	2,649,274	2,165,527	2,408,471	2,545,396	1,503,089	3,025,956	25,887,979	30.61%
PACIFIC NORTHWEST	0	0	0	0	0	0	0	0	324,905	0	0	0	324,905	0.38%
CHICAGO & BEYOND	1,859,619	195,111	427,499	1,284,852	1,630,357	1,387,730	3,262,524	2,704,742	3,249,047	721,313	1,963,532	3,144,526	21,830,853	25.81%
KANSAS CITY & BEYOND	0	0	0	3,981	7,971	1,641,427	1,145,619	0	0	3,696	16,098	15,908	2,834,700	3.35%
MEXICO	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
MINNESOTA PROCESSERS	0	10,397	0	0	0	0	56,404	0	421,173	59,135	0	0	547,109	0.65%
SOUTHWEST FEED MARKETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
OTHER	235,427	652,037	63,280	833,650	837,615	0	3,318	337,314	170,052	378,224	430,620	413,616	4,355,153	5.15%
TOTAL	8,898,869	9,062,468	7,509,686	3,681,253	7,127,477	5,228,024	7,654,631	6,417,994	8,410,560	4,805,460	5,418,500	10,357,920	84,572,842	100.00%

TABLE 12

JULY 1999-JUNE 2000 NORTH DAKOTA ELEVATOR GRAIN SHIPMENTS BY MODE

North Dakota	H.R.Wheat Rail	H.R.Wheat Truck	Durum Rail	Durum Truck	Barley Rail	Barley Truck	Sunflowers Rail	Sunflowers Truck	Soybeans Rail	Soybeans Truck	Corn Rail	Corn Truck	Total Rail	Total Truck	Total All Modes
DUL-SUP	20,634,000	7,651,000	6,166,000	2,204,000	2,896,000	339,000	723,000	66,000	19,401,000	783,000	5,465,000	76,000	55,285,000	11,119,000	66,404,000
MPLS&RIVER	36,418,000	13,553,000	17,475,000	3,783,000	19,623,000	11,538,000	1,271,000	895,000	3,941,000	283,000	3,291,000	138,000	82,019,000	30,190,000	112,209,000
PAC NW	22,427,000	845,000	665,000	1,000	641,000	90,000	46,000	232,000	8,240,000	26,000	11,621,000	88,000	43,640,000	1,282,000	44,922,000
MIDLAND&GULF	14,934,000	336,000	8,691,000	29,000	4,549,000	603,000	43,000	377,000	917,000	30,000	795,000	393,000	29,929,000	1,768,000	31,697,000
MN & WIS	4,348,000	1,718,000	2,601,000	598,000	3,981,000	1,708,000	161,000	3,908,000	588,000	467,000	848,000	287,000	12,527,000	8,686,000	21,213,000
OTHER	36,410,000	2,329,000	7,371,000	204,000	6,838,000	1,826,000	1,288,000	2,731,000	4,924,000	610,000	3,568,000	5,455,000	60,399,000	13,155,000	73,554,000
NORTH DAKOTA	2,427,000	8,801,000	5,995,000	5,147,000	3,506,000	13,662,000	2,305,000	26,911,000	57,000	603,000	2,269,000	2,112,000	16,559,000	57,236,000	73,795,000
TOTAL	137,598,000	35,233,000	48,964,000	11,966,000	42,034,000	29,766,000	5,837,000	35,120,000	38,068,000	2,802,000	27,857,000	8,549,000	300,358,000	123,436,000	423,794,000

TABLE 13
COMPARISON OF ESTIMATED GRAIN SHIPMENTS WITH TOTAL MINNESOTA GRAIN PRODUCTION IN THOUSAND BUSHELS

	CORN	SOYBEANS	WHEAT	TOTAL
	TOTAL	TOTAL	TOTAL	TOTAL
1998 PRODUCTION	1,032,750	285,600	80,444	1,398,794
1999 PRODUCTION	990,000	282,900	79,210	1,352,110
1998-1999 AVE PRODUCTION	1,011,375	284,250	79,827	1,375,452
TOTAL ESTIMATED SHIPMENTS	418,223	244,508	84,805	747,536
ESTIMATED SHIPMENTS	593,152	39,742	-4,978	627,916
ESTIMATED FEED USE	360,000			
ESTIMATED SEED USE	3,500	8,000	2,000	13,500
FARM TO PROCESSORS	90,000			90,000
FARM TO RIVER	70,000	14,000		84,000
TOTAL OTHER USES	523,500	22,000	2,000	547,500
DIFFERENCE BETWEEN PRODUCTION				
AND ESTIMATED SHIPMENTS				
AND OTHER USES	69,652	17,742	-6,978	80,416

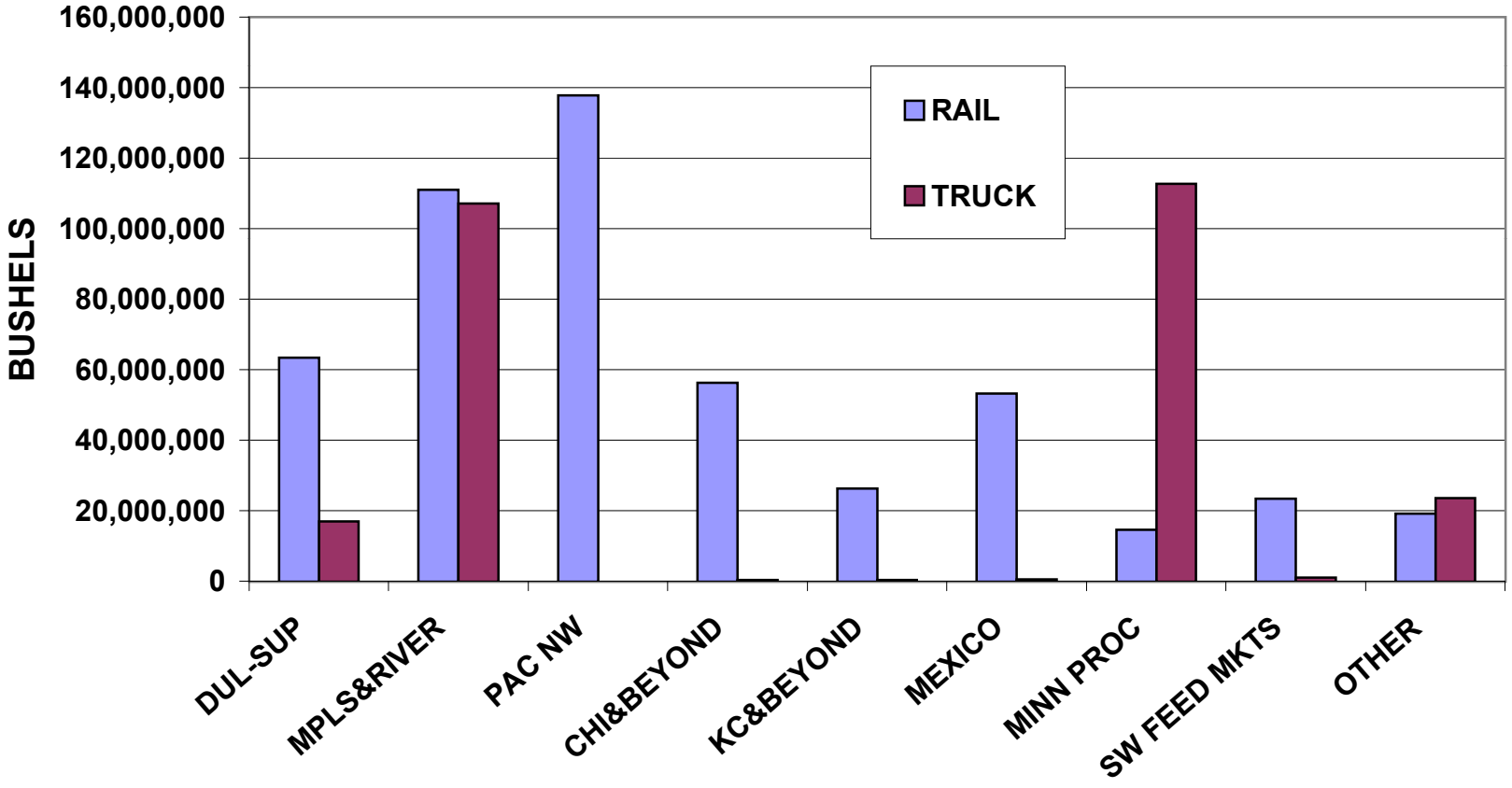
TABLE 14
COMPARISON OF SHIPMENTS AND PRODUCTION
BY GRAIN AND CRD IN THOUSAND BUSHELS

	PRODUCTION CORN	SHIPMENTS CORN	PRODUCTION SOYBEANS	SHIPMENTS SOYBEANS	PRODUCTION WHEAT	SHIPMENTS WHEAT
CRD 1	12835	4919	19558	17436	50775	43967
CRD 4	182659	78840	62546	61336	24769	25874
CRD 5	185014	65118	44668	35087	1714	1803
CRD 7	208726	115931	61876	60061		
CRD 8	234015	123262	60750	54352		
CRD 9	146250	50223	29492	16305		
TOTAL	990000	438293	282900	244577	79210	71644

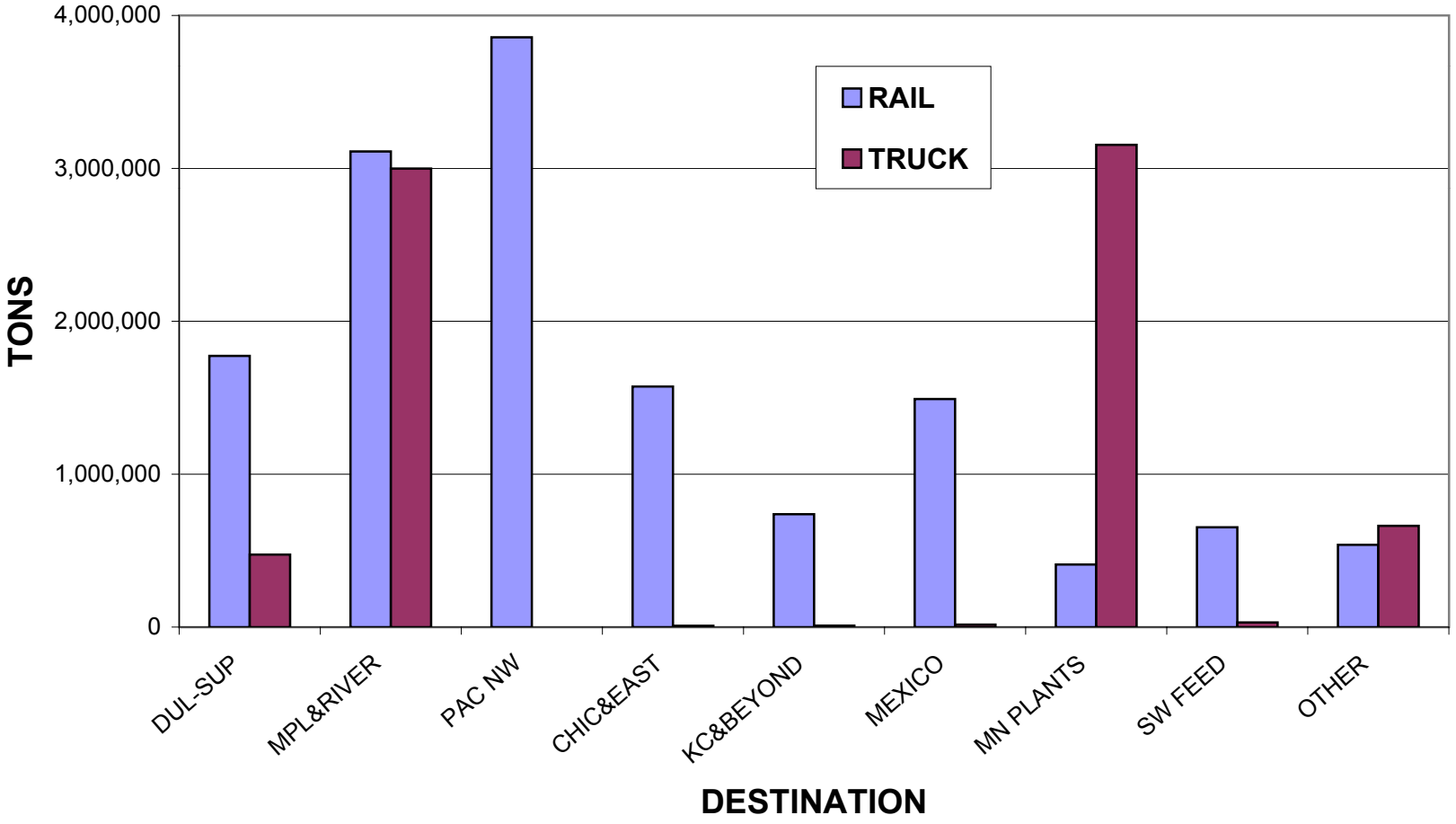
APPENDIX C

GRAPHS

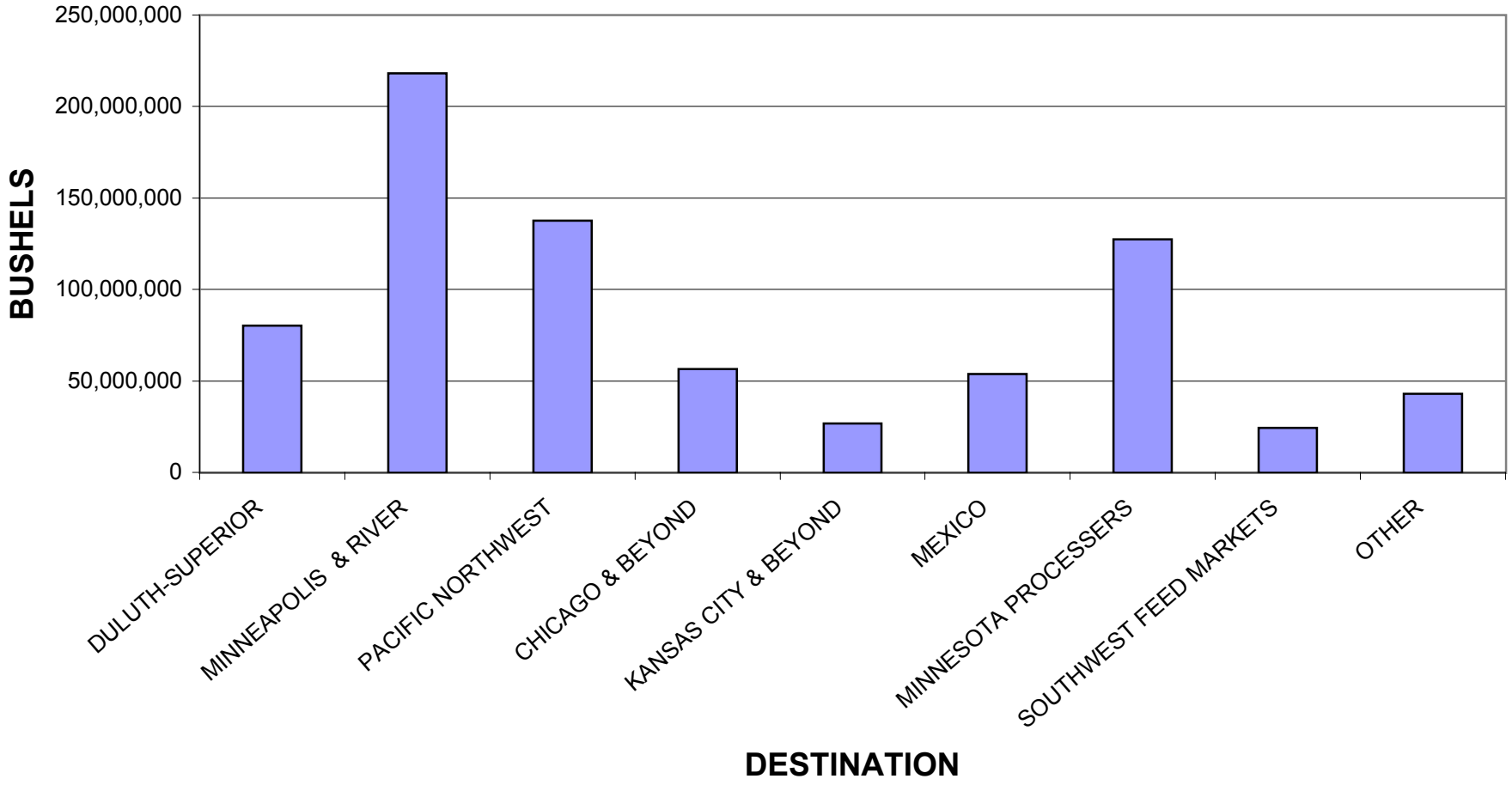
GRAPH 1
MINNESOTA ESTIMATED ALLGRAIN DESTINATIONS 7/99-6/00
BUSHELS



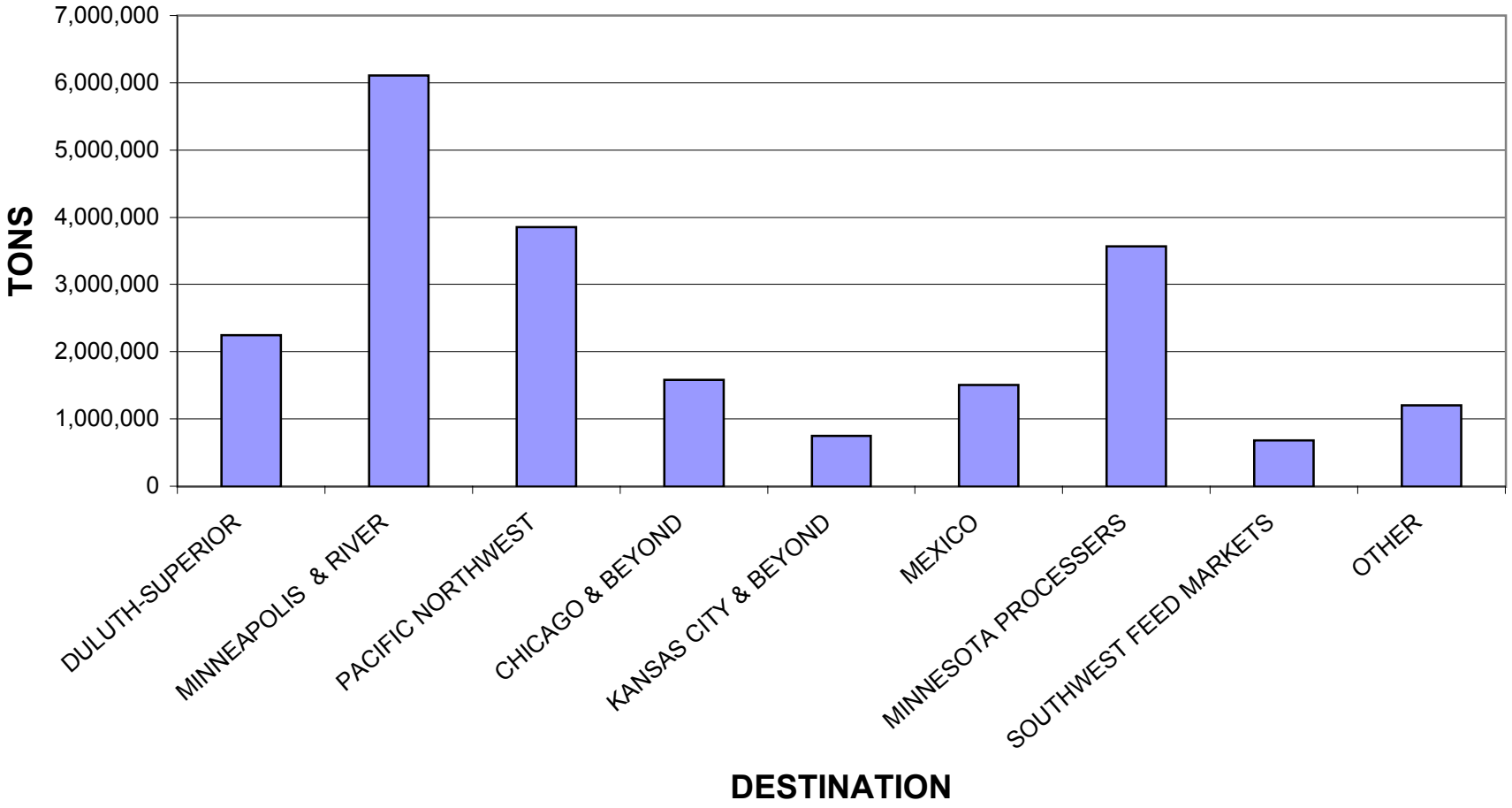
GRAPH 2
MINNESOTA ESTIMATED ALLGRAIN DESTINATIONS
7/99-6/00 TONS



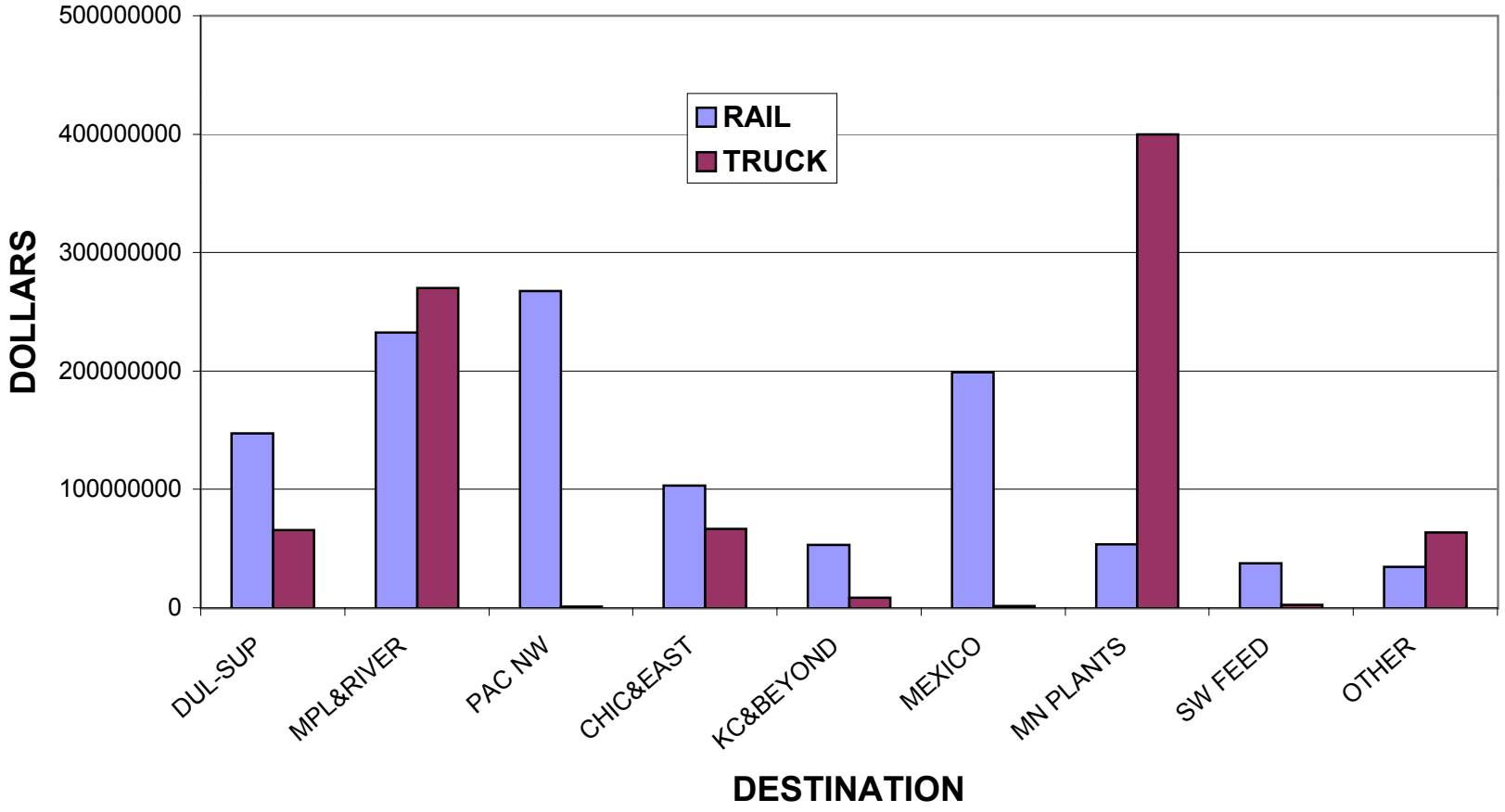
GRAPH 3
MINNESOTA ESTIMATED ALLGRAIN DESTINATIONS 7/99-6/00
TOTAL BUSHELS



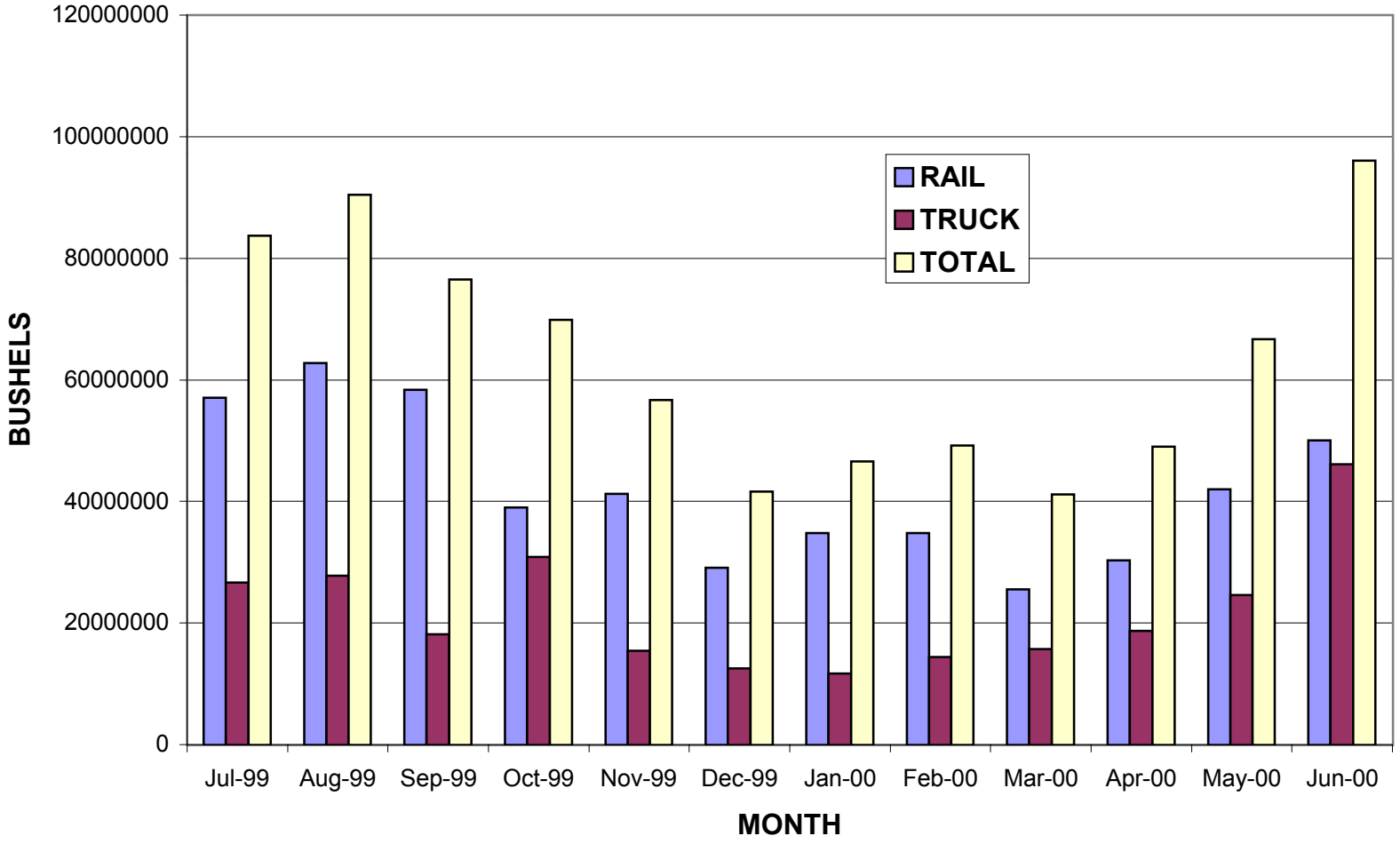
GRAPH 4
MINNESOTA ESTIMATED ALLGRAIN DESTINATIONS 7/99-6/00
TOTAL TONS



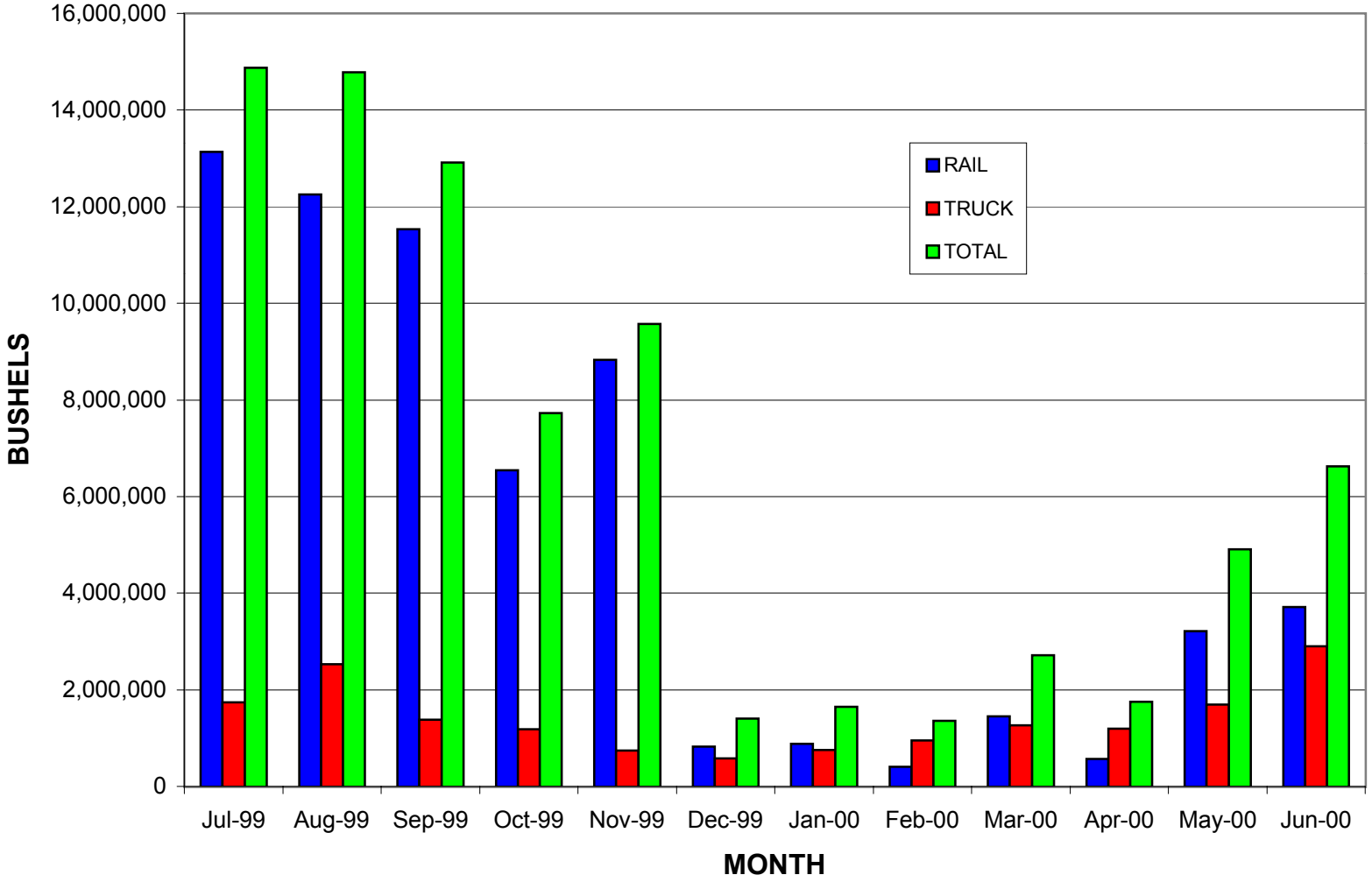
GRAPH 5
VALUE OF MINNESOTA MAJOR GRAINS BY DESTINATION
7/99-6/00



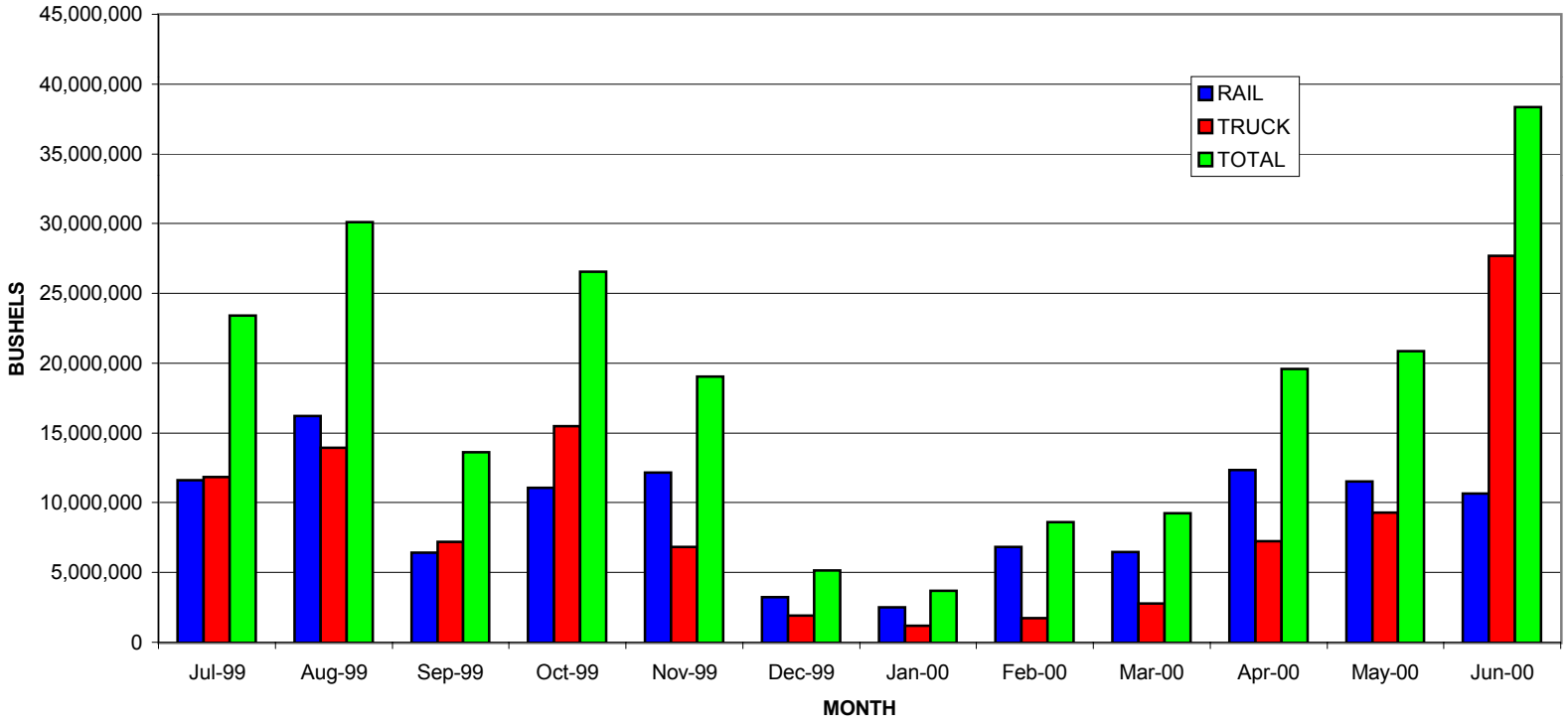
GRAPH 6
MINNESOTA ELEVATOR SHIPMENTS OF ALL GRAINS BY MONTH
7/99-6/00



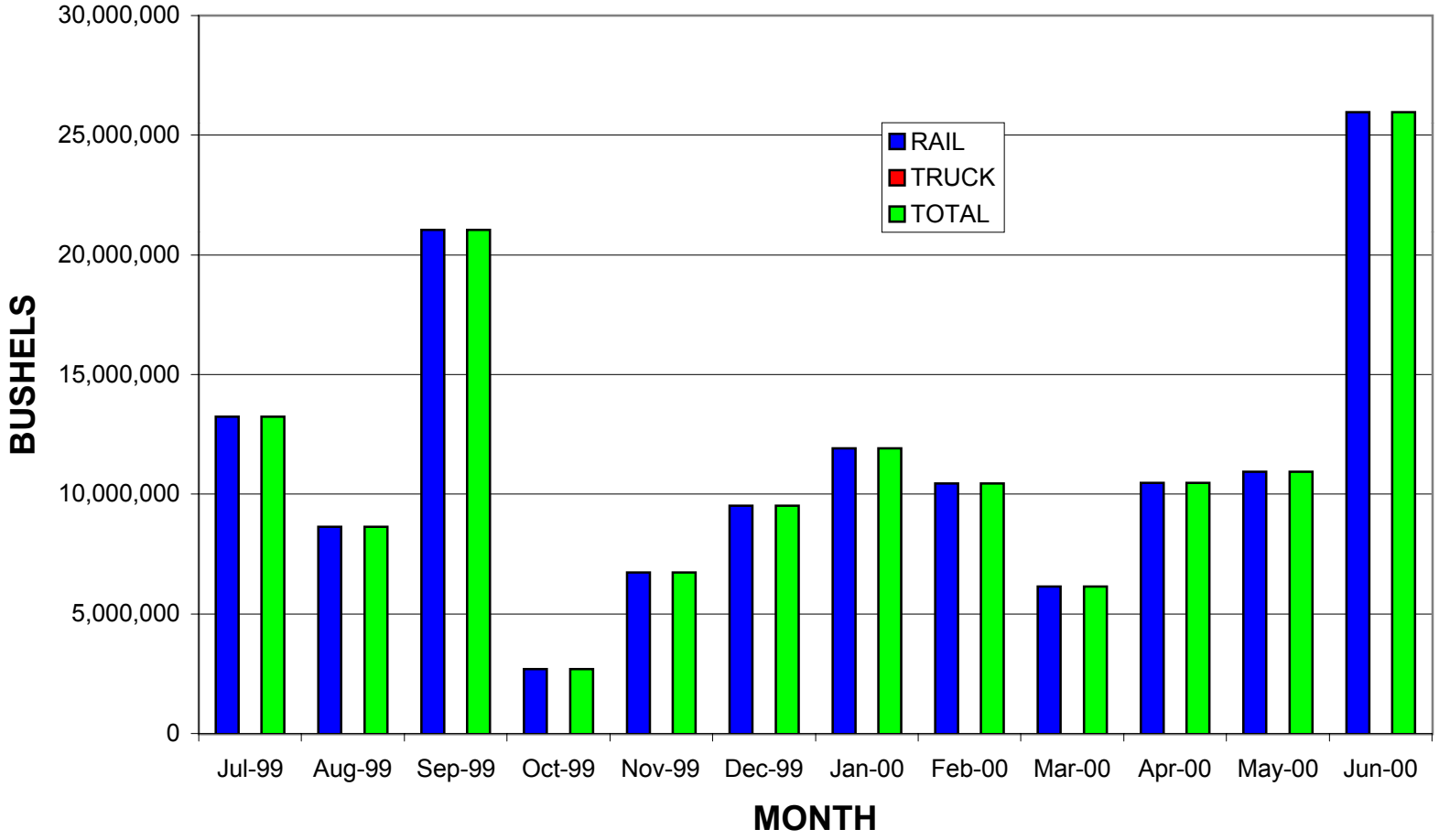
GRAPH 7
MINNESOTA GRAIN SHIPMENTS TO DULUTH SUPERIOR BY MONTH
7/99-6/00



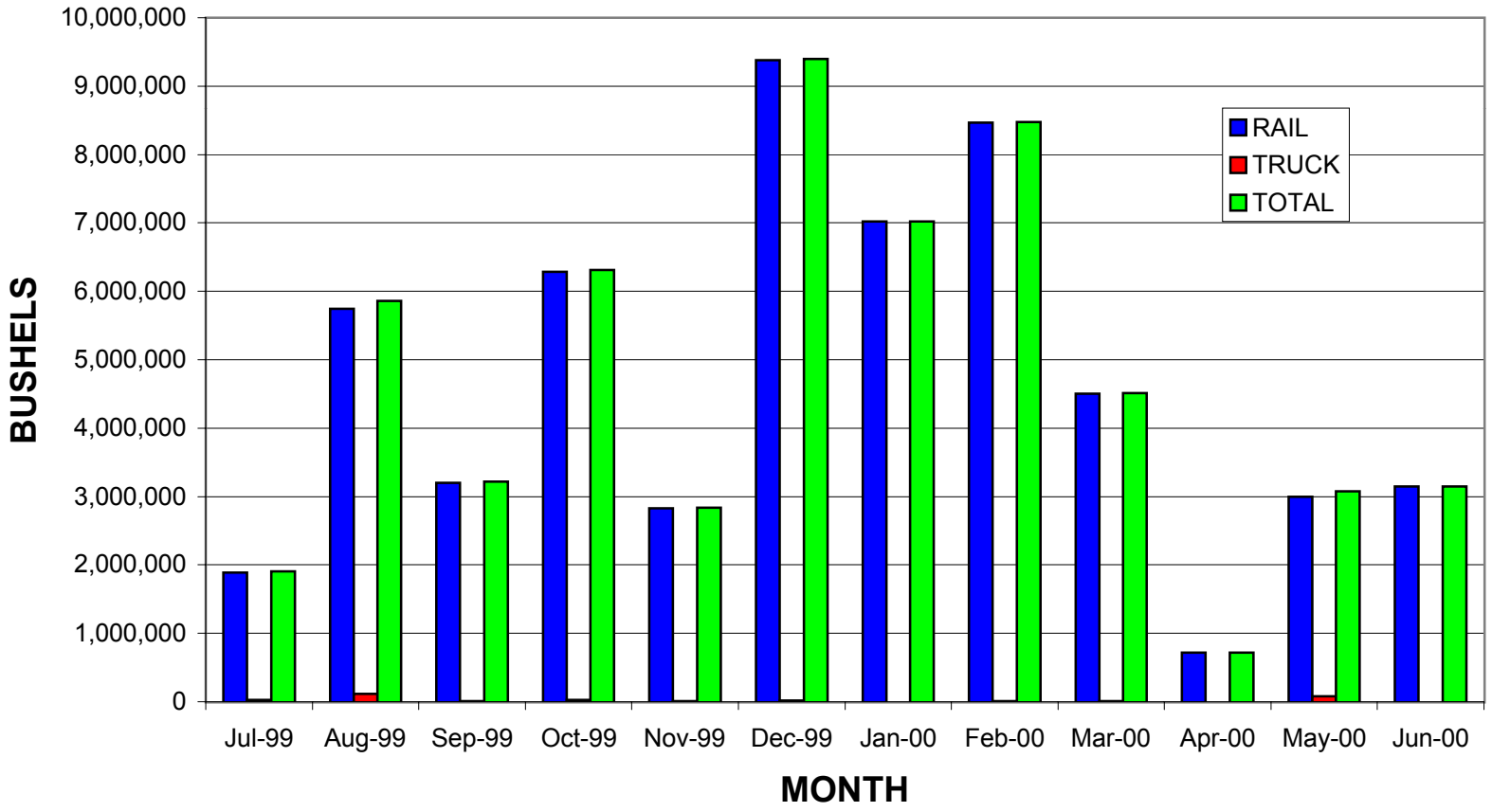
GRAPH 8
MINNESOTA GRAIN SHIPMENTS TO MINNEAPOLIS AND RIVER BY MONTH 7/99 6/00



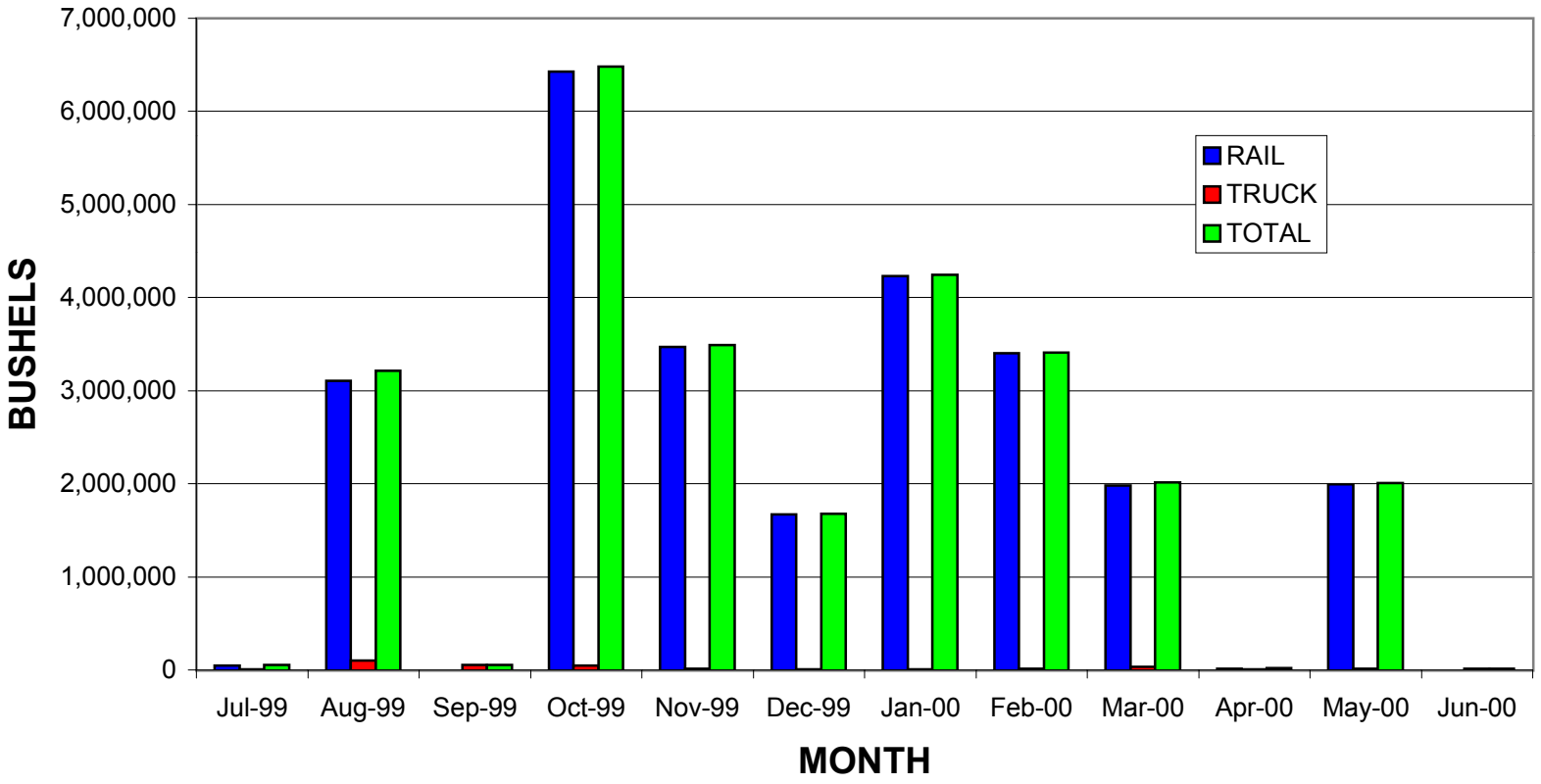
GRAPH 9
MINNESOTA GRAIN SHIPMENTS TO PACIFIC NORTHWEST BY MONTH 7/99-6/00



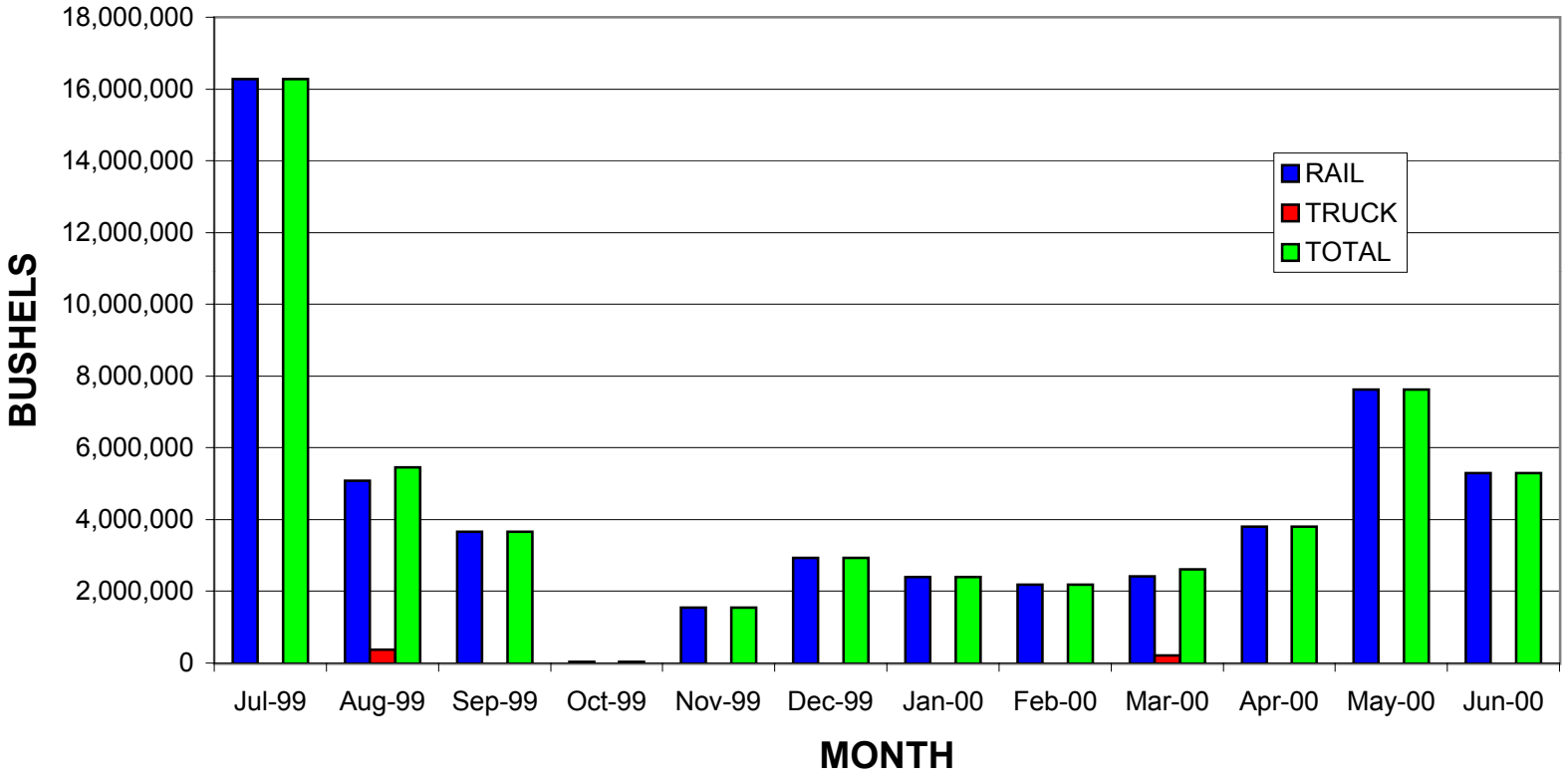
GRAPH 10
MINNESOTA GRAIN SHIPMENTS TO CHICAGO AND BEYOND BY MONTH 7/99-6/00



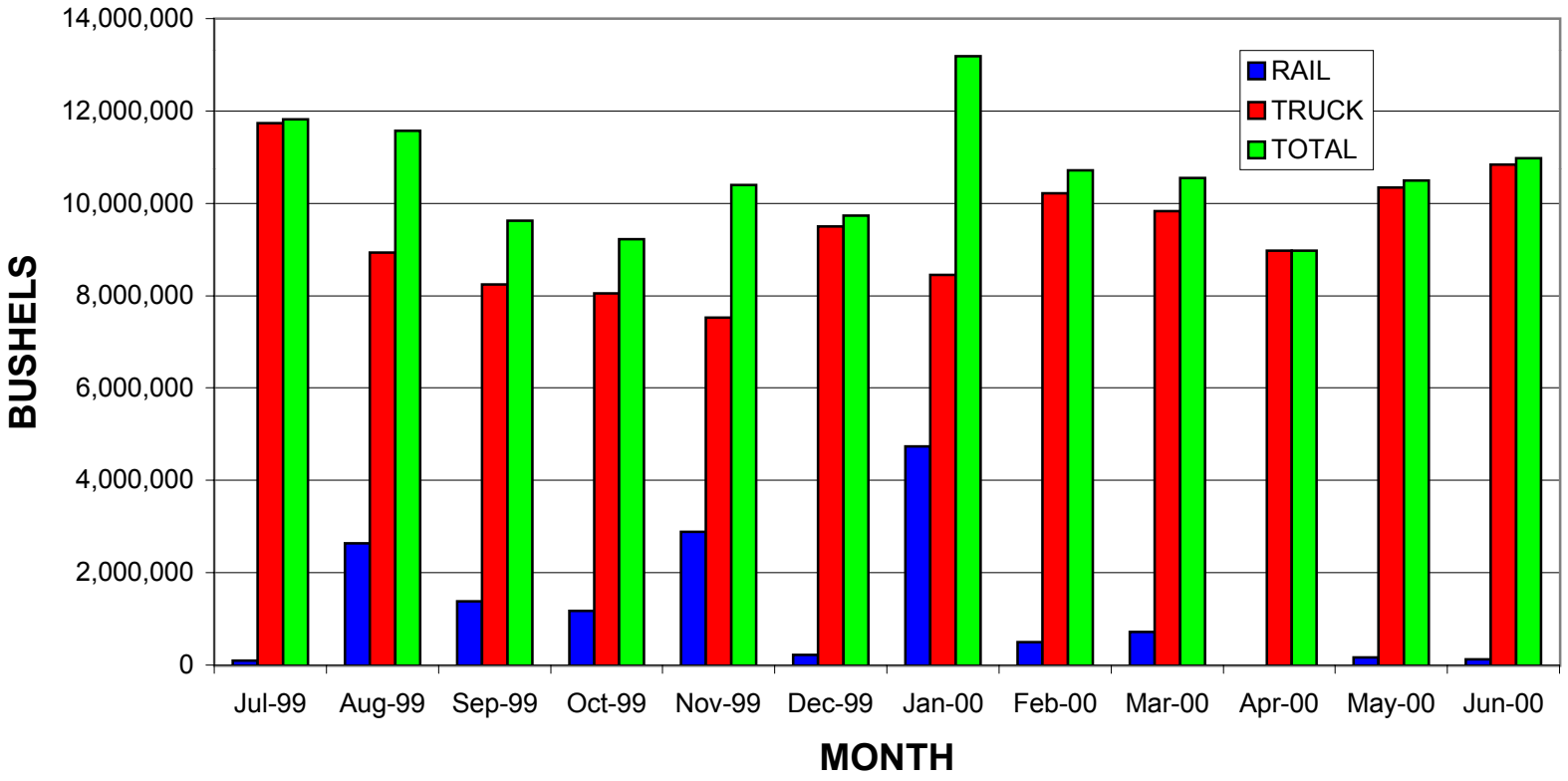
GRAPH 11
MINNESOTA GRAIN SHIPMENTS TO KANSAS CITY AND BEYOND BY MONTH 7/99-6/00



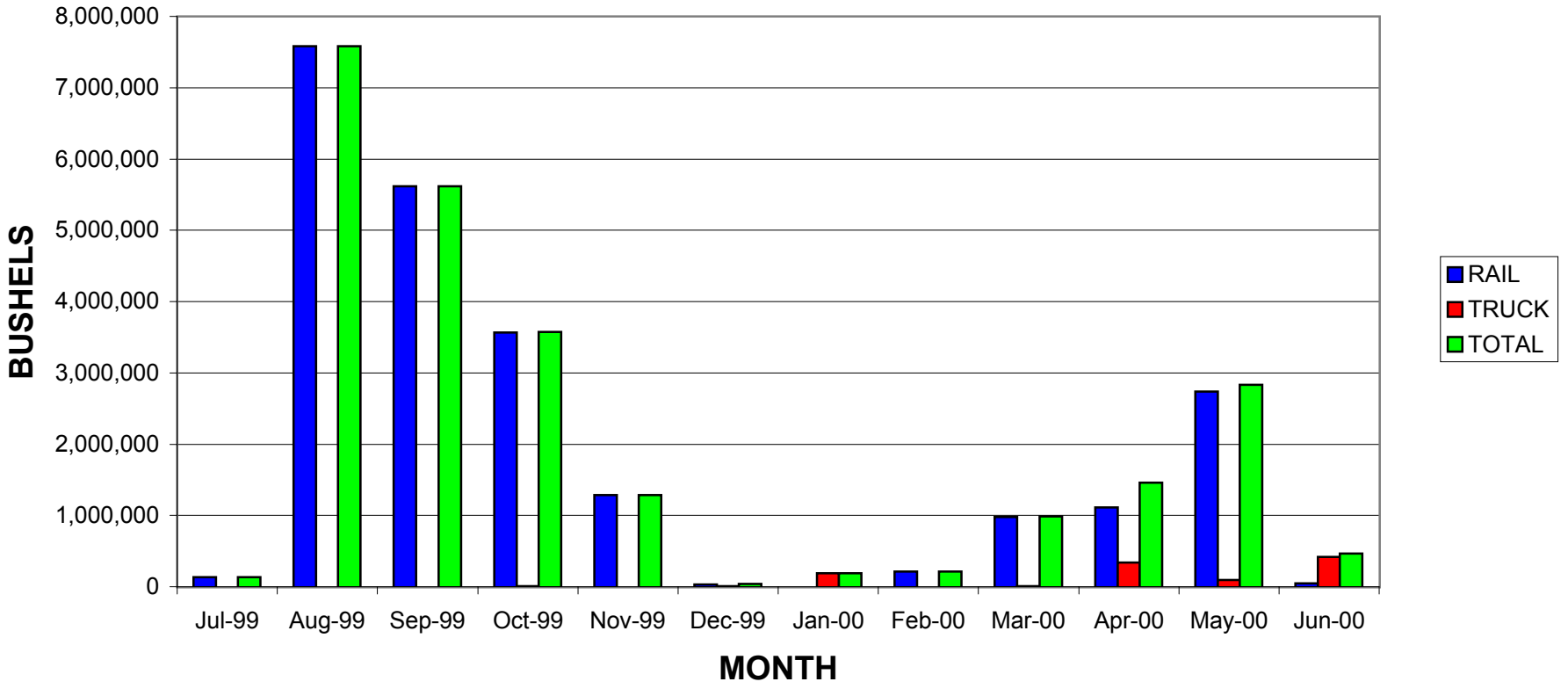
GRAPH 12
MINNESOTA GRAIN SHIPMENTS TO MEXICO BY MONTH 7/99-6/00



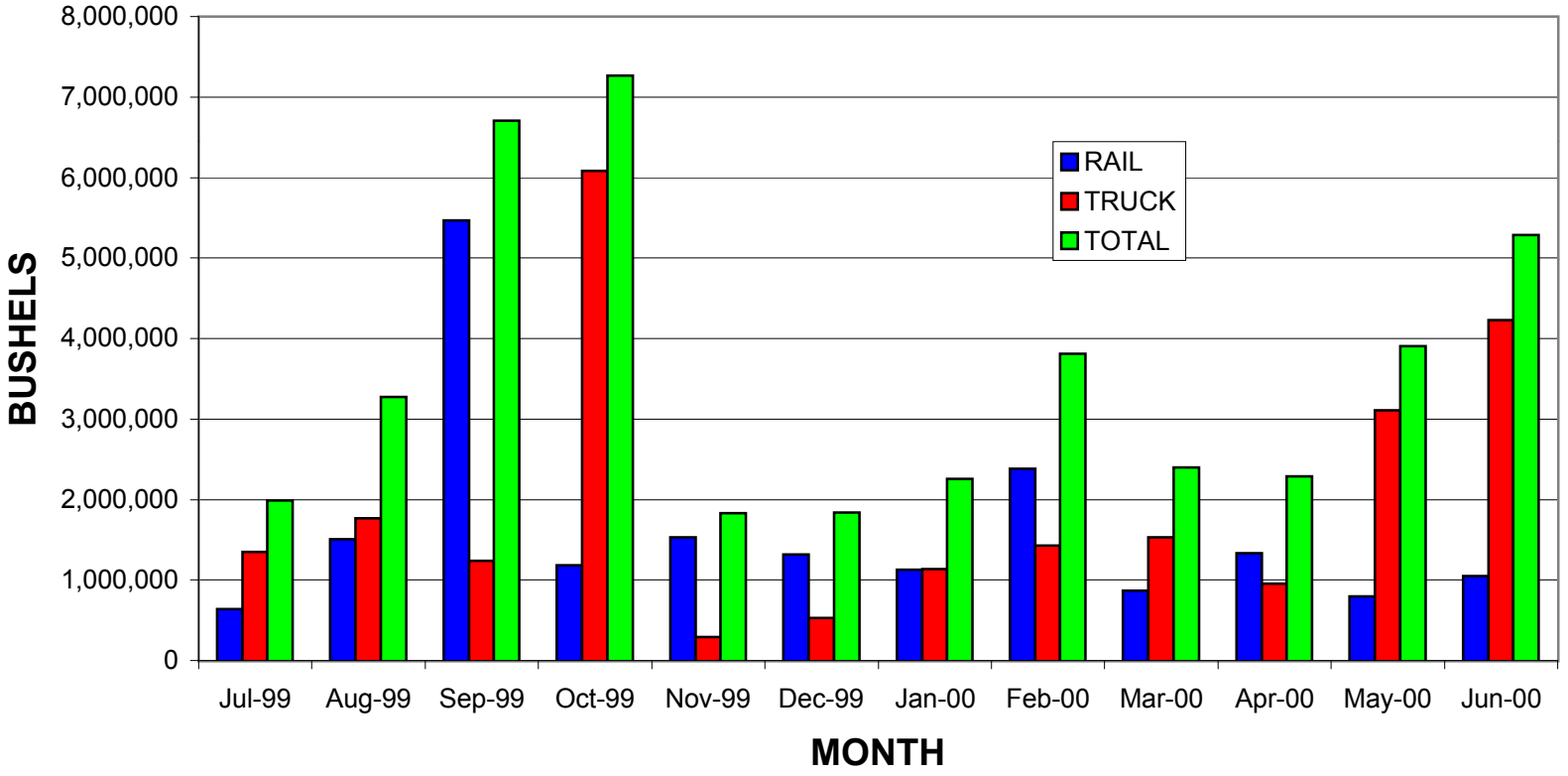
GRAPH 13
MINNESOTA GRAIN SHIPMENTS TO MINNESOTA PROCESSORS BY MONTH 7/99-6/00



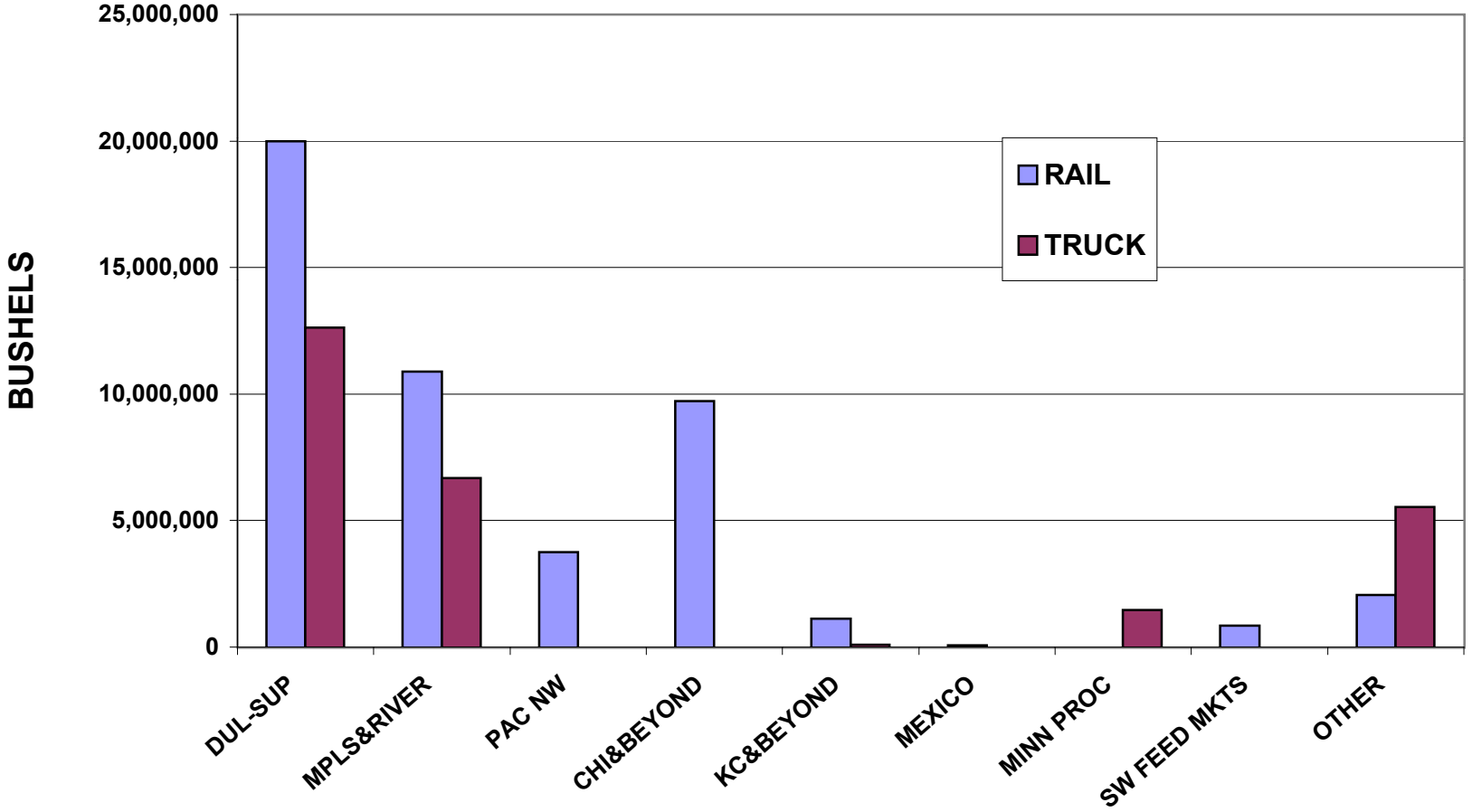
GRAPH 14
MINNESOTA GRAIN SHIPMENTS TO SOUTHWEST FEED MARKETS
BY MONTH 7/99-6/00



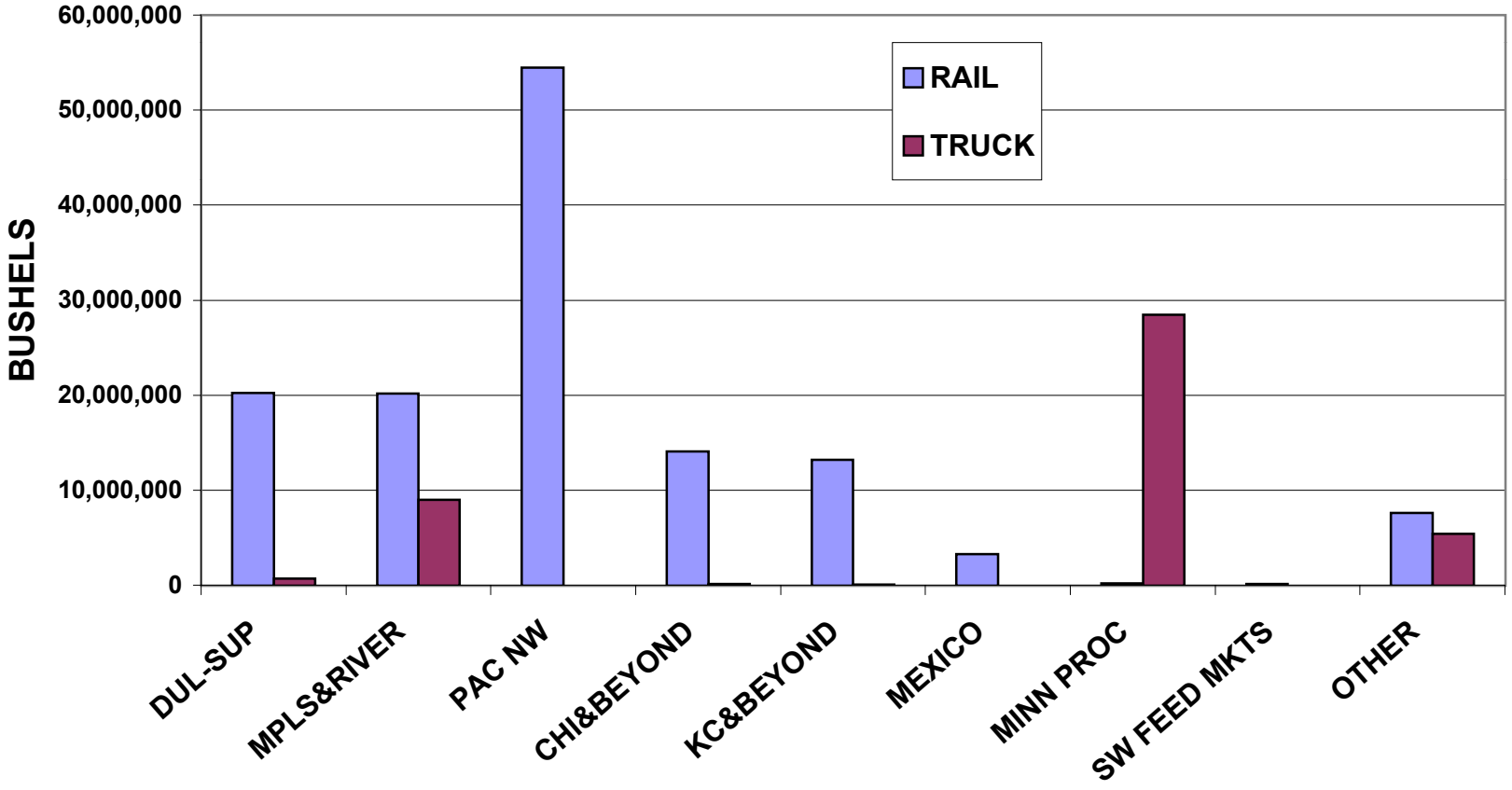
GRAPH 15
MINNESOTA GRAIN SHIPMENTS TO OTHER AND UNKNOWN MARKETS BY MONTH 7/99-6/00



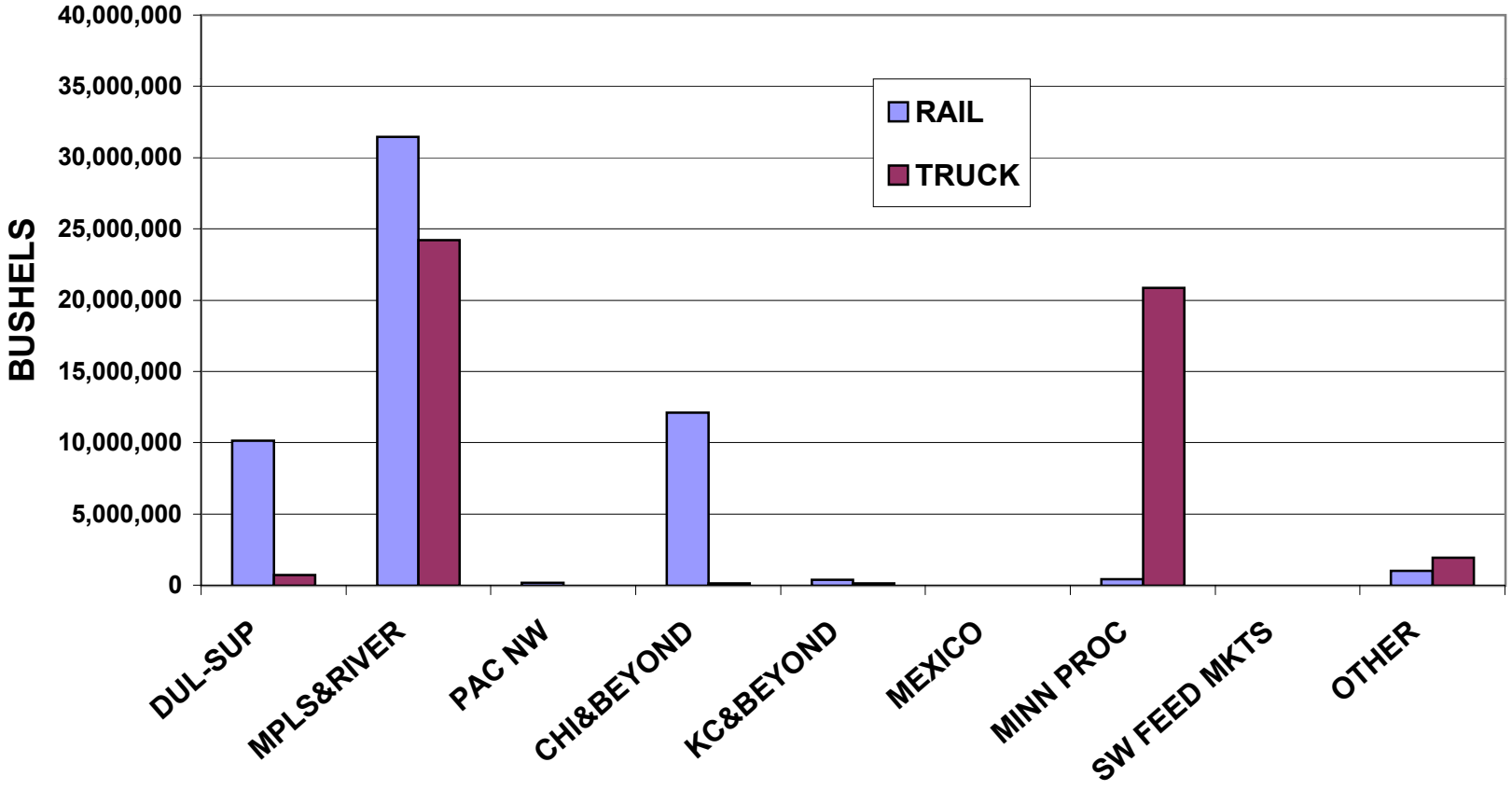
GRAPH 16
ESTIMATED CRD 1 ALLGRAIN DESTINATIONS 7/99-6/00
BUSHELS



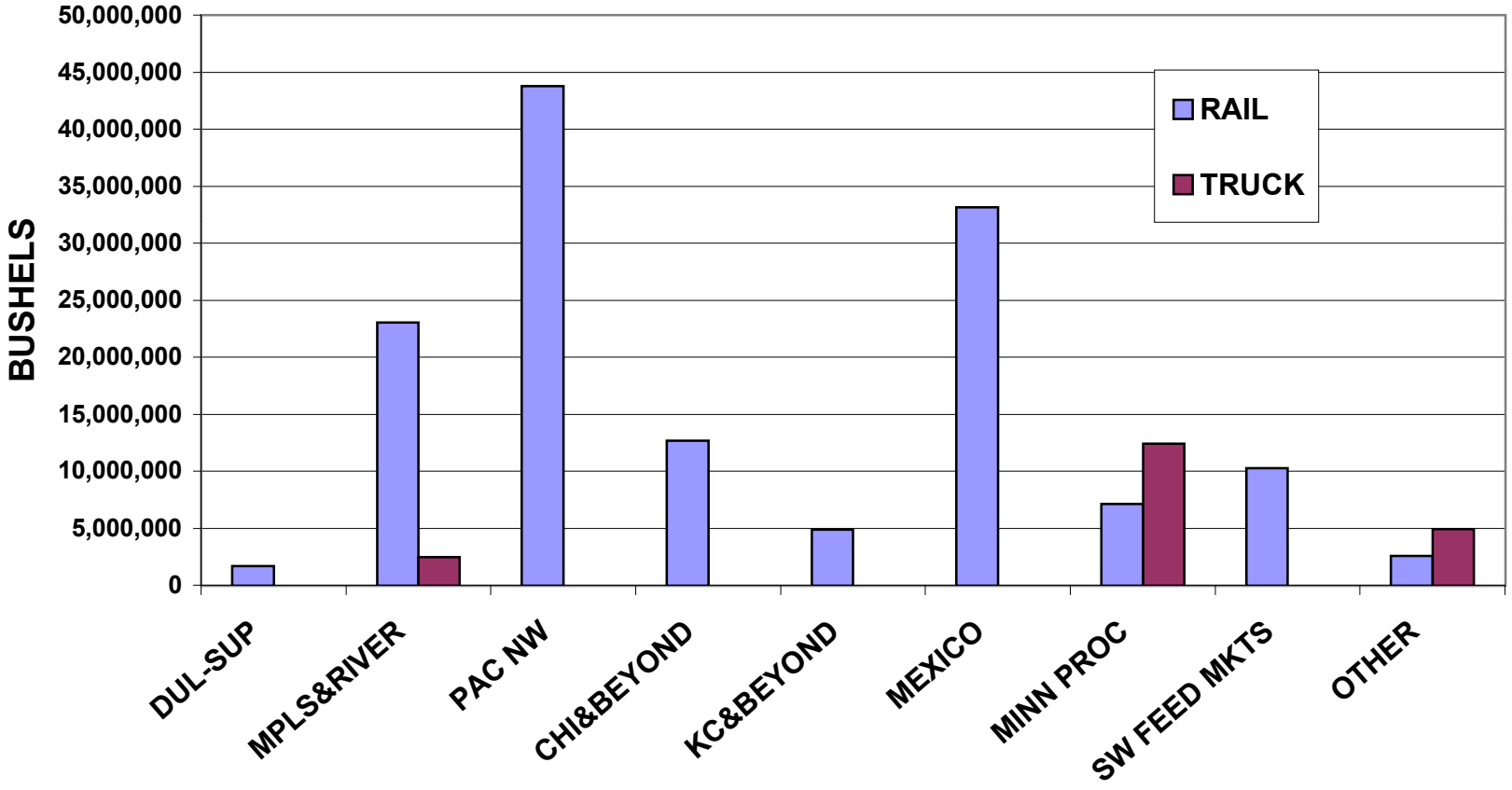
GRAPH 17
ESTIMATED CRD 4 ALLGRAIN DESTINATIONS 7/99-6/00
BUSHELS



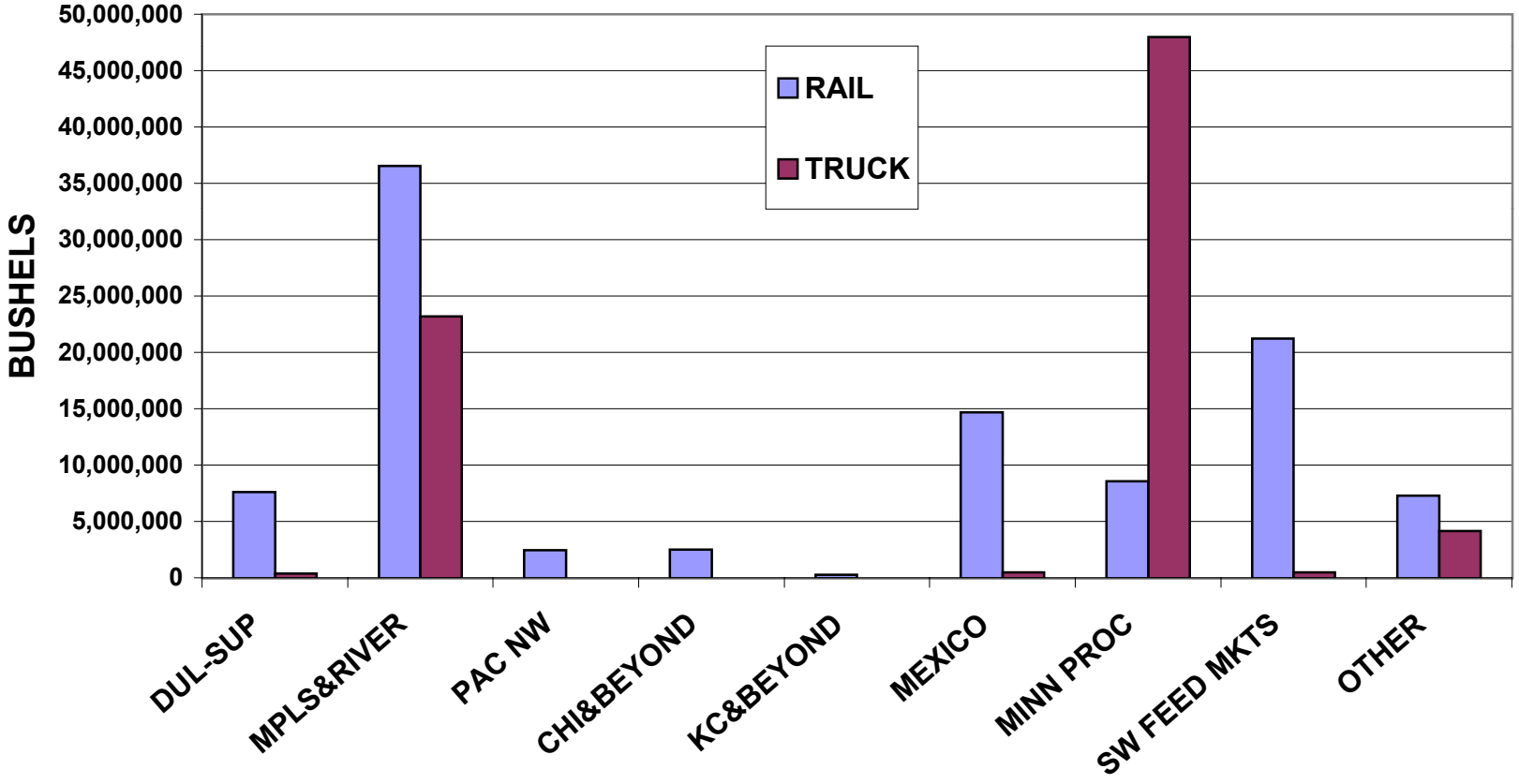
GRAPH 18
ESTIMATED CRD 5 ALLGRAIN DESTINATIONS 7/99-6/00
BUSHELS



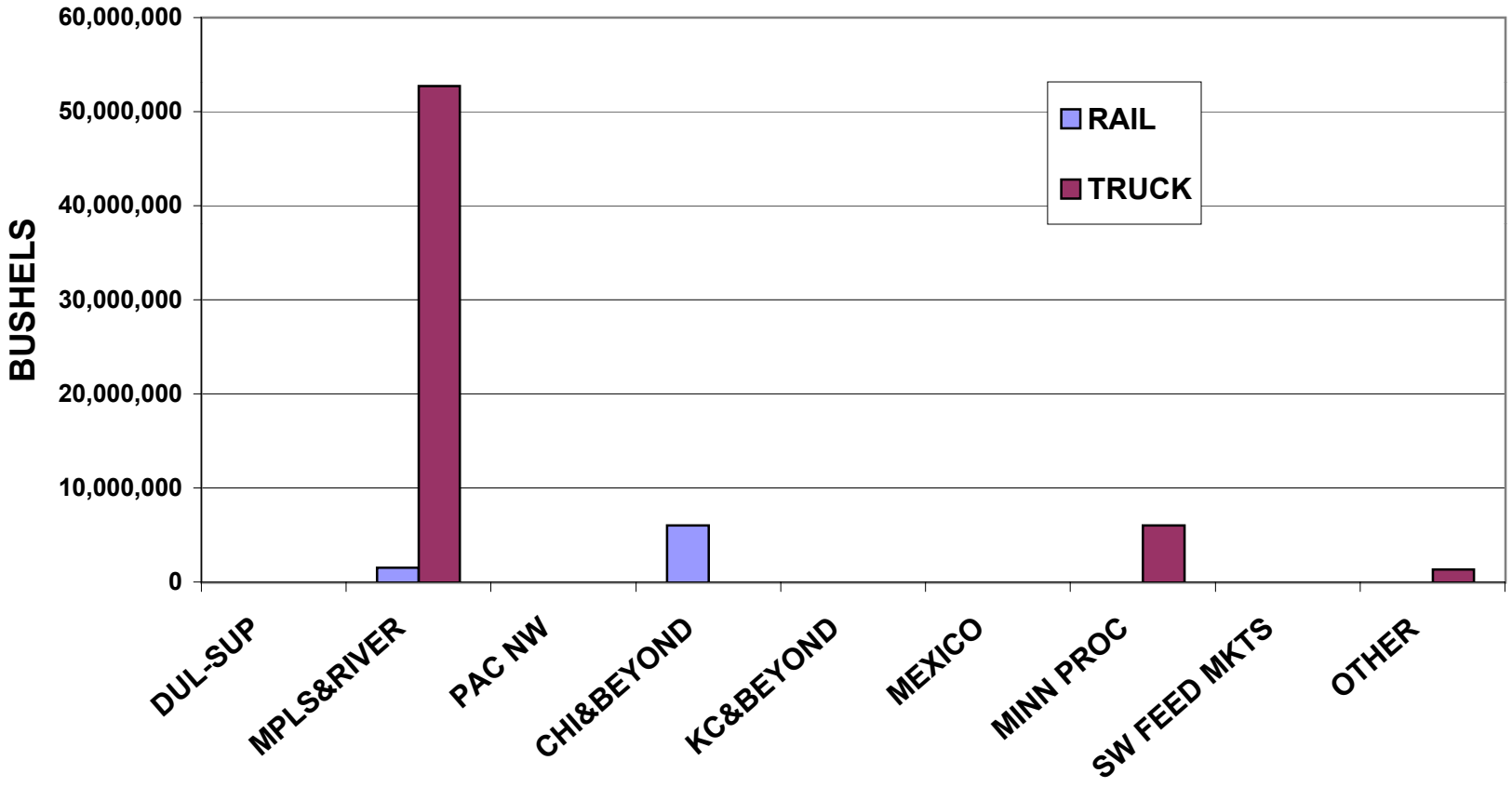
GRAPH 19
ESTIMATED CRD 7 ALLGRAIN DESTINATIONS 7/99-6/00
BUSHELS



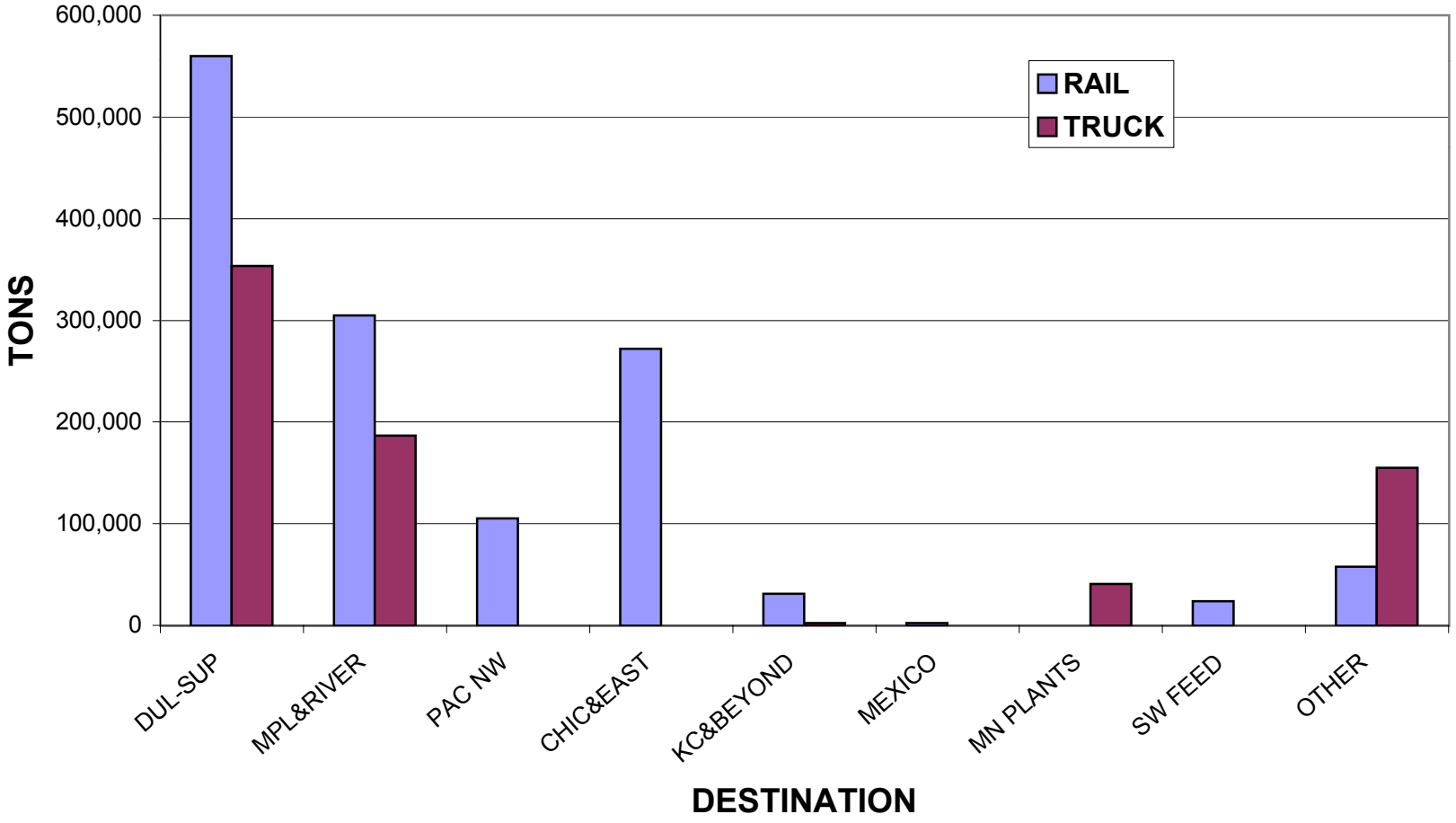
GRAPH 20
ESTIMATED CRD 8 ALLGRAIN DESTINATIONS 7/99-6/00
BUSHELS



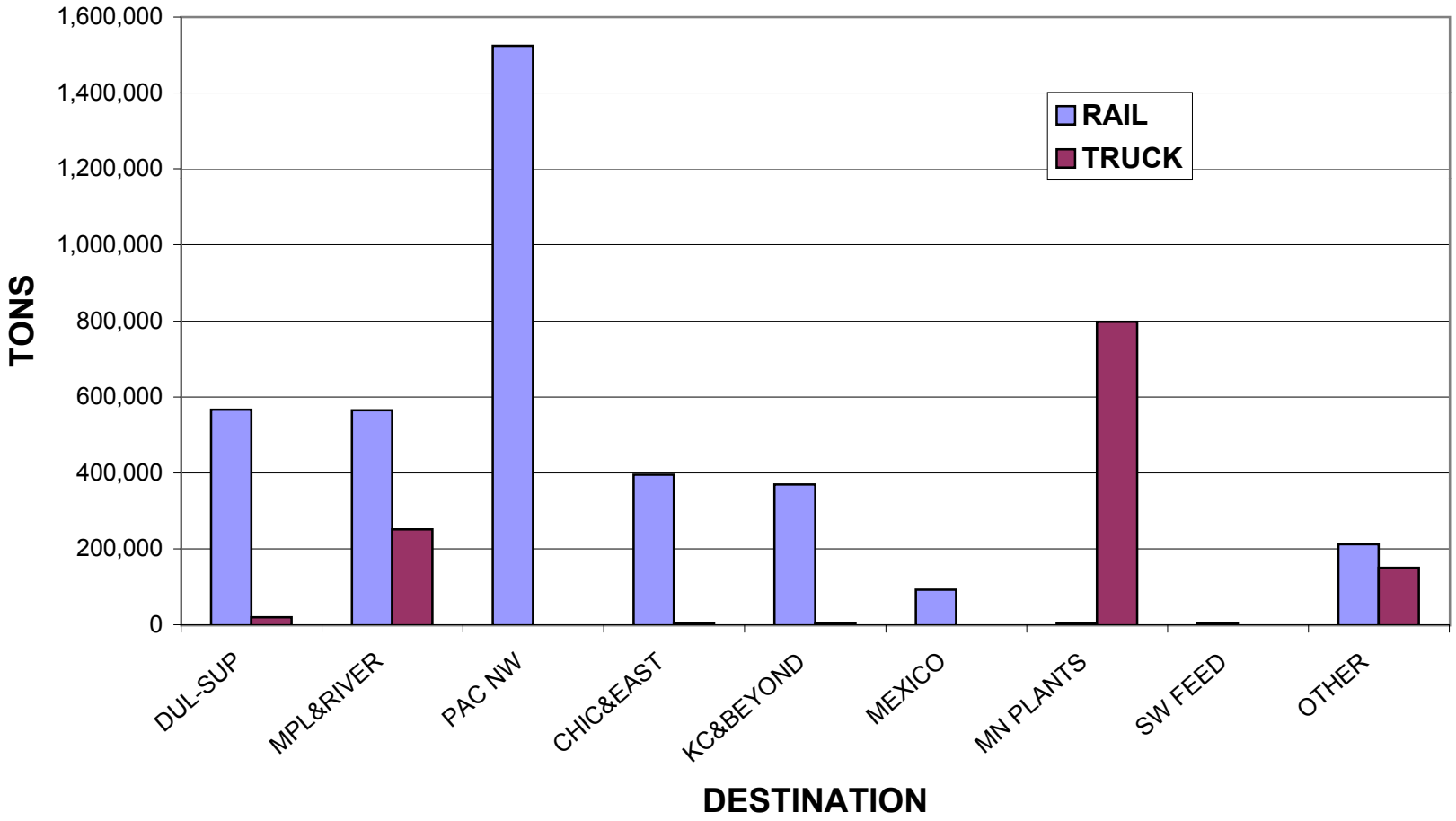
GRAPH 21
ESTIMATED CRD 9 ALLGRAIN DESTINATIONS 7/99-6/00
BUSHELS



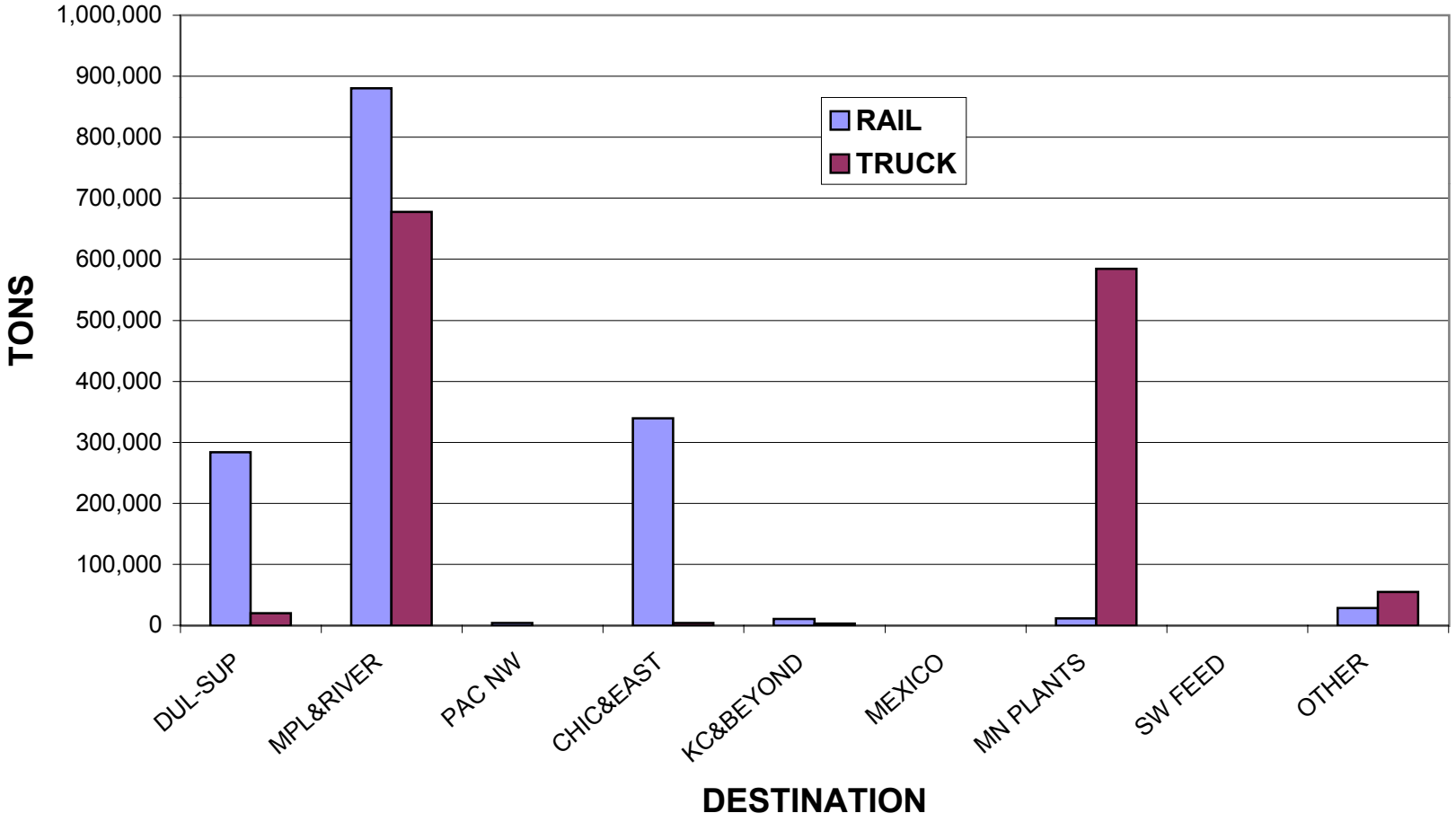
GRAPH 22
ESTIMATED CRD 1 ALLGRAIN DESTINATIONS 7/99-6/00
TONS



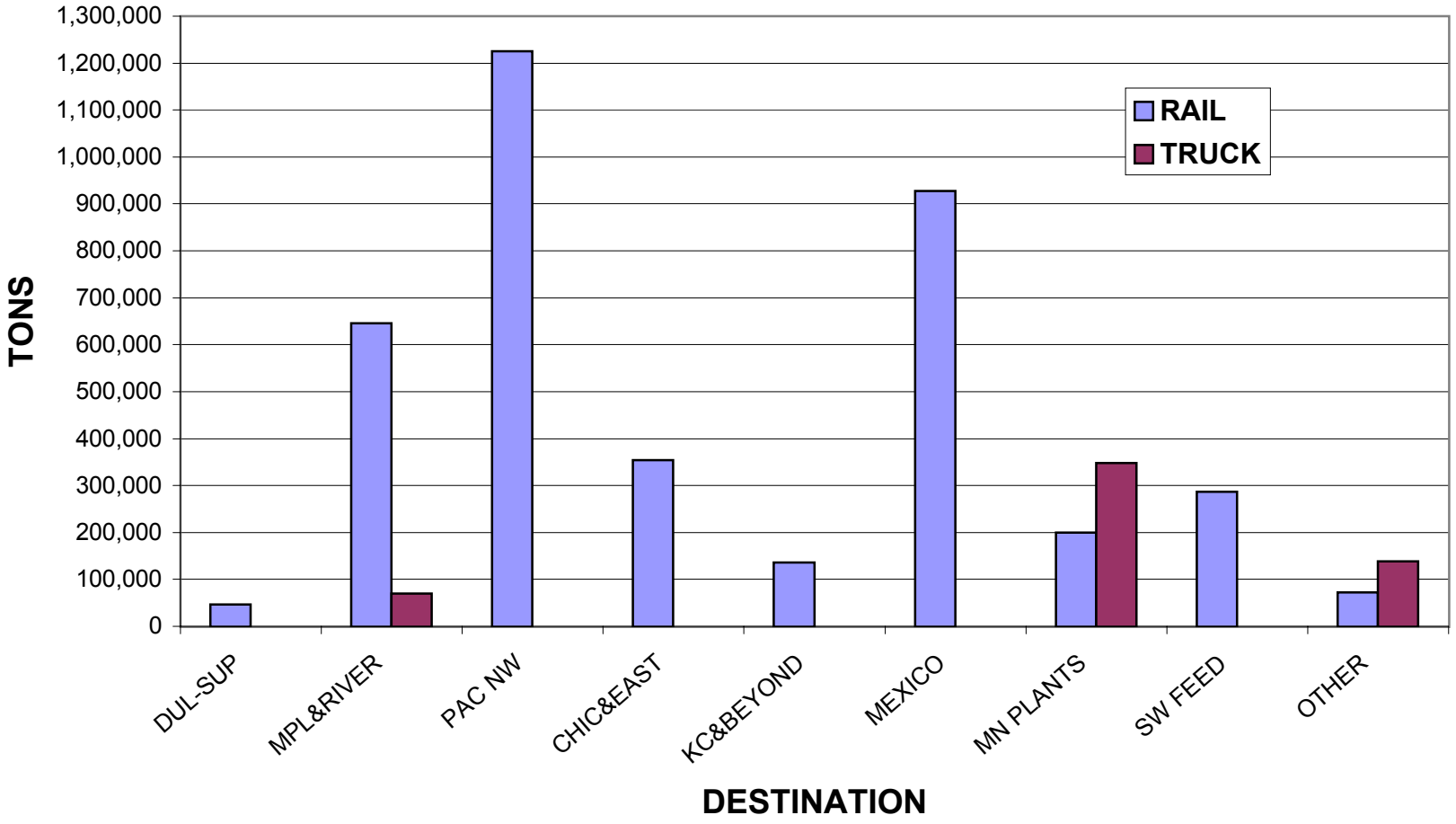
GRAPH 23
ESTIMATED CRD 4 ALLGRAIN DESTINATIONS 7/99-6/00
TONS



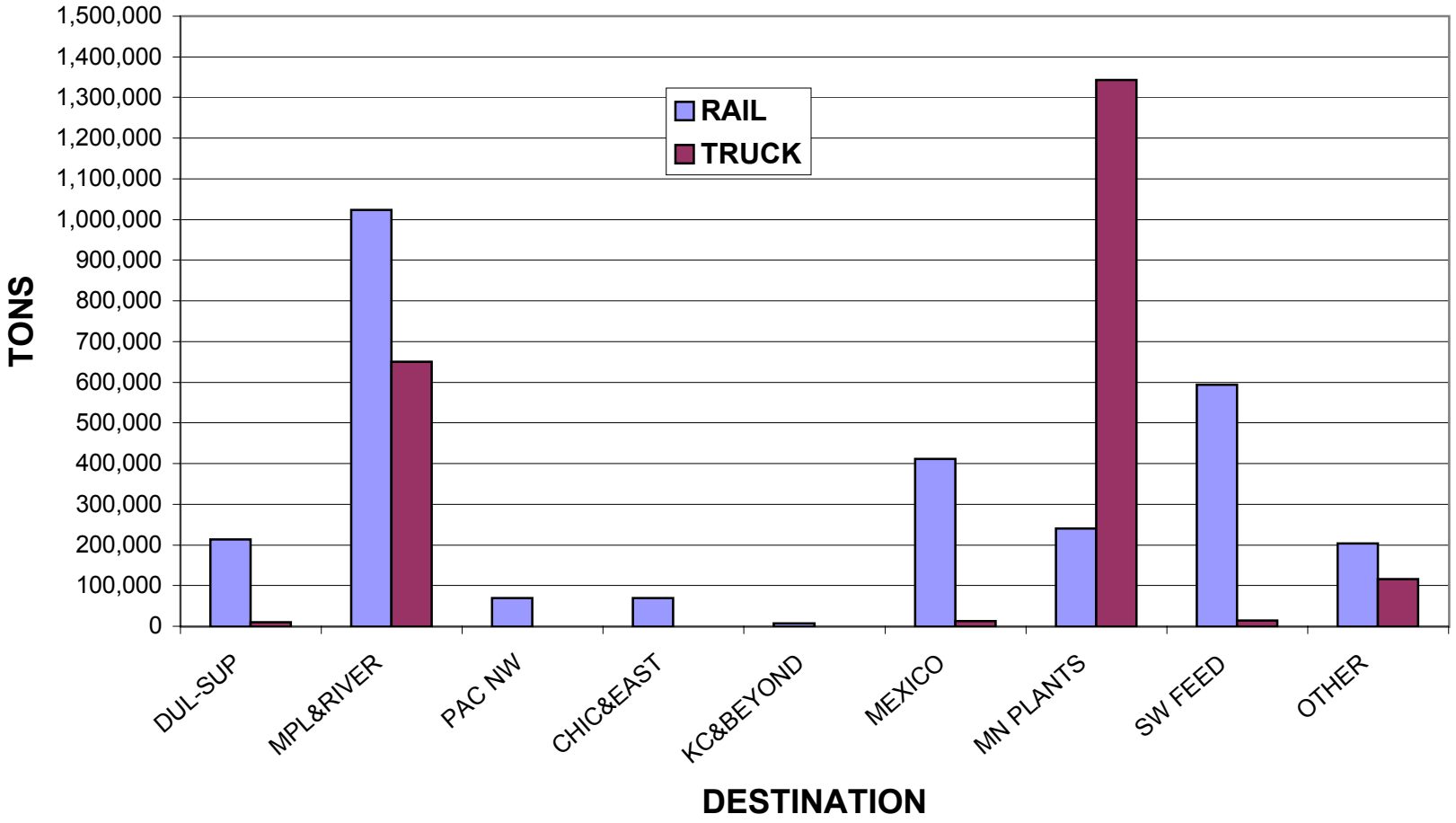
GRAPH 24
ESTIMATED CRD 5 ALLGRAIN DESTINATIONS 7/99-6/00
TONS



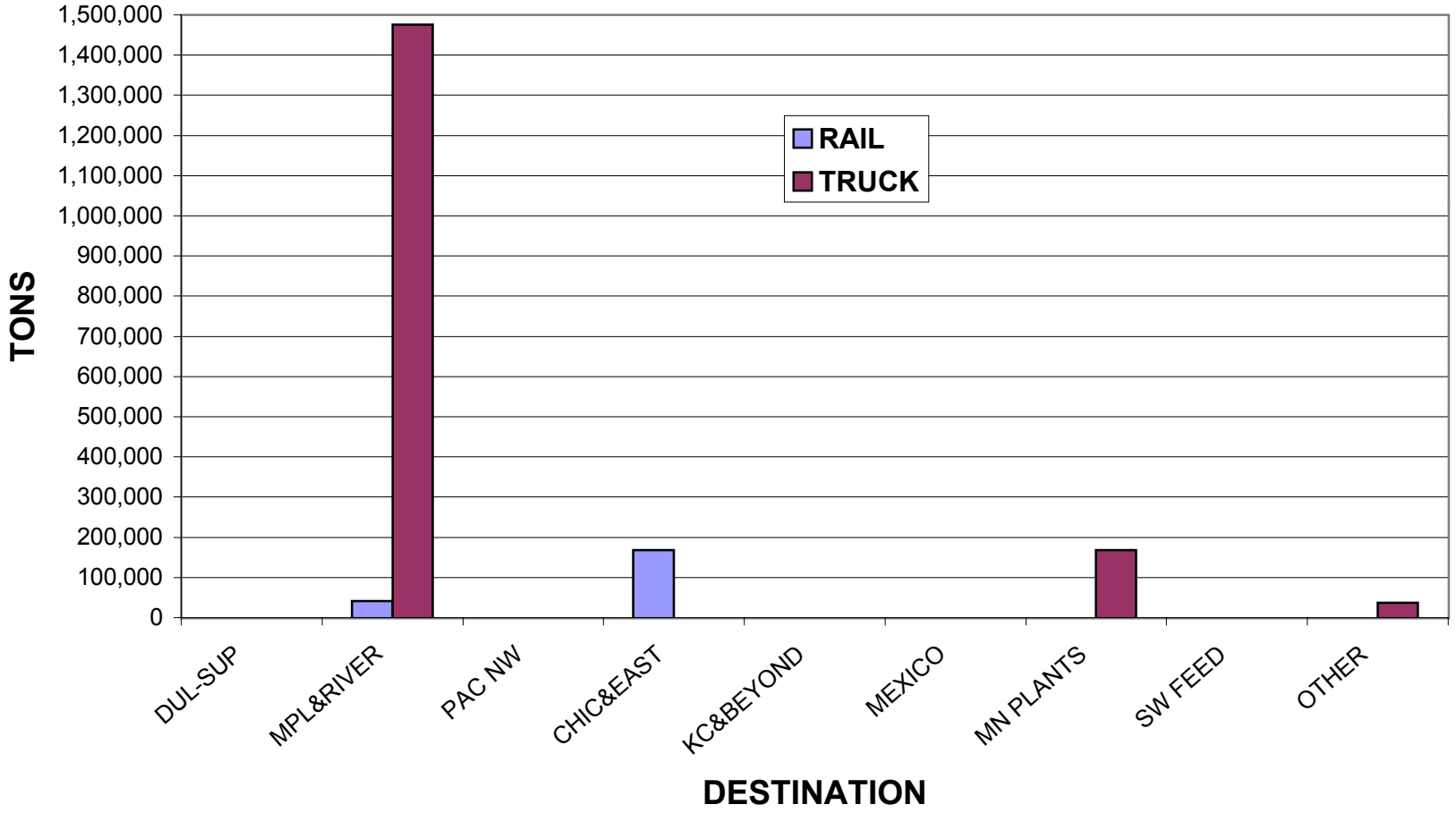
GRAPH 25
ESTIMATED CRD 7 ALLGRAIN DESTINATIONS 7/99-6/00
TONS



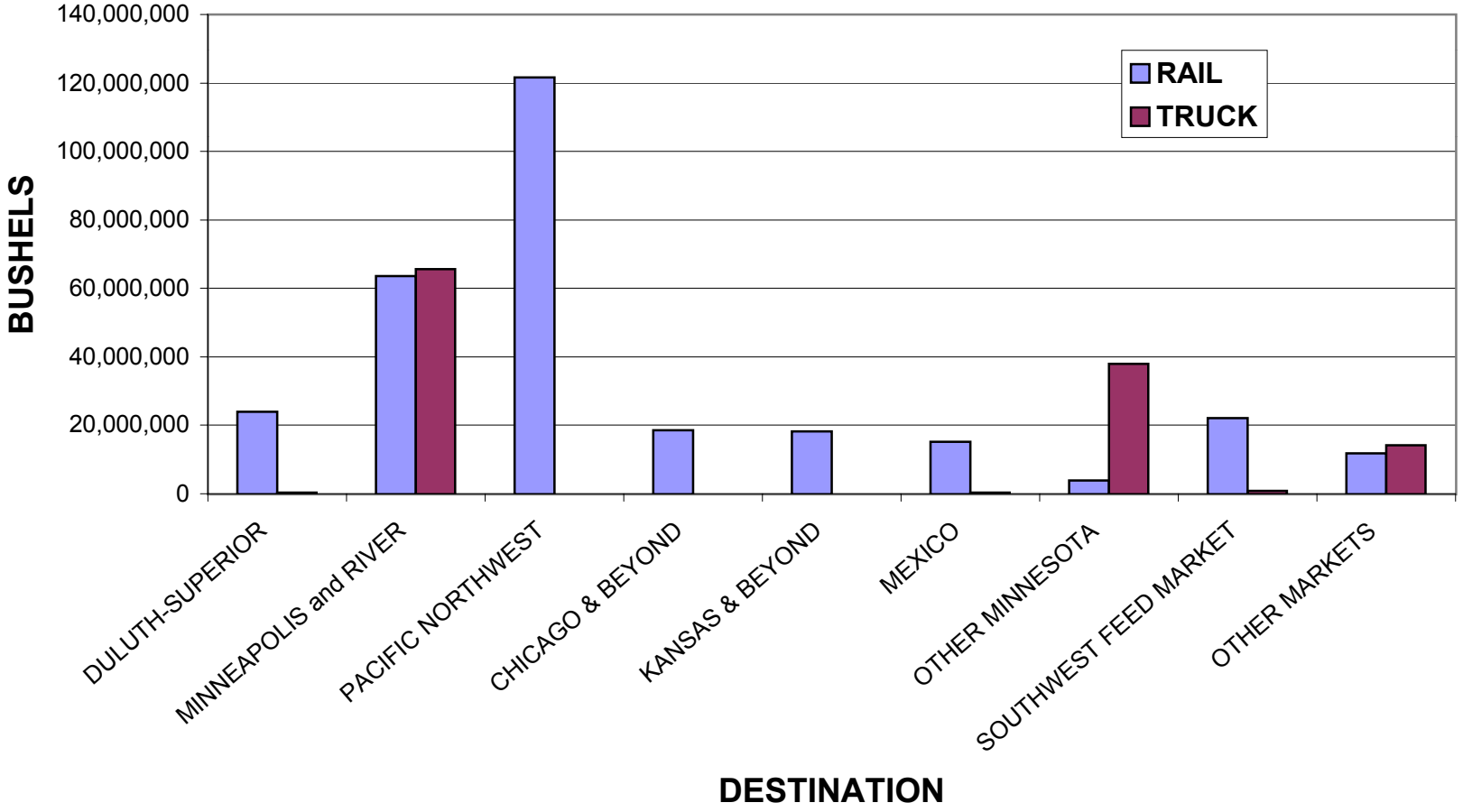
GRAPH 26
ESTIMATED CRD 8 ALLGRAIN DESTINATIONS 7/99-6/00
TONS



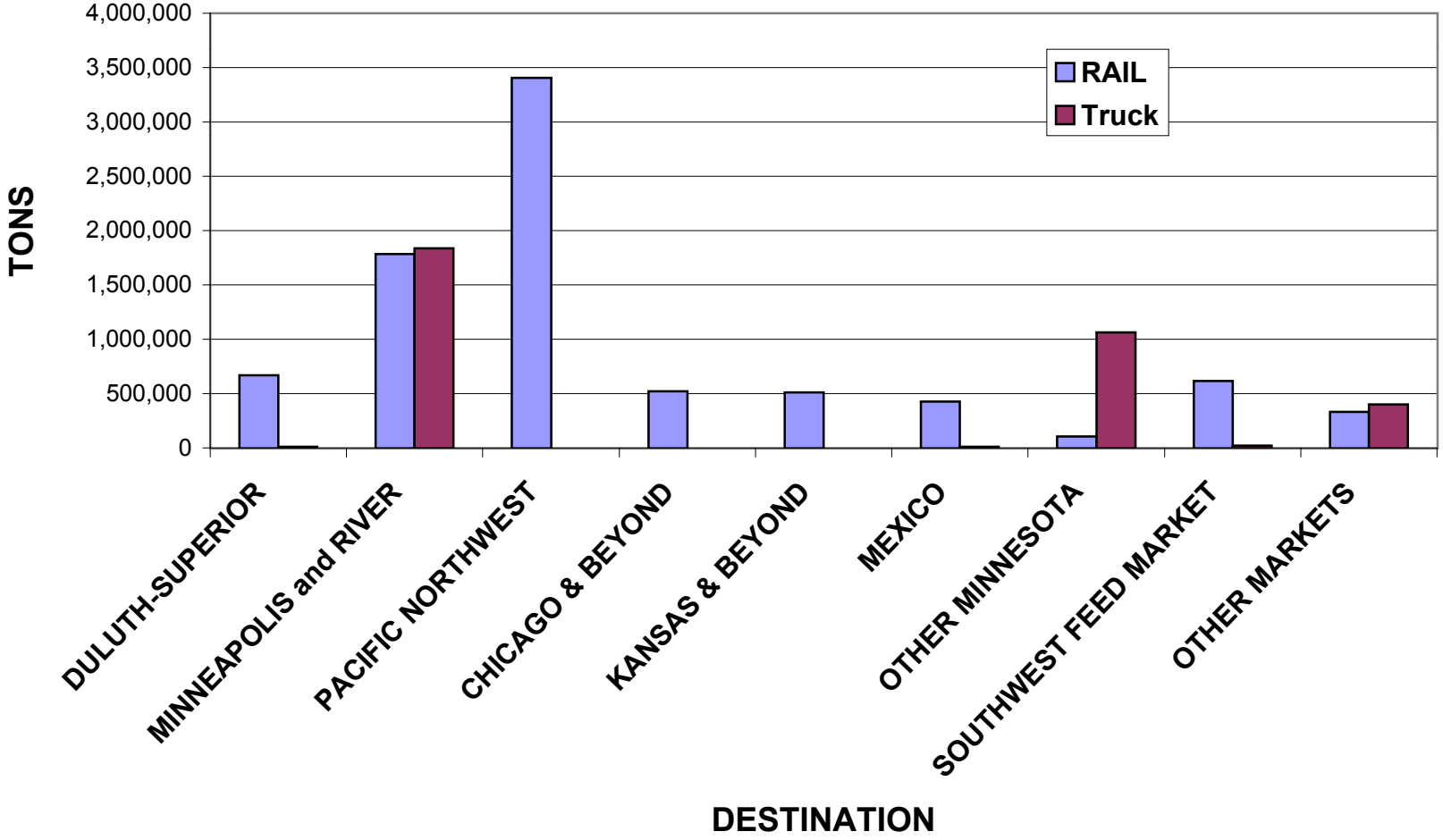
GRAPH 27
ESTIMATED CRD 9 ALLGRAIN DESTINATIONS 7/99-6/00
TONS



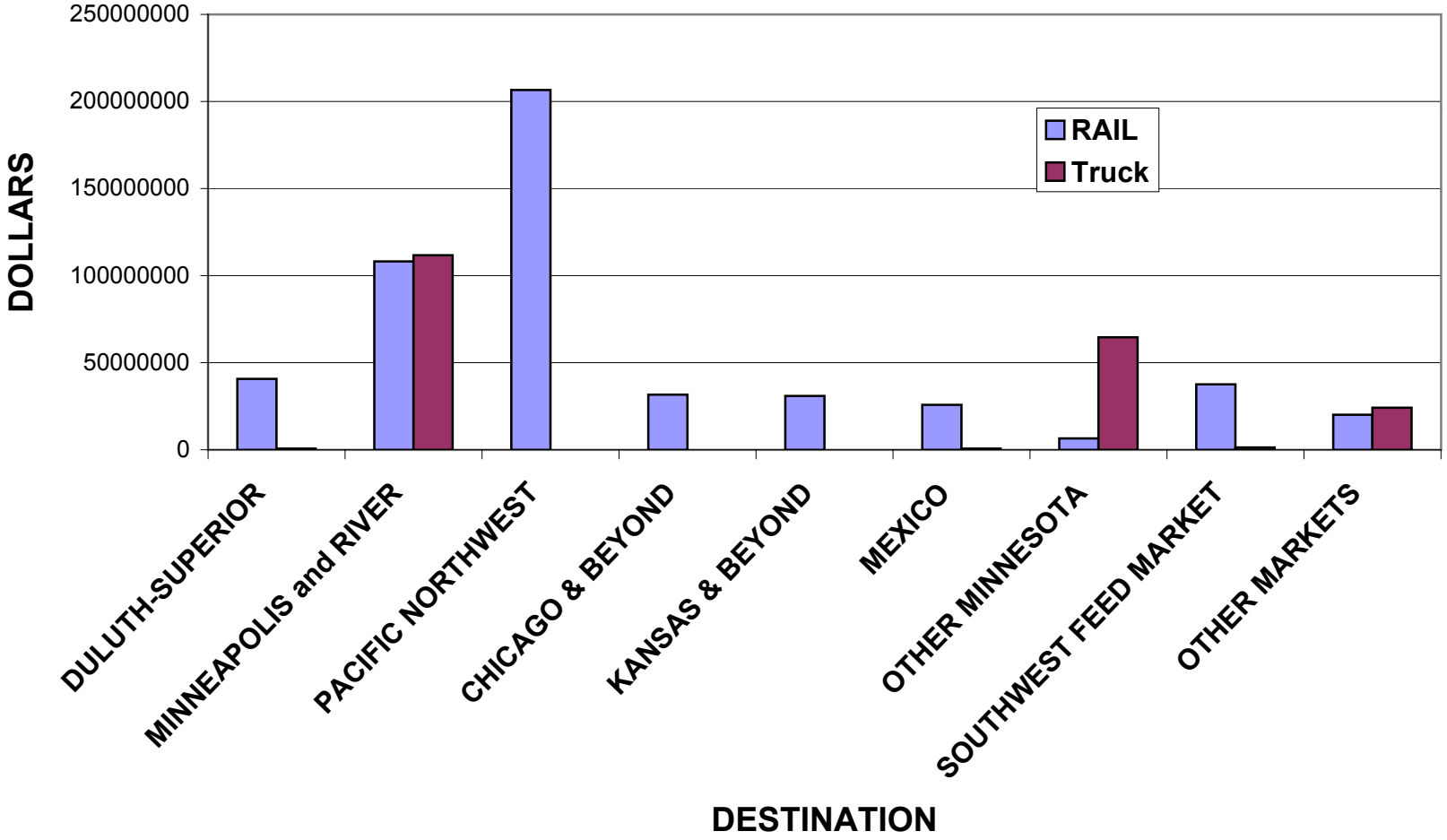
GRAPH 28
MINNESOTA CORN DESTINATIONS 7/99-6/00 IN BUSHELS



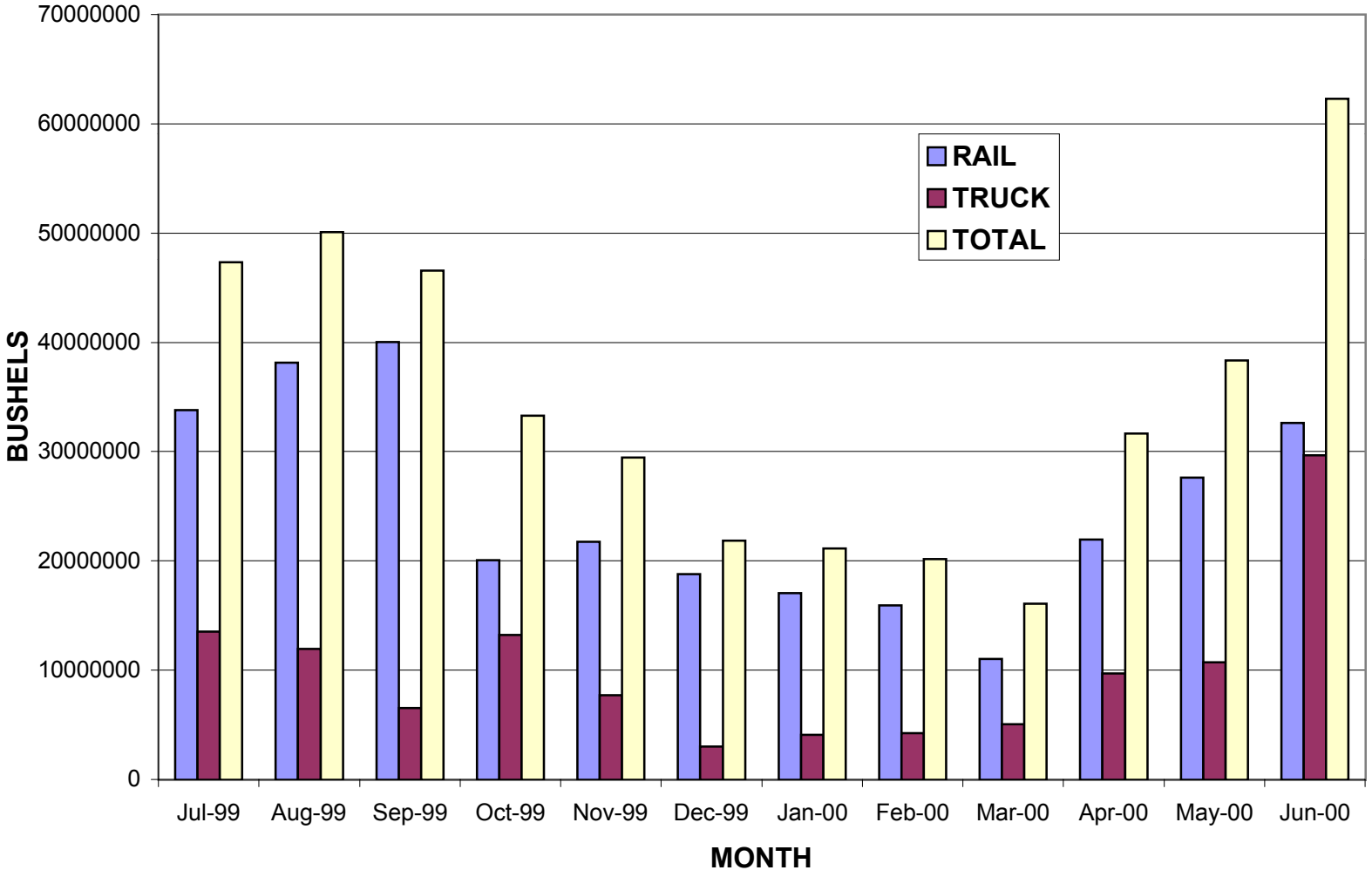
GRAPH 29
MINNESOTA CORN DESTINATIONS 7/99-6/00 TONS



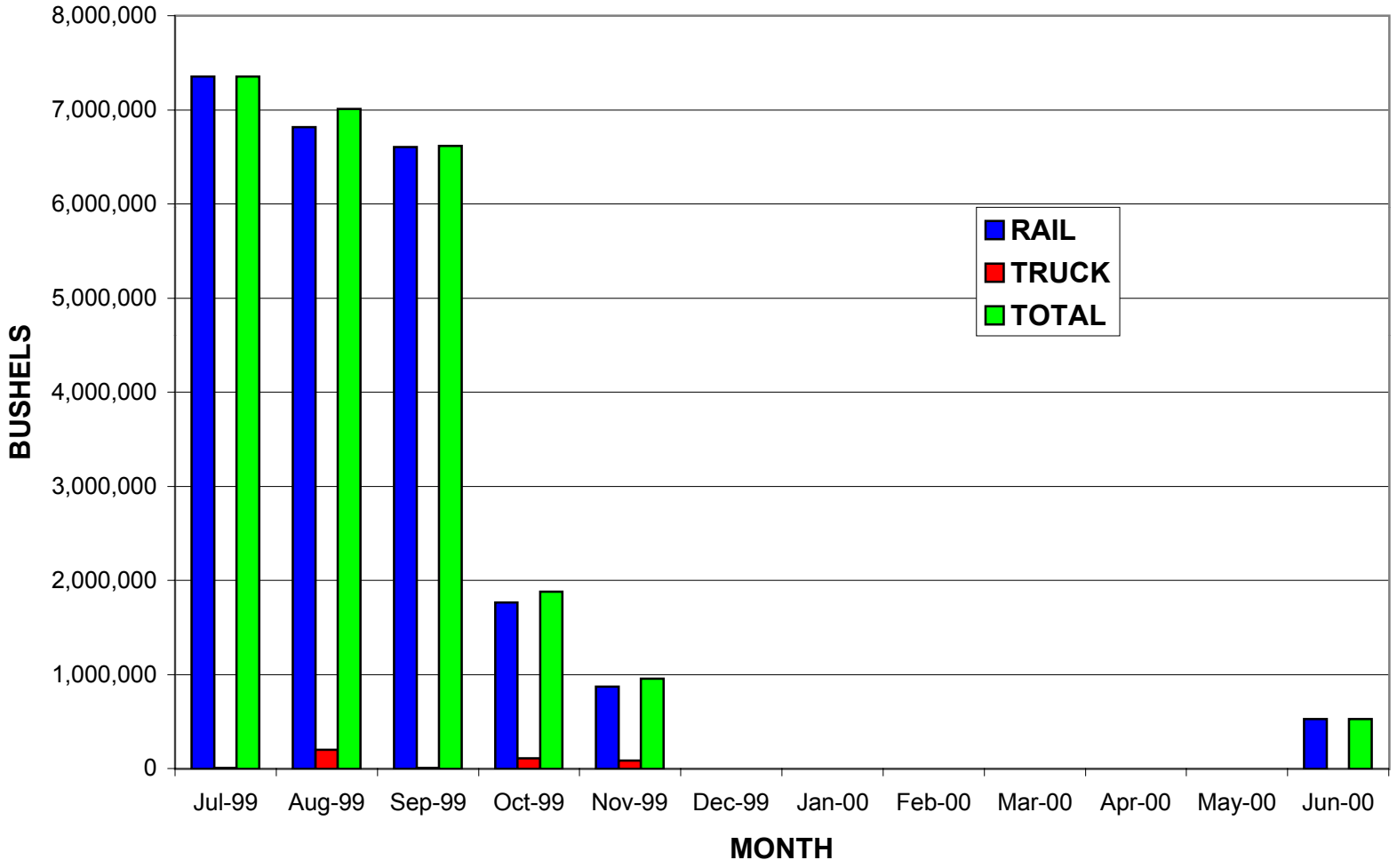
GRAPH 30
VALUE OF MINNESOTA CORN SHIPMENTS 7/99-6/00
AT $1.70 PER BUSHEL



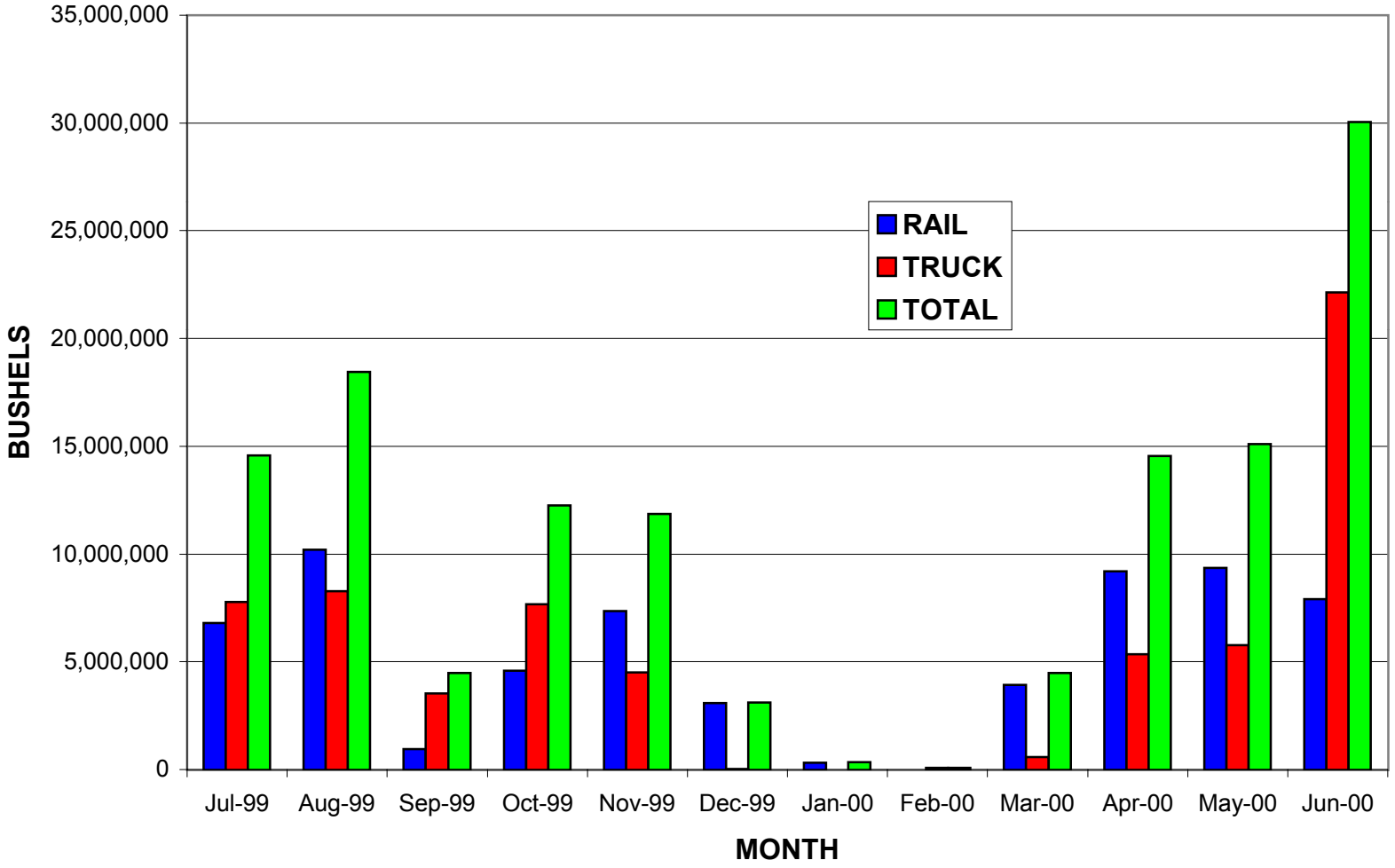
GRAPH 31
MINNESOTA CORN SHIPMENTS BY MONTH 7/99-6/00



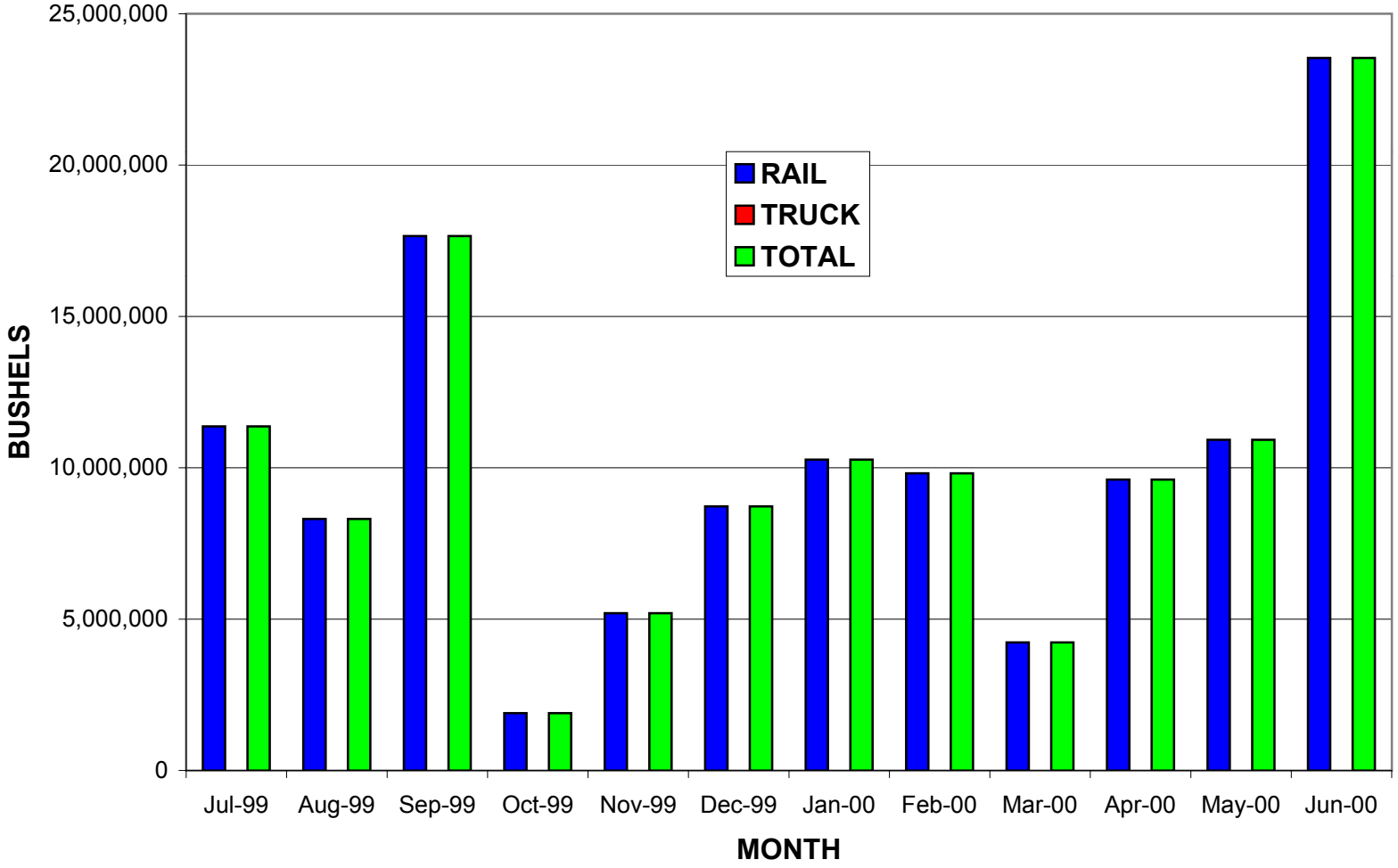
GRAPH 32
MINNESOTA CORN SHIPMENTS TO DULUTH SUPERIOR BY MONTH
7/99-6/00



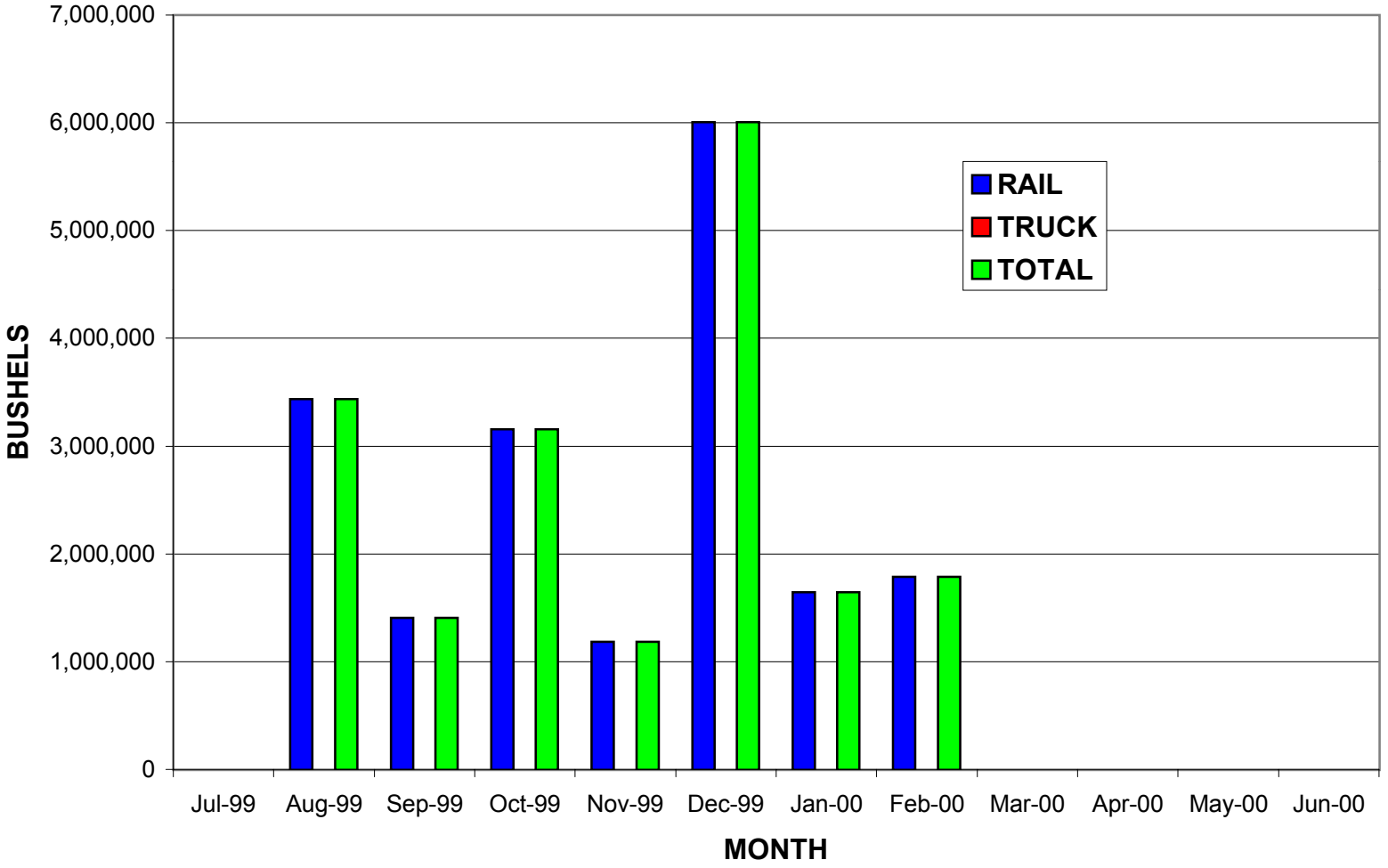
GRAPH 33
MINNESOTA CORN SHIPMENTS TO MINNEAPOLIS AND RIVER PORTS BY MONTH 7/99-6/00



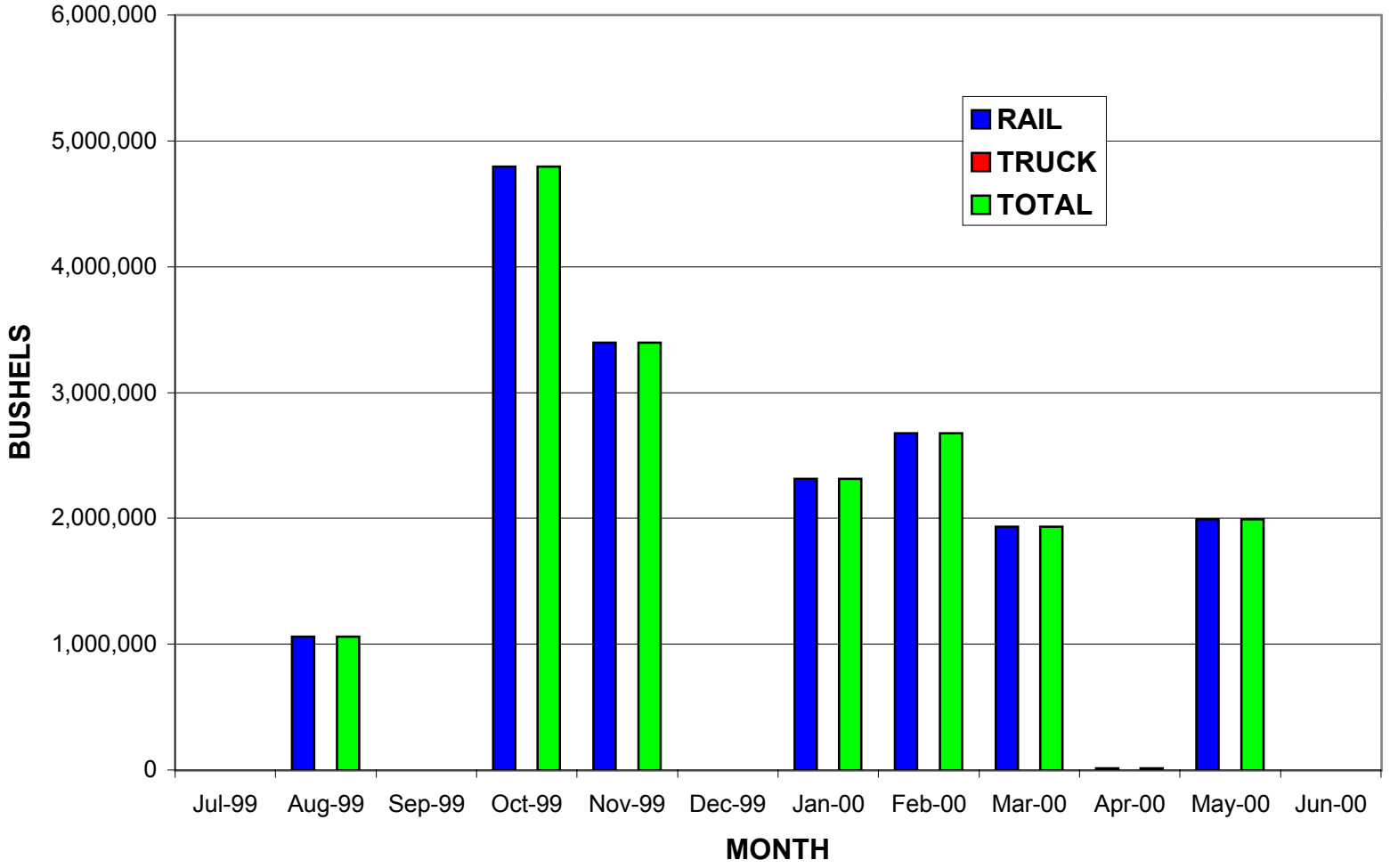
GRAPH 34
MINNESOTA CORN SHIPMENTS TO PACIFIC NORTHWEST BY MONTH 7/99-6/00



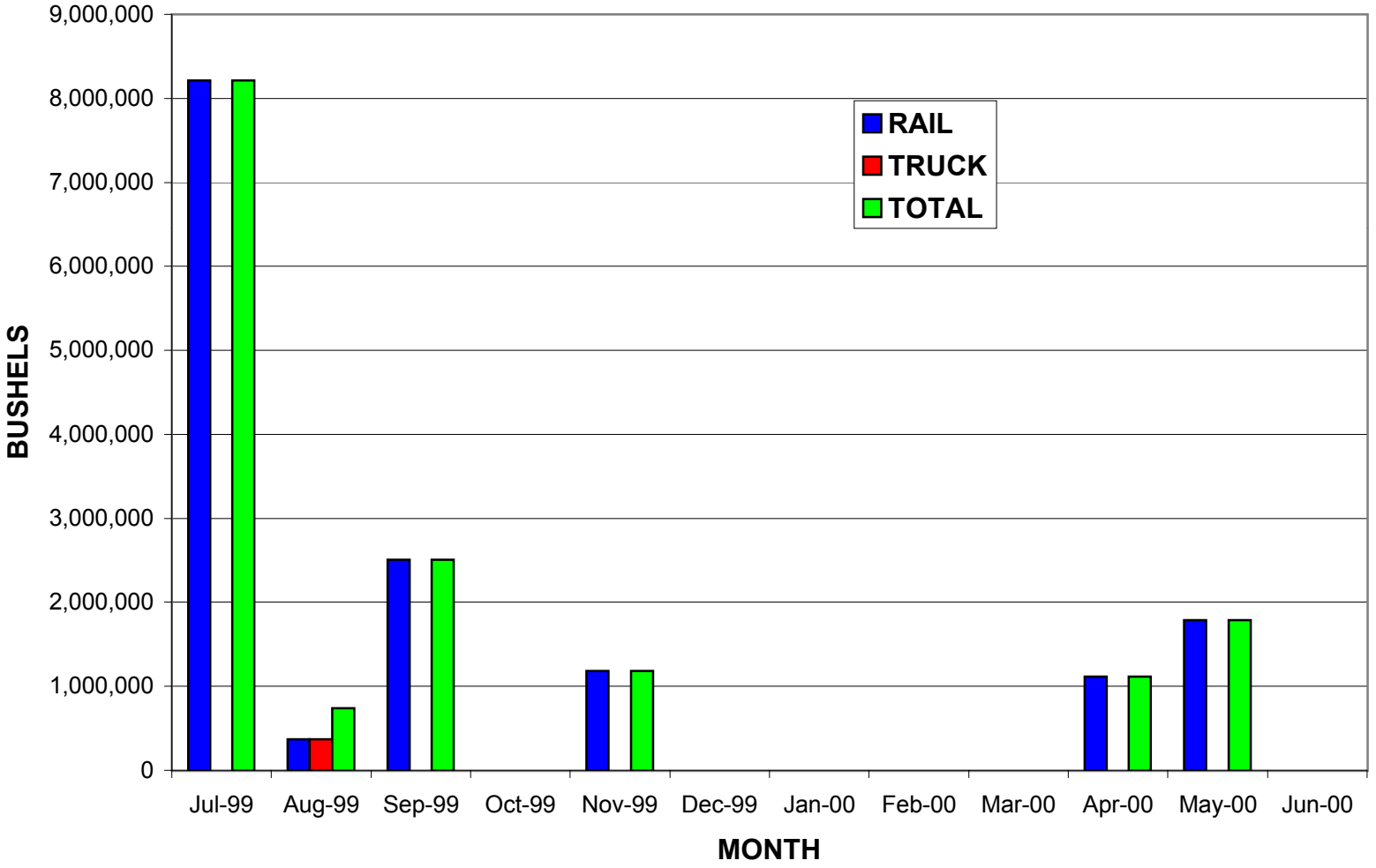
GRAPH 35
MINNESOTA CORN SHIPMENTS TO CHICAGO AND BEYOND BY MONTH 7/99-6/00



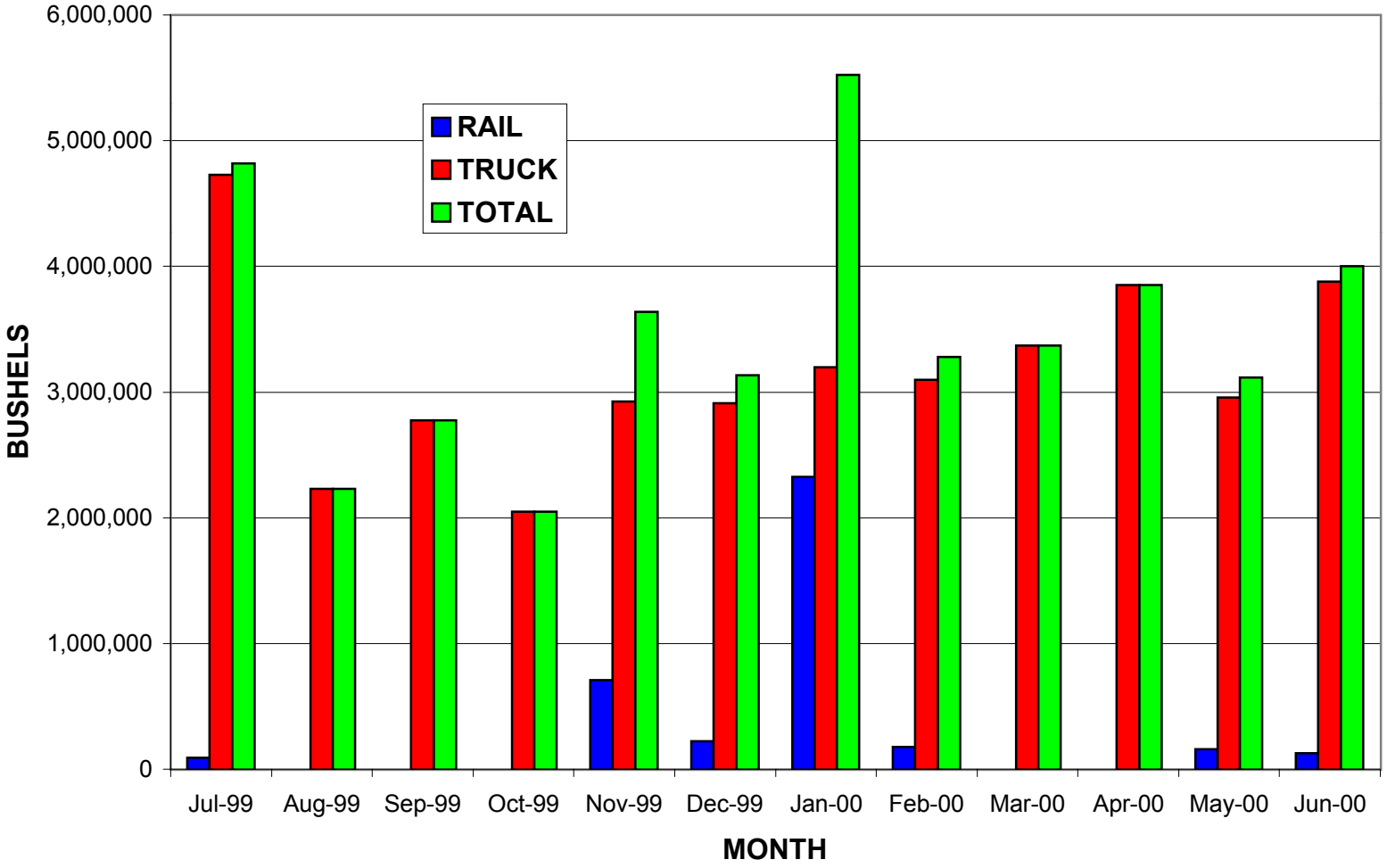
GRAPH 36
MINNESOTA CORN SHIPMENTS TO KANSAS CITY AND BEYOND BY MONTH 7/99-6/00



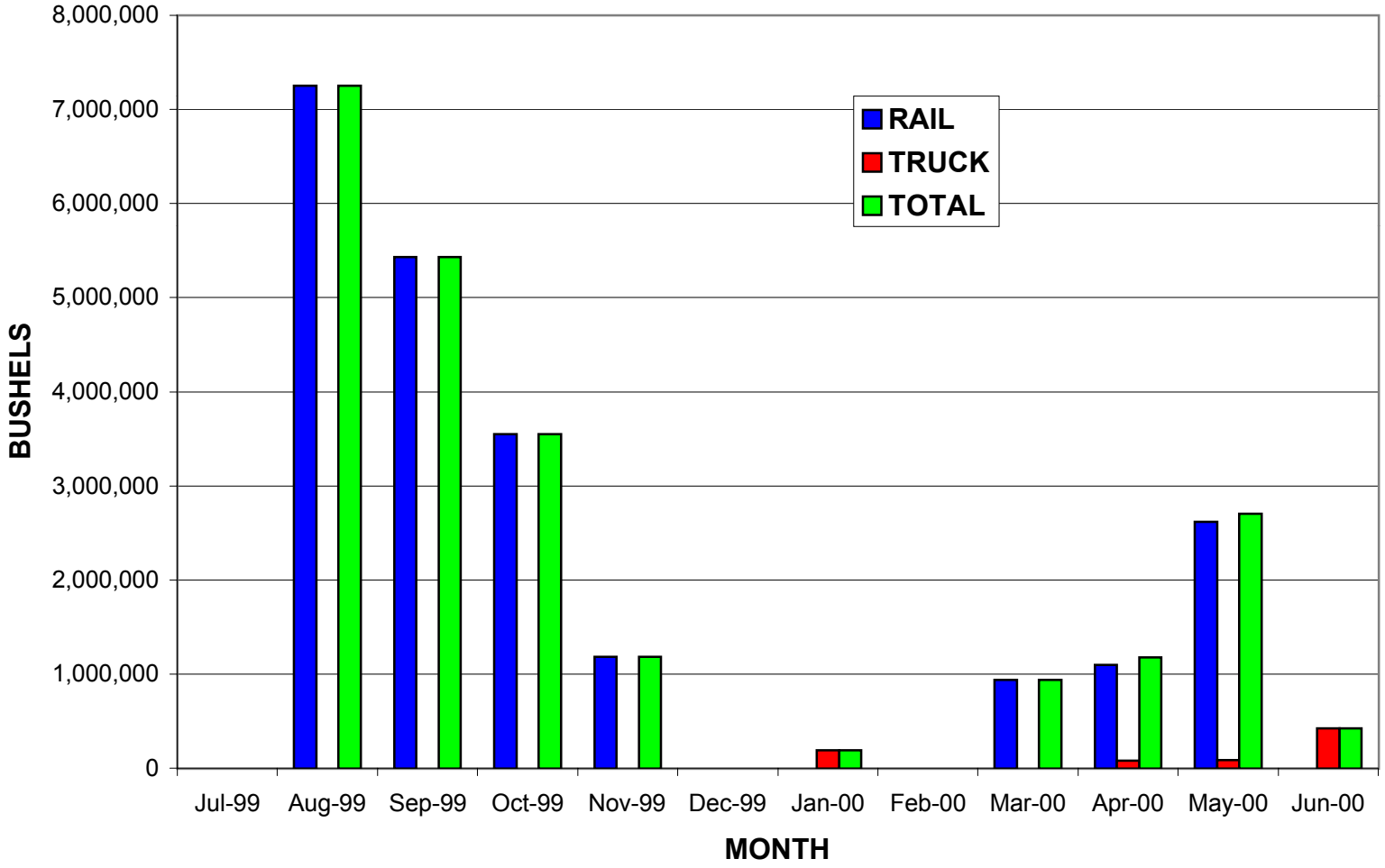
GRAPH 37
MINNESOTA CORN SHIPMENTS TO MEXICO BY MONTH 7/99-6/00



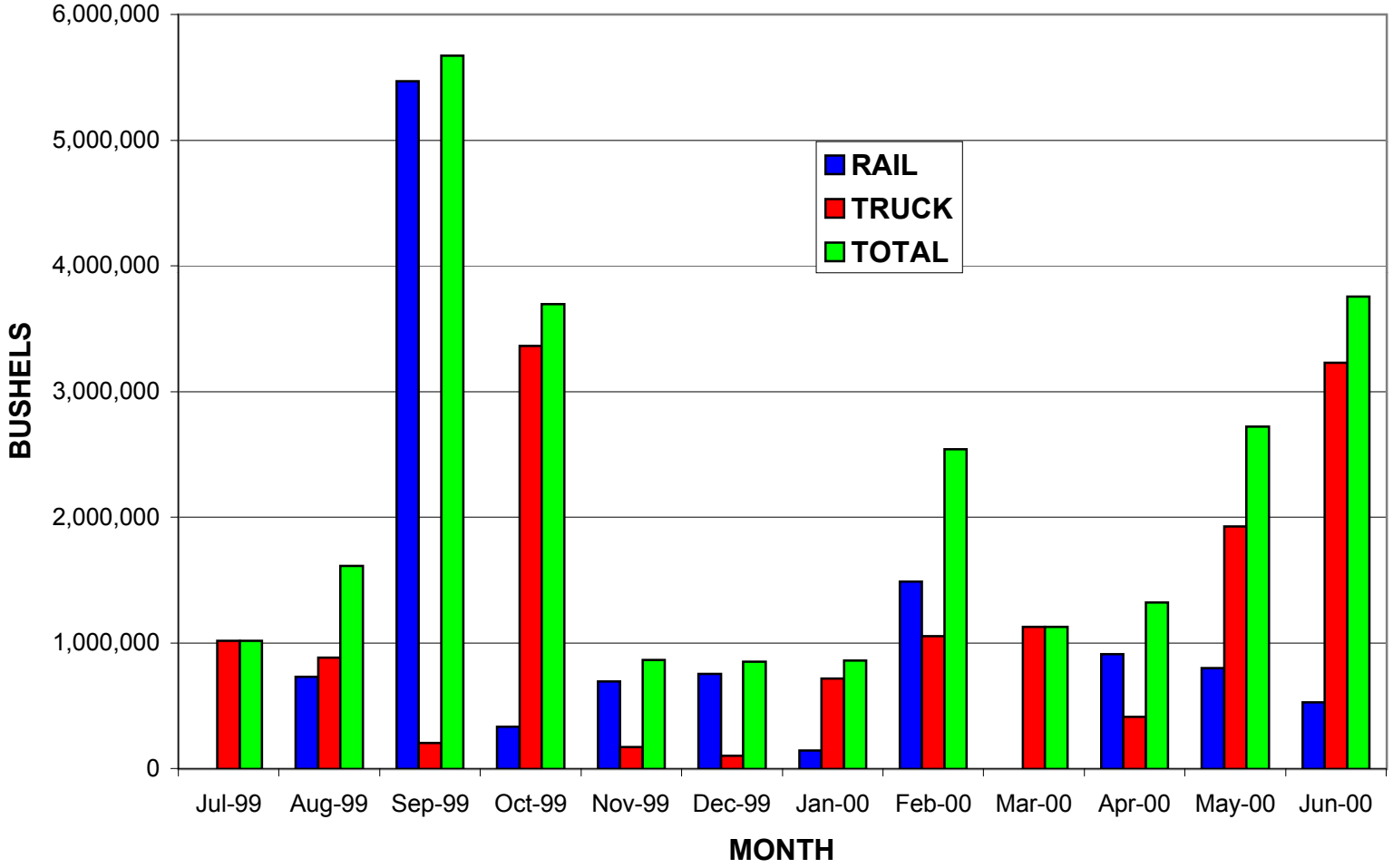
GRAPH 38
MINNESOTA CORN SHIPMENTS TO MINNESOTA PROCESSORS BY MONTH 7/99-6/00



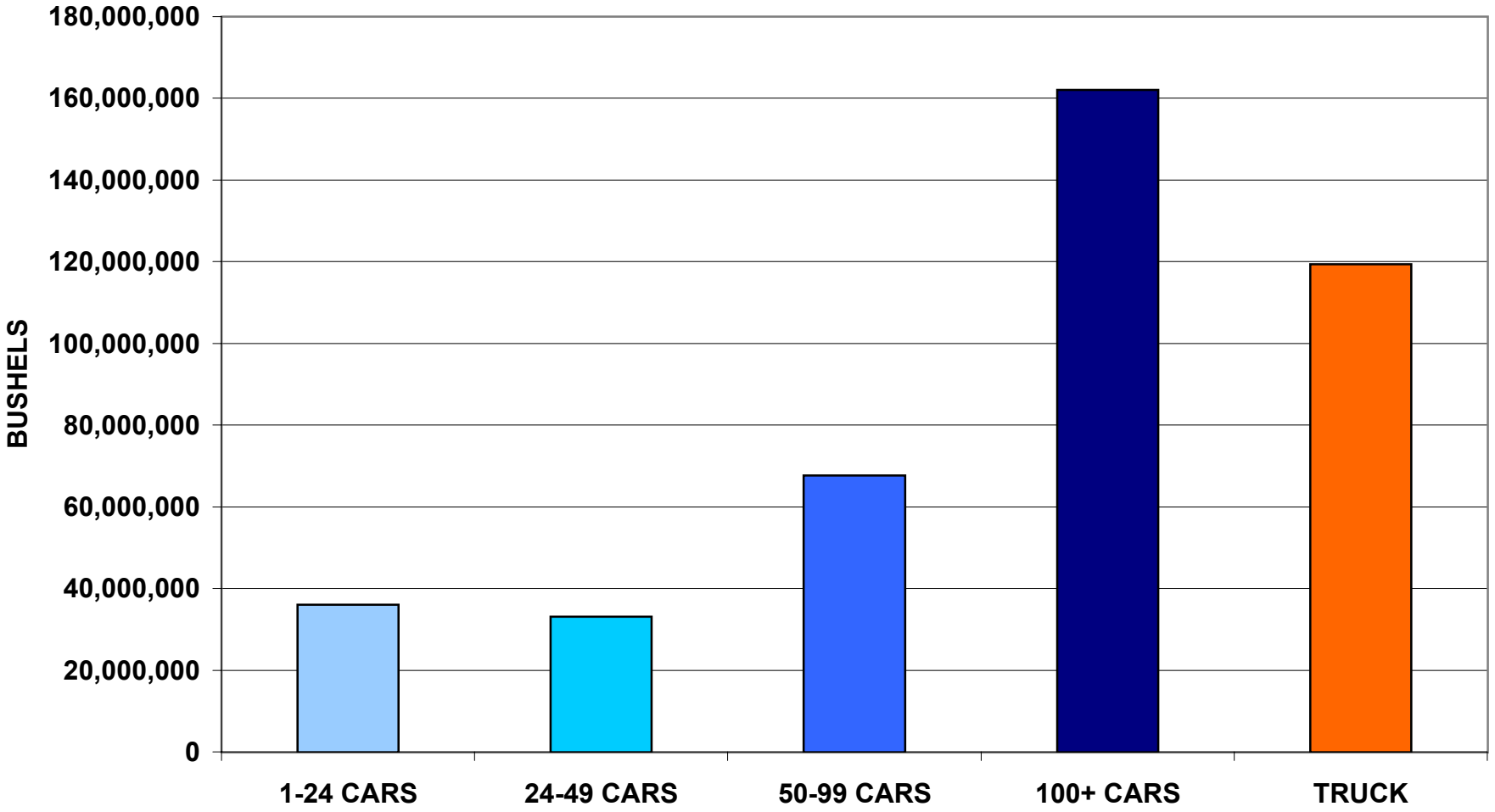
GRAPH 39
MINNESOTA CORN SHIPMENTS TO SOUTHWEST FEED MARKET BY MONTH 7/99-6/00



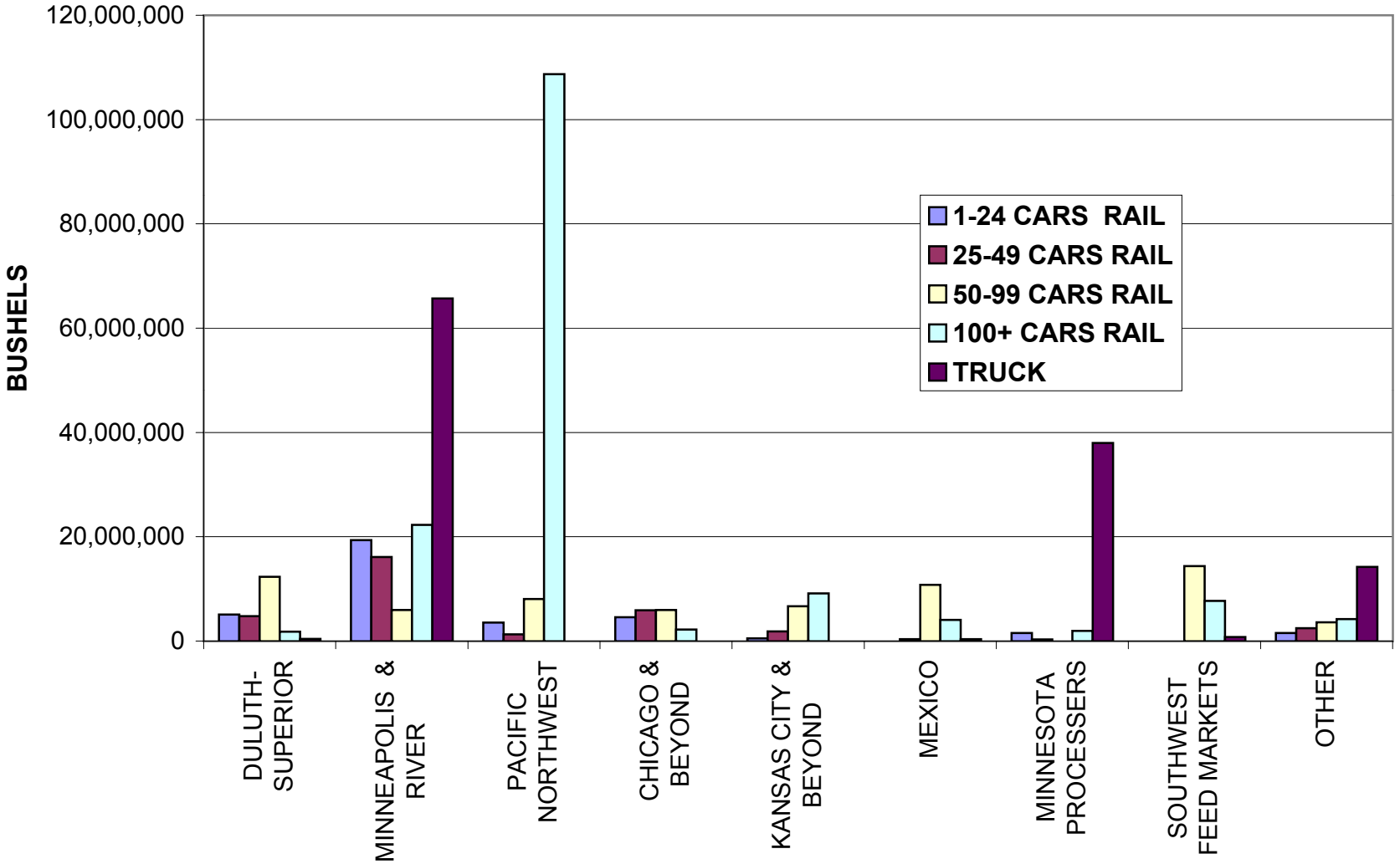
GRAPH 40
MINNESOTA CORN SHIPMENTS TO OTHER AND UNKNOWN MARKETS BY MONTH 7/99-6/00



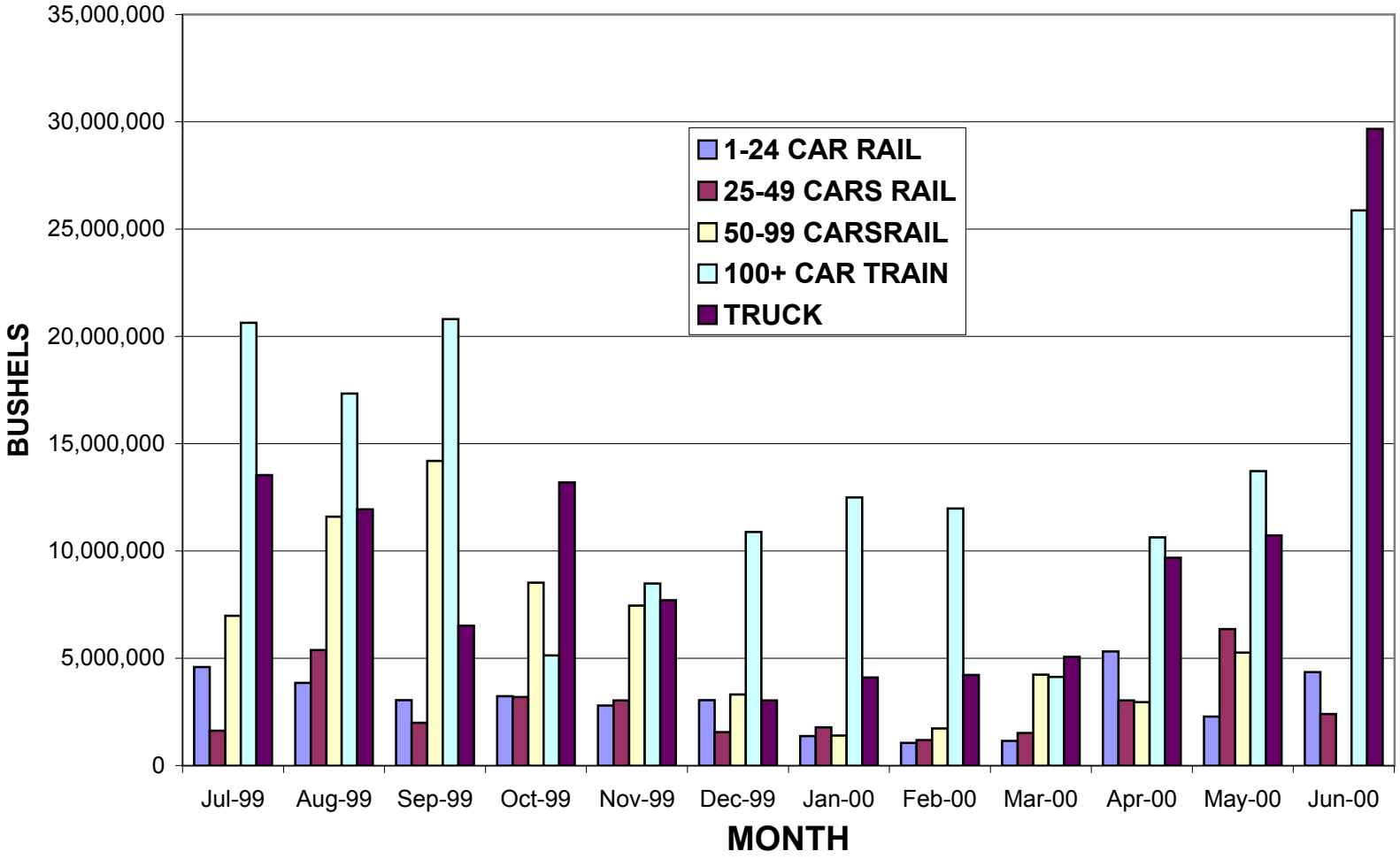
GRAPH 41
MINNESOTA CORN SHIPMENTS BY MODE 7/99-6/00



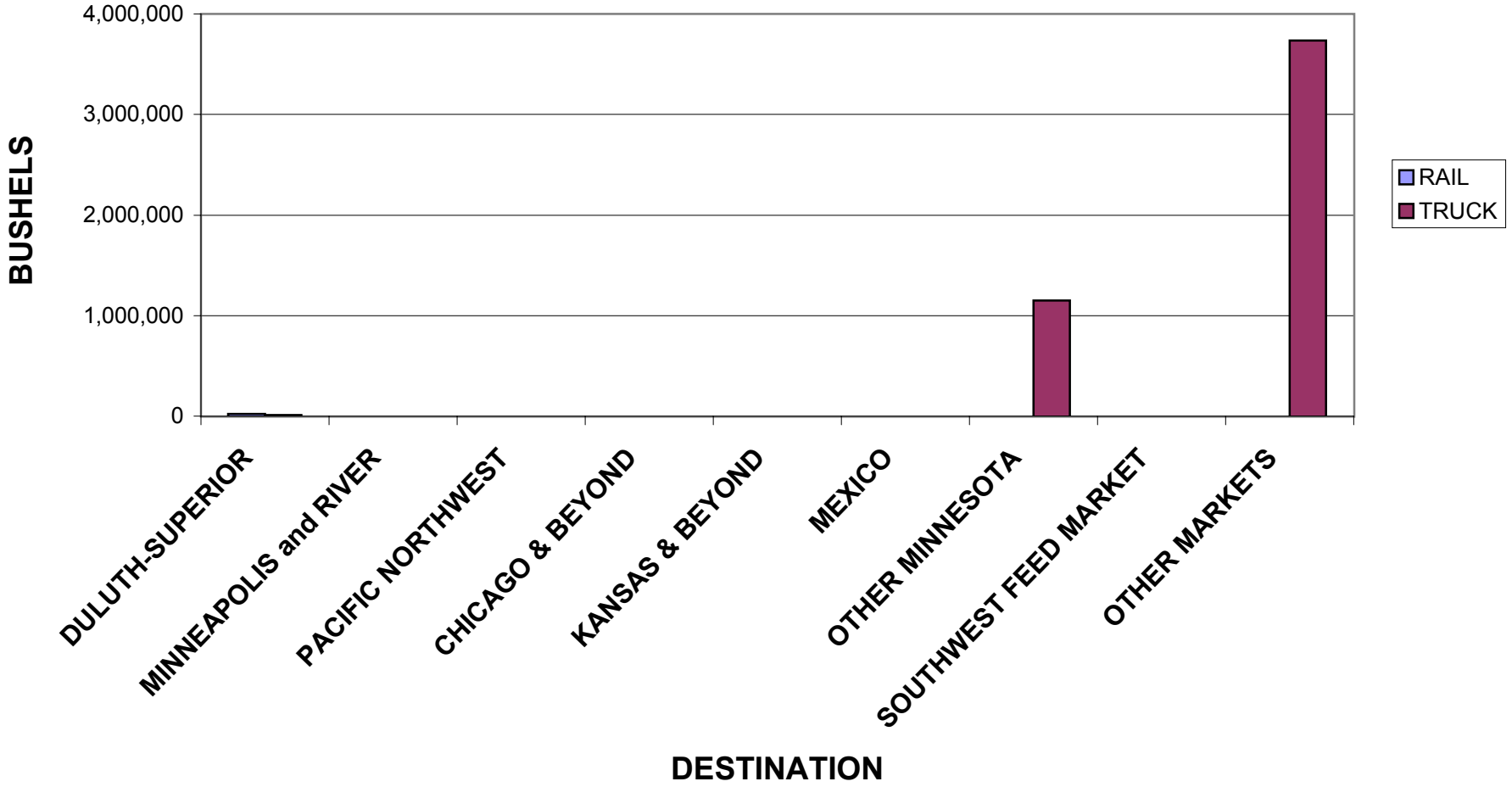
GRAPH 42
MINNESOTA CORN SHIPMENTS BY MODE TO DESTINATION
7/99-6/00



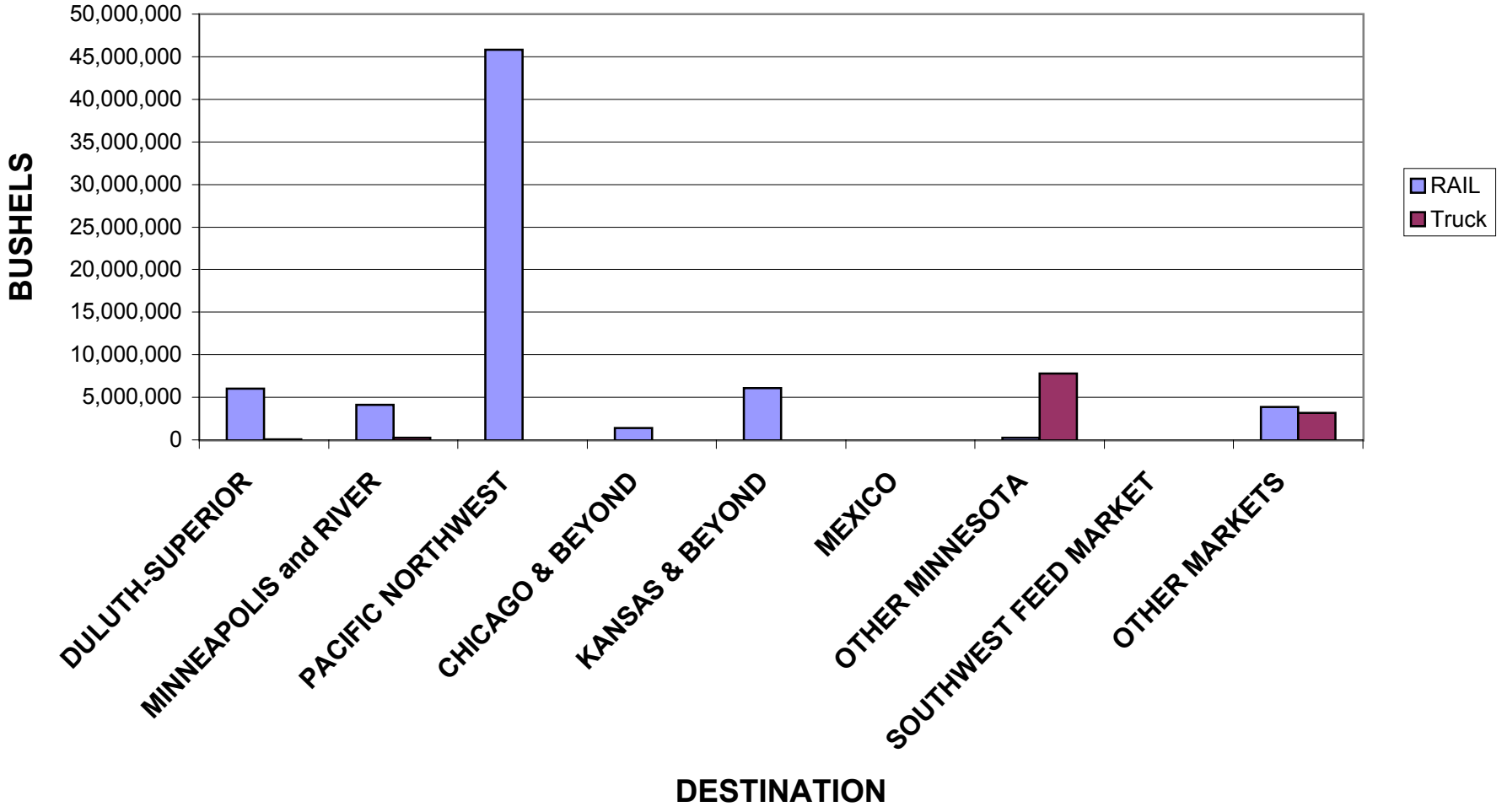
GRAPH 43
MINNESOTA CORN SHIPMENTS BY MONTH AND MODE
7/99-6/00



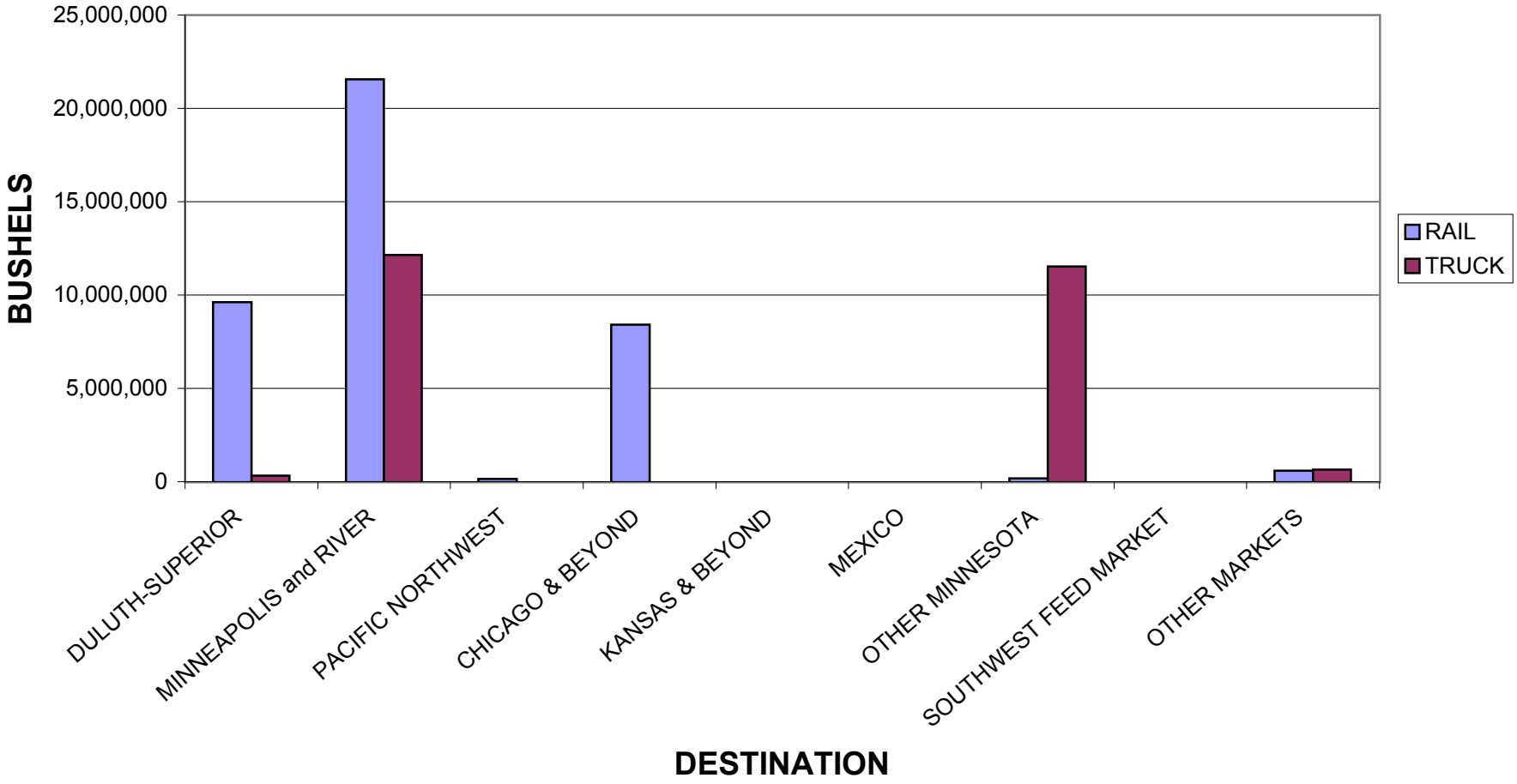
GRAPH 44
ESTIMATED CRD1 CORN DESTINATIONS 7/99-6/00
IN BUSHELS



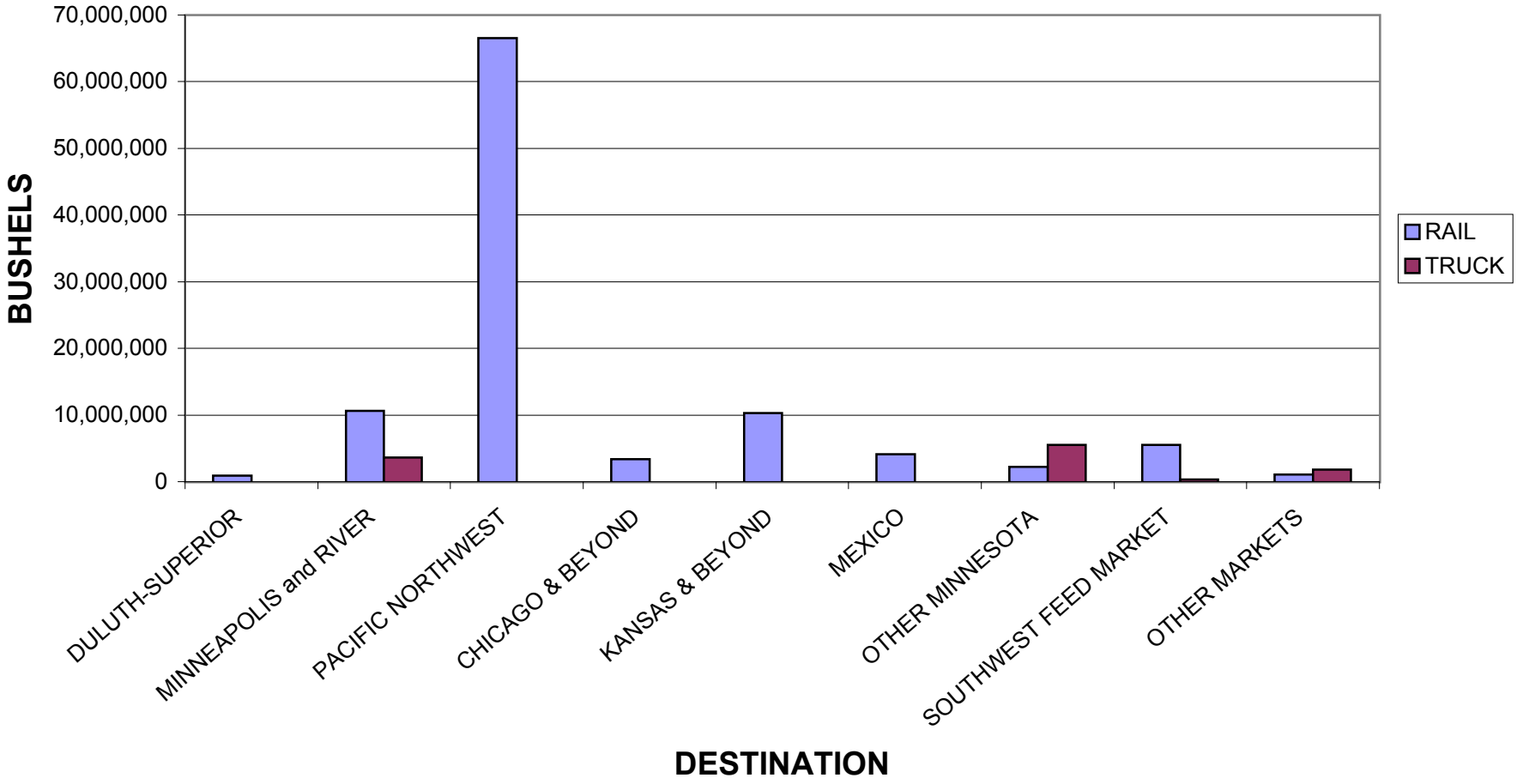
GRAPH 45
ESTIMATED CRD 4 CORN DESTINATIONS 7/99-6/00
IN BUSHELS



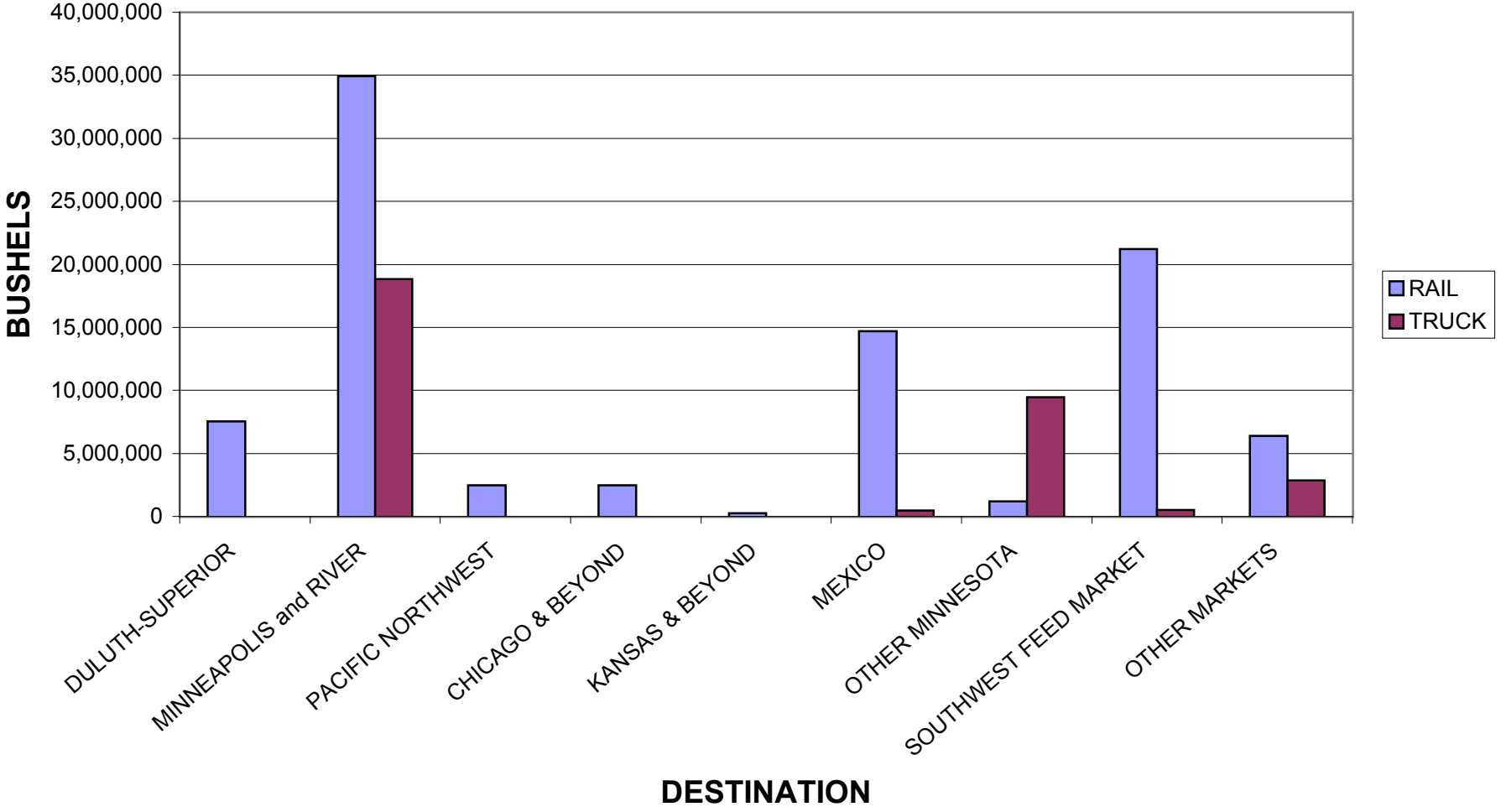
GRAPH 46
ESTIMATED CRD 5 CORN DESTINATIONS 7/99-6/00
IN BUSHELS



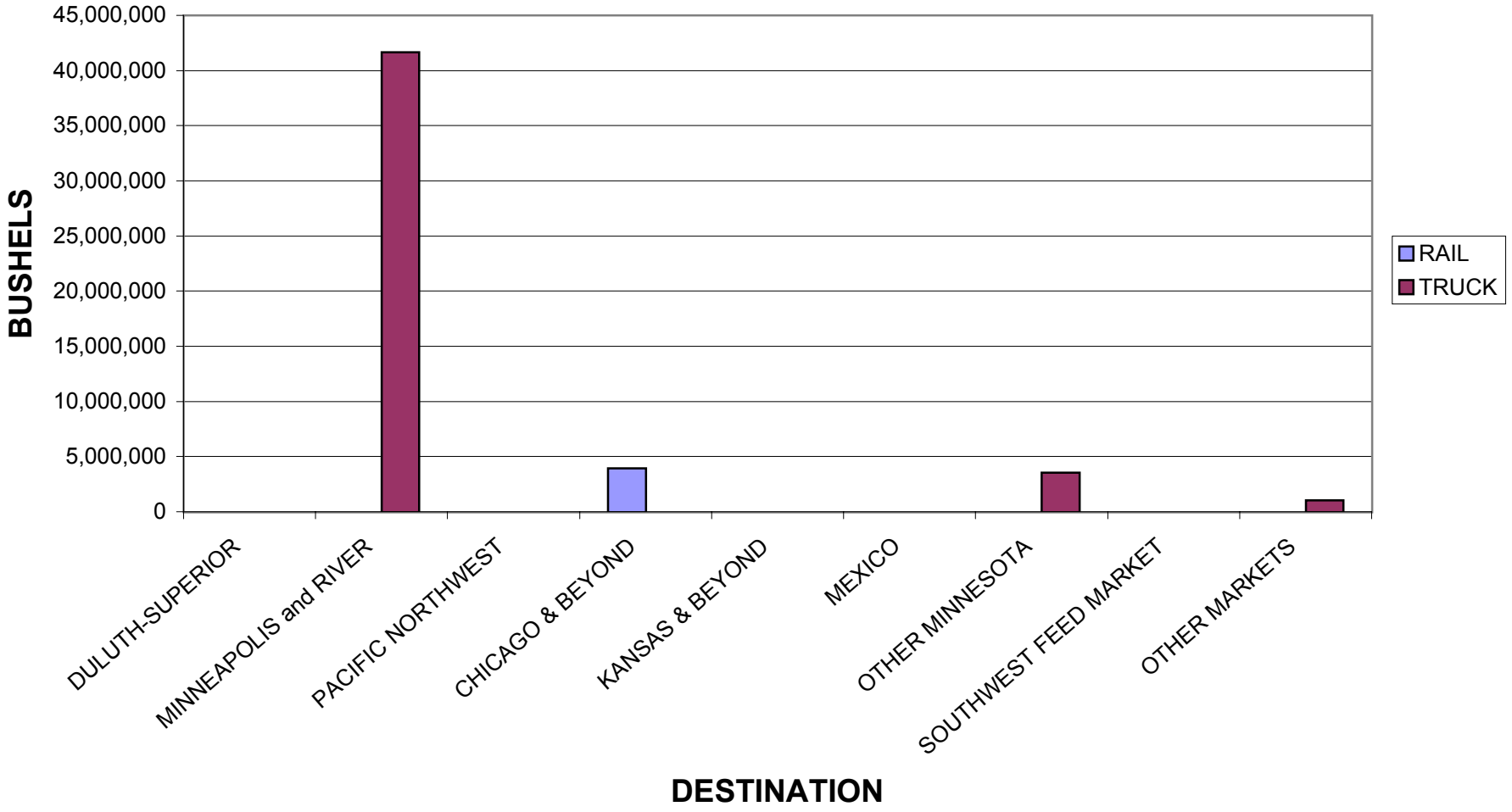
GRAPH 47
ESTIMATED CRD 7 CORN DESTINATIONS 7/99-6/00
IN BUSHELS



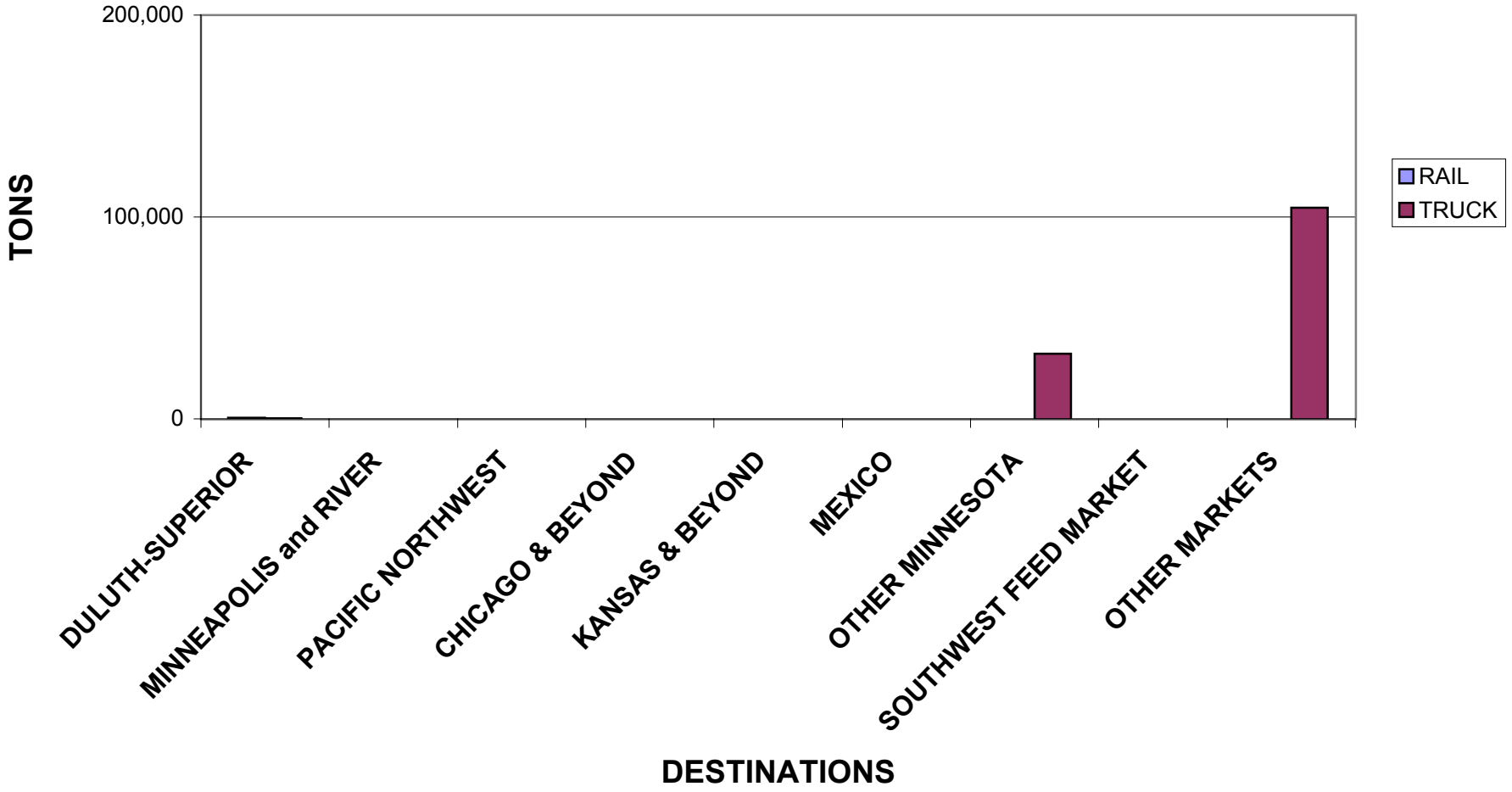
GRAPH 48
ESTIMATED CRD 8 CORN DESTINATIONS 7/99-6/00
IN BUSHELS



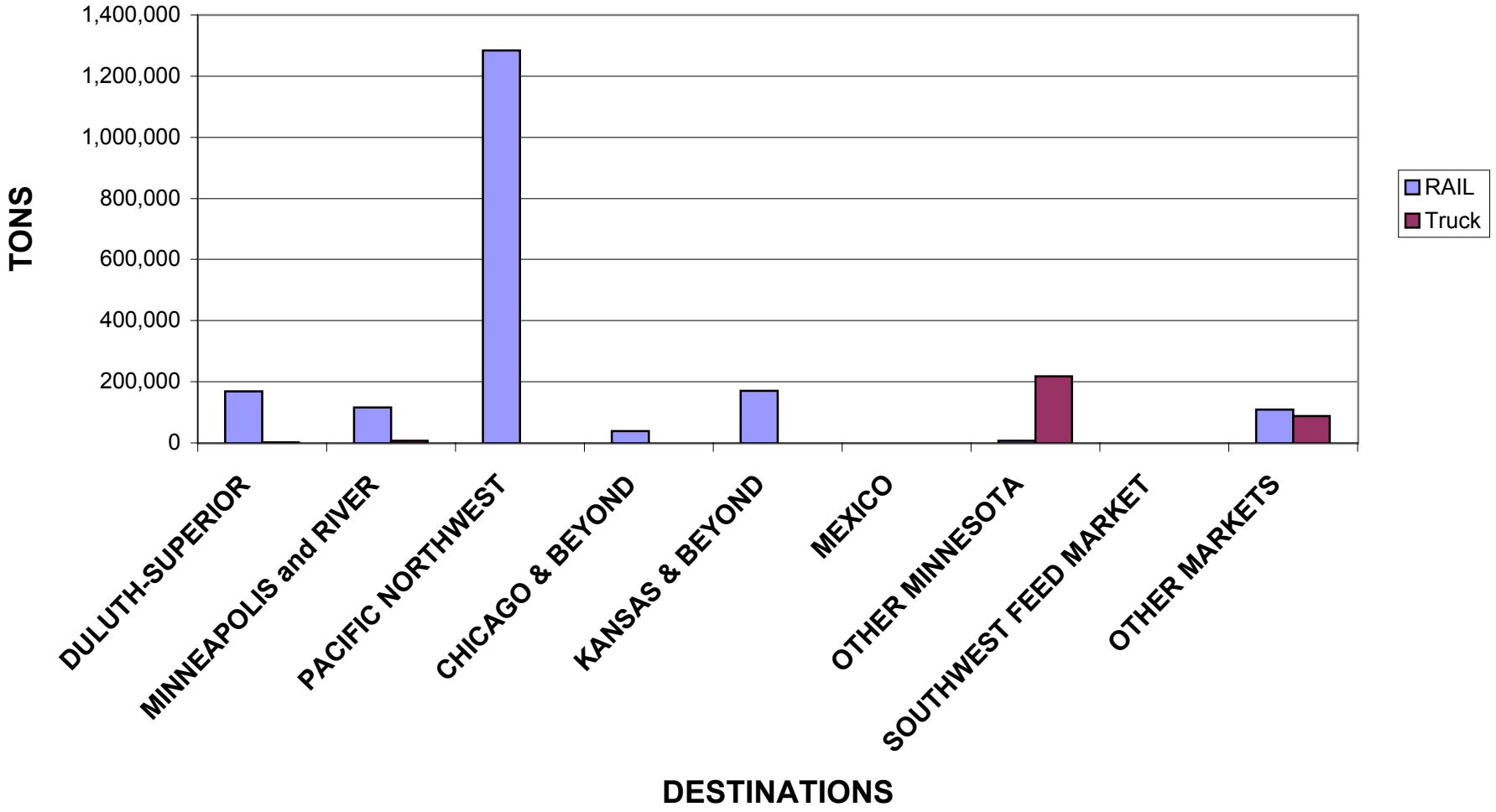
GRAPH 49
ESTIMATED CRD 9 CORN DESTINATIONS 7/99-6/00
IN BUSHELS



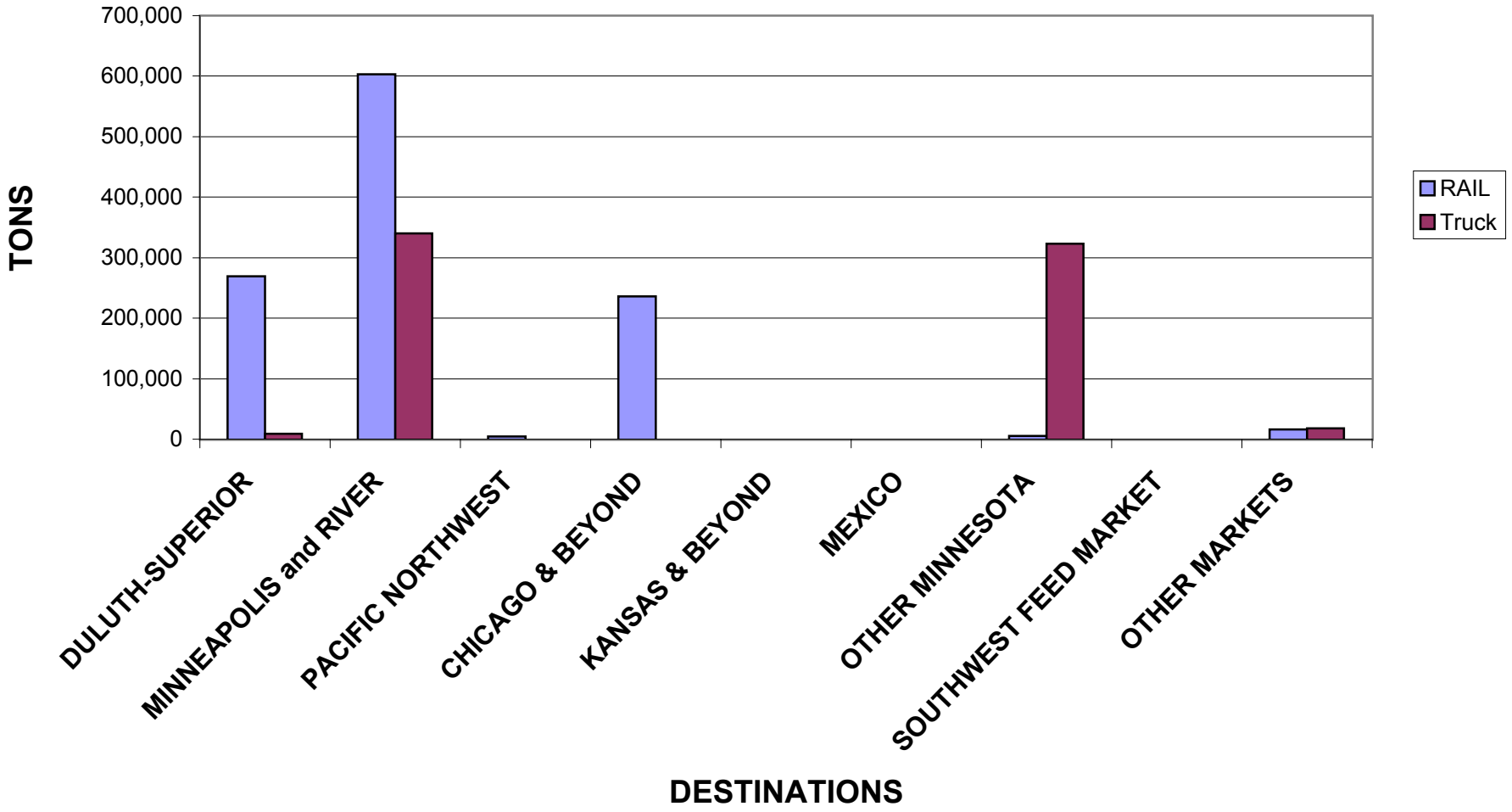
GRAPH 50
ESTIMATED CRD1 CORN DESTINATIONS 7/99-6/00
TONS



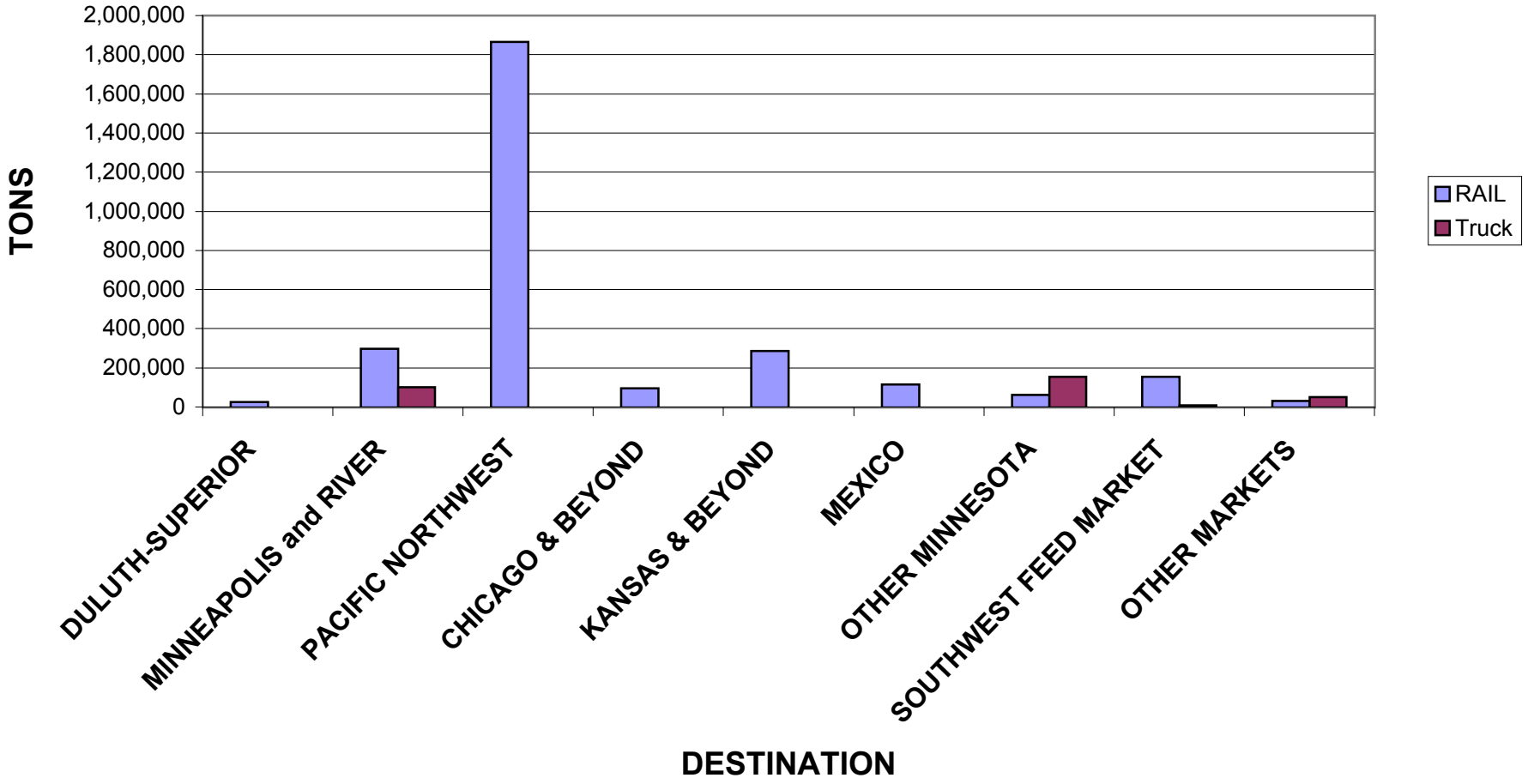
GRAPH 51
ESTIMATED CRD 4 CORN DESTINATIONS 7/99-6/00
TONS



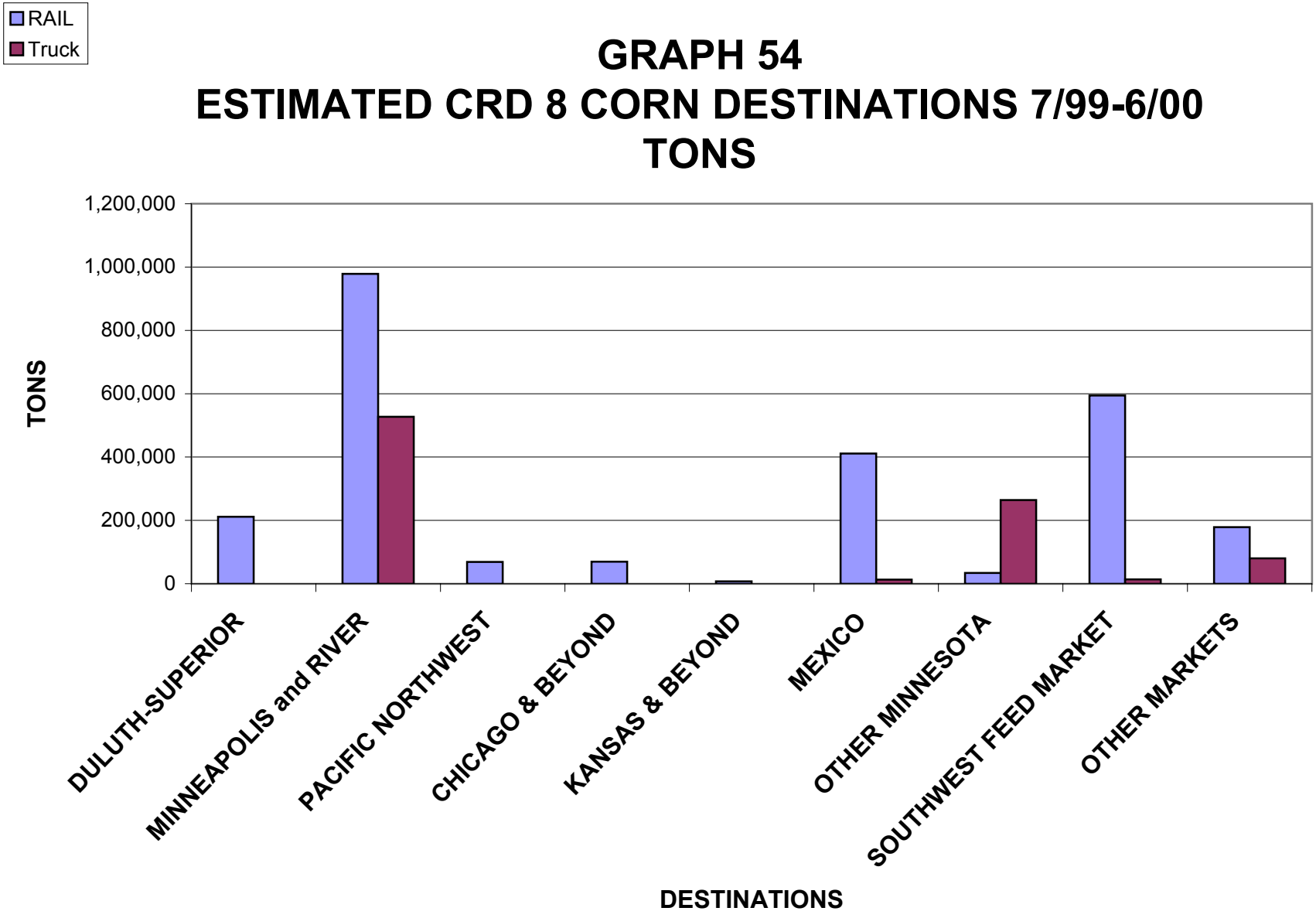
GRAPH 52
ESTIMATED CRD 5 CORN DESTINATIONS 7/99-6/00
TONS



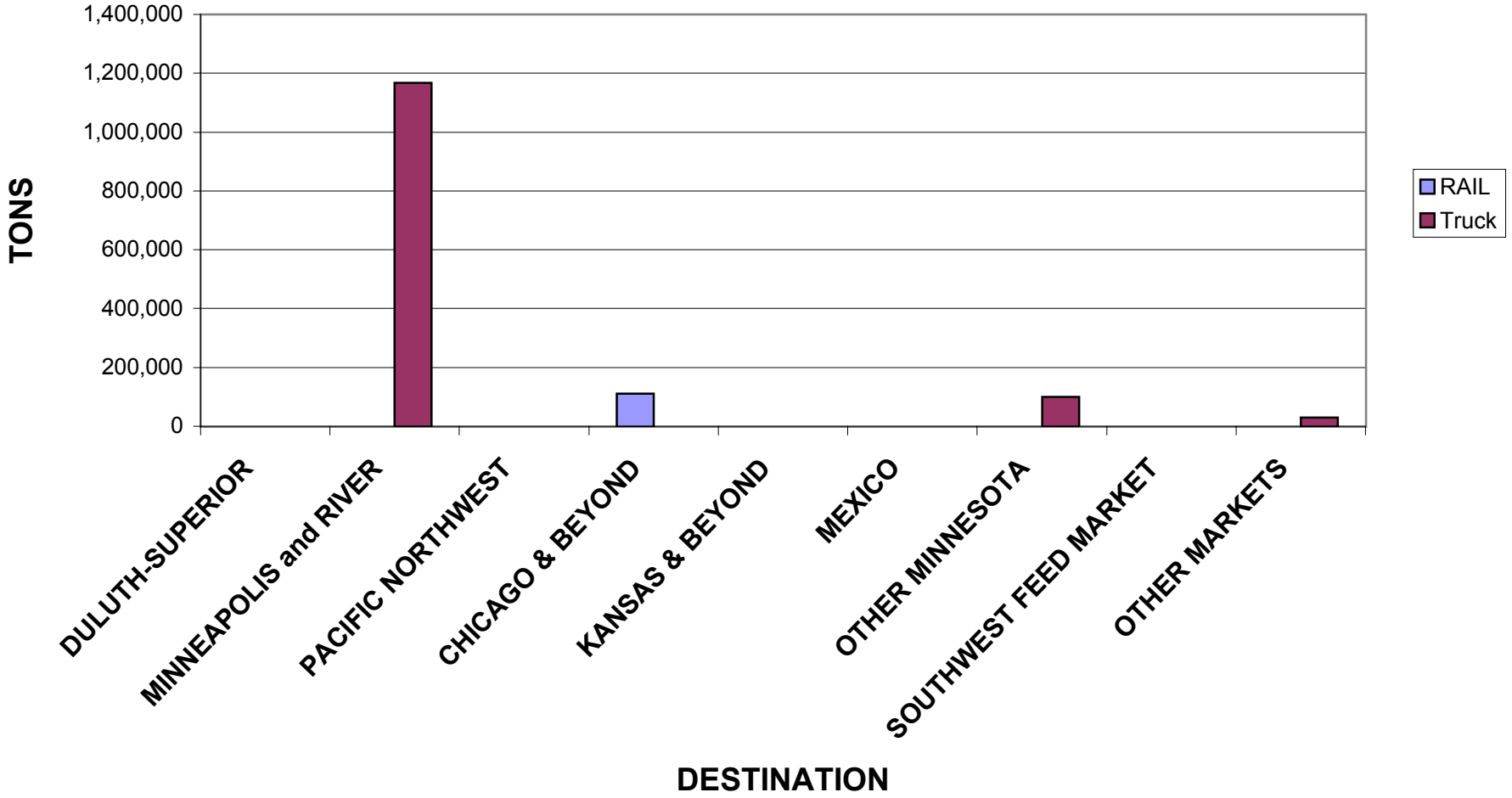
GRAPH 53
ESTIMATED CRD 7 CORN DESTINATIONS 7/99-6/00
TONS



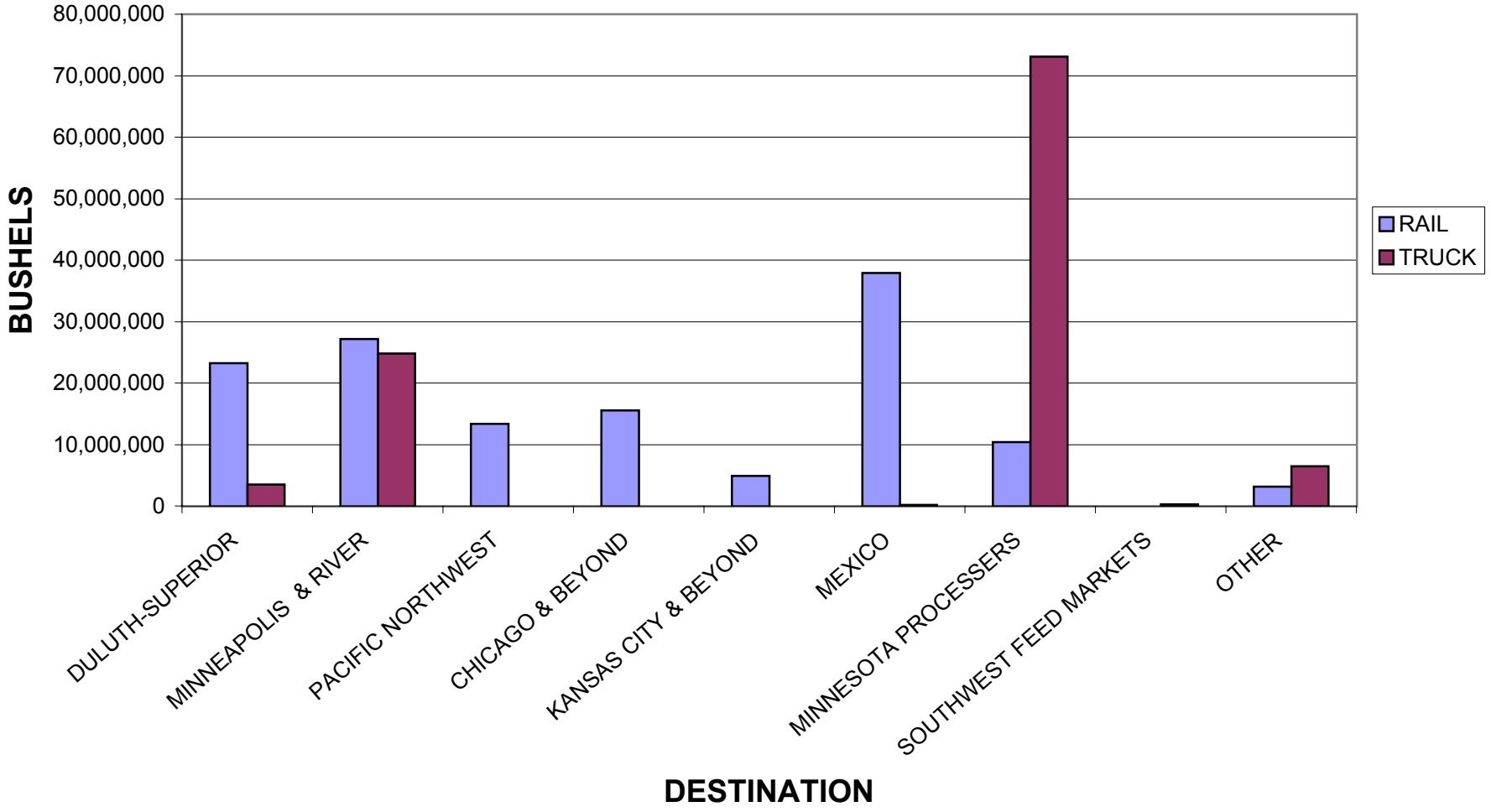
GRAPH 54
ESTIMATED CRD 8 CORN DESTINATIONS 7/99-6/00
TONS



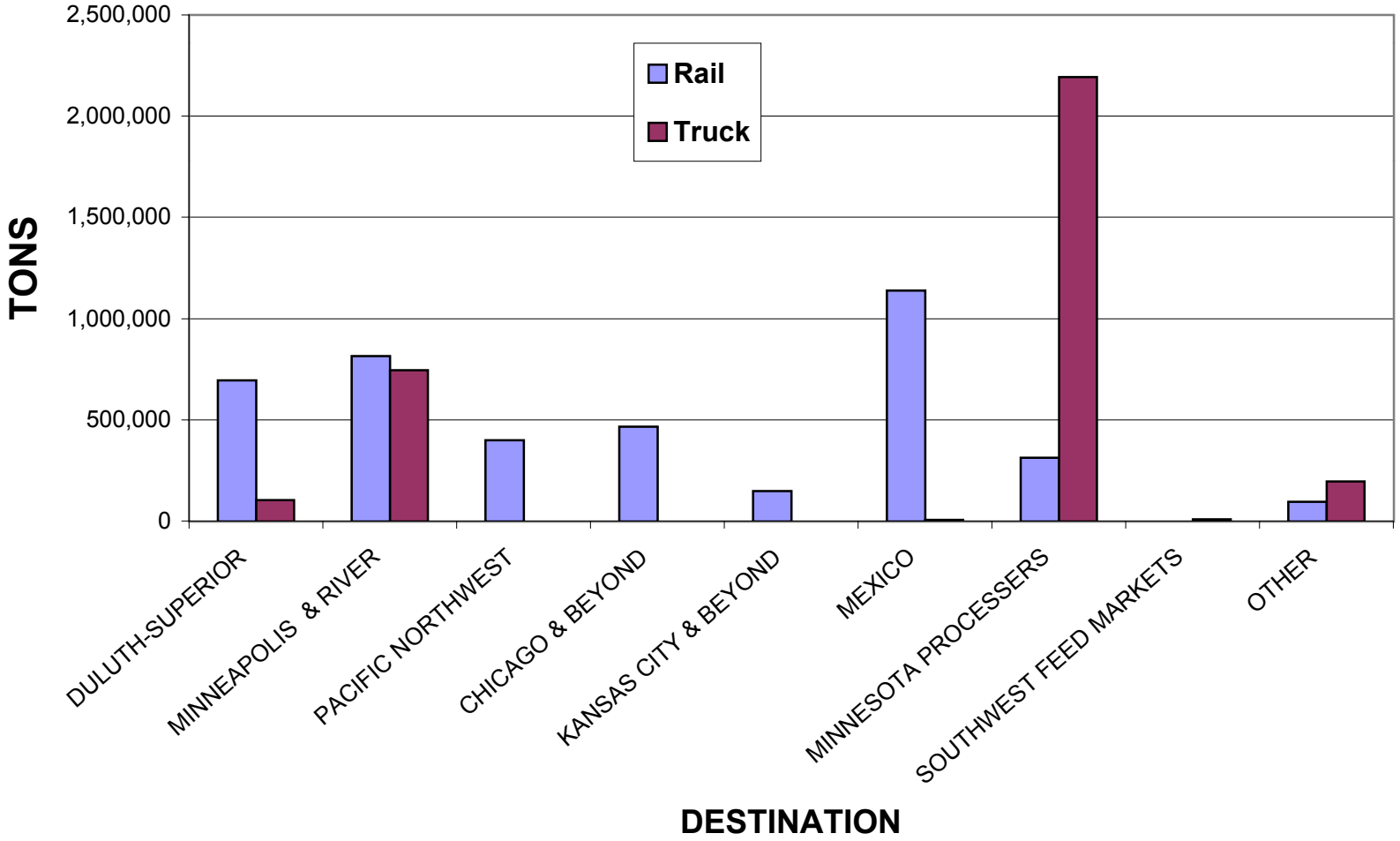
GRAPH 55
ESTIMATED CRD 9 CORN DESTINATIONS 7/99-6/00
TONS



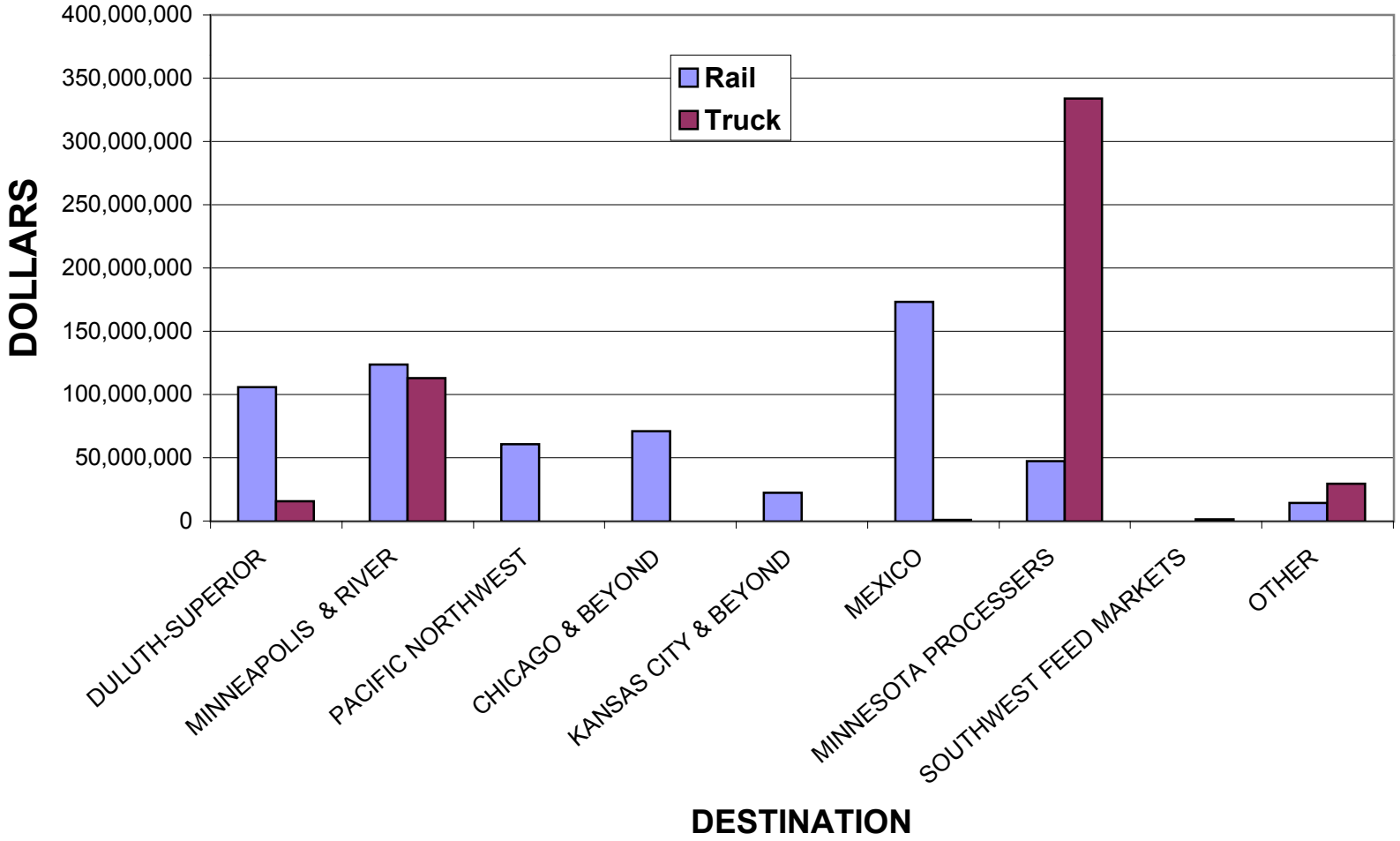
GRAPH 56
MINNESOTA SOYBEAN DESTINATIONS 7/99-6/00
BUSHELS



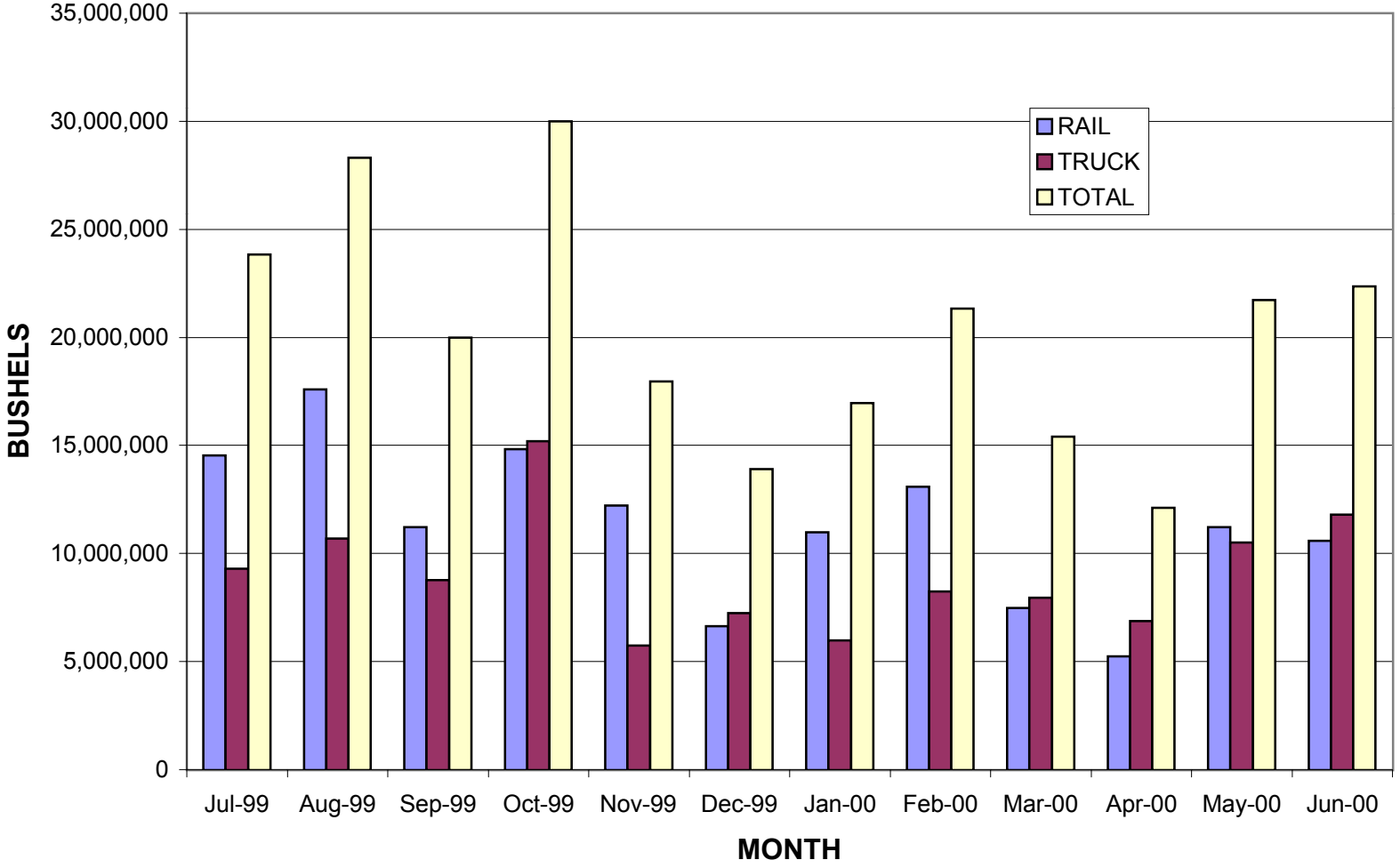
GRAPH 57
MINNESOTA SOYBEAN DESTINATION 7/99-6/00
TONS



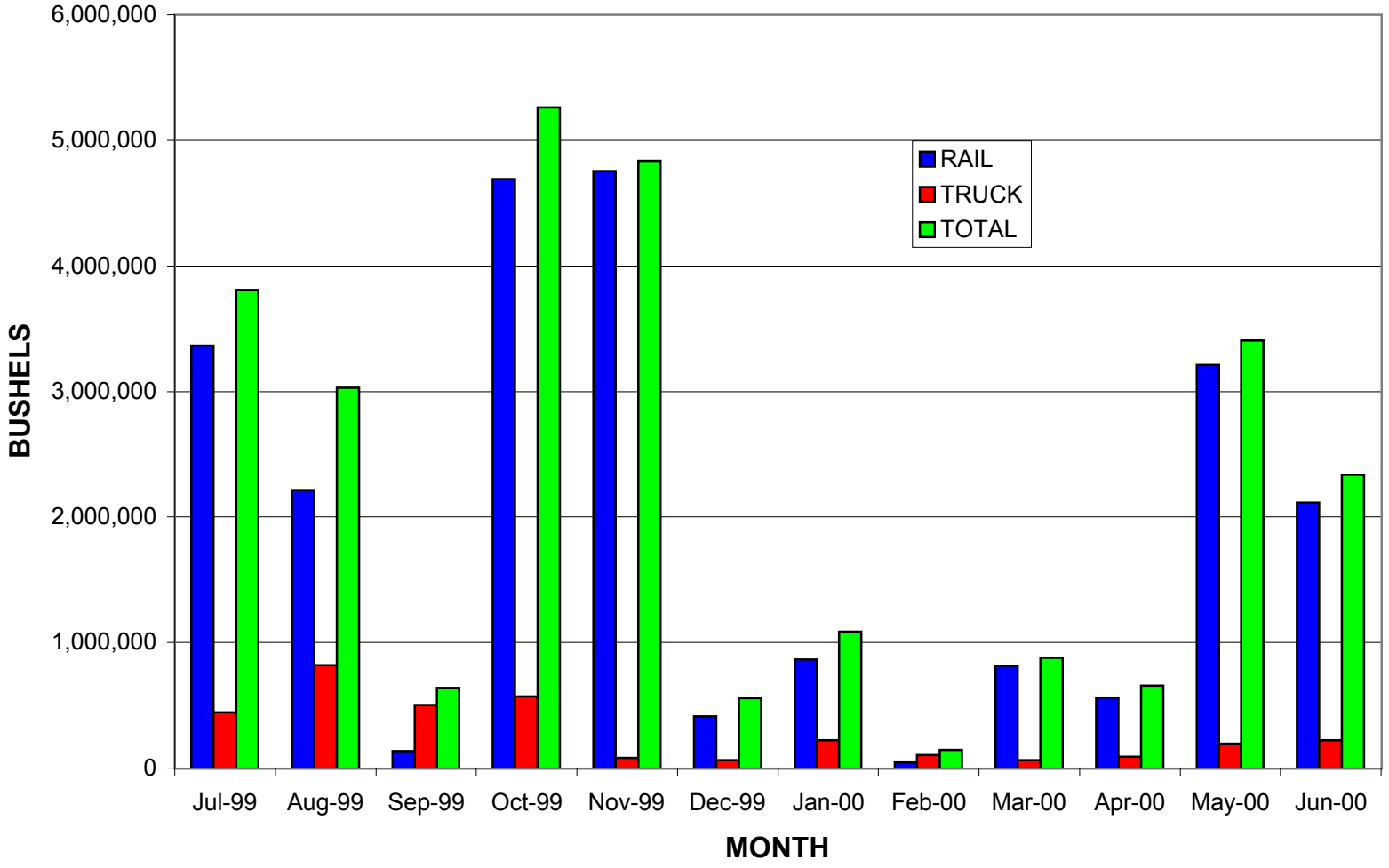
GRAPH 58
VALUE OF MINNESOTA SOYBEAN SHIPMENTS 7/99-6/00 AT $4.55 PER BUSHEL



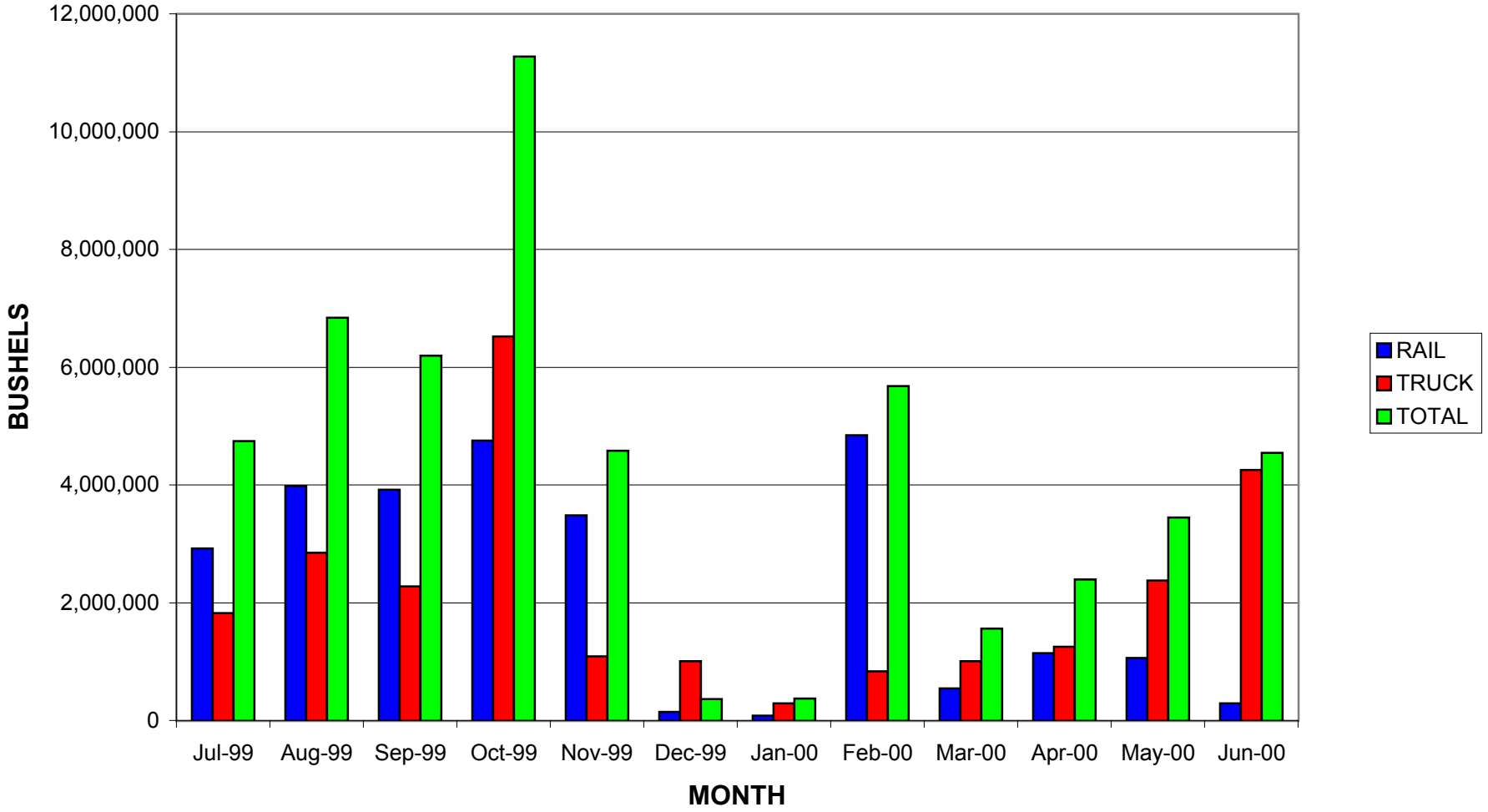
GRAPH 59
MINNESOTA SOYBEAN SHIPMENTS BY MONTH
7/99-6/00



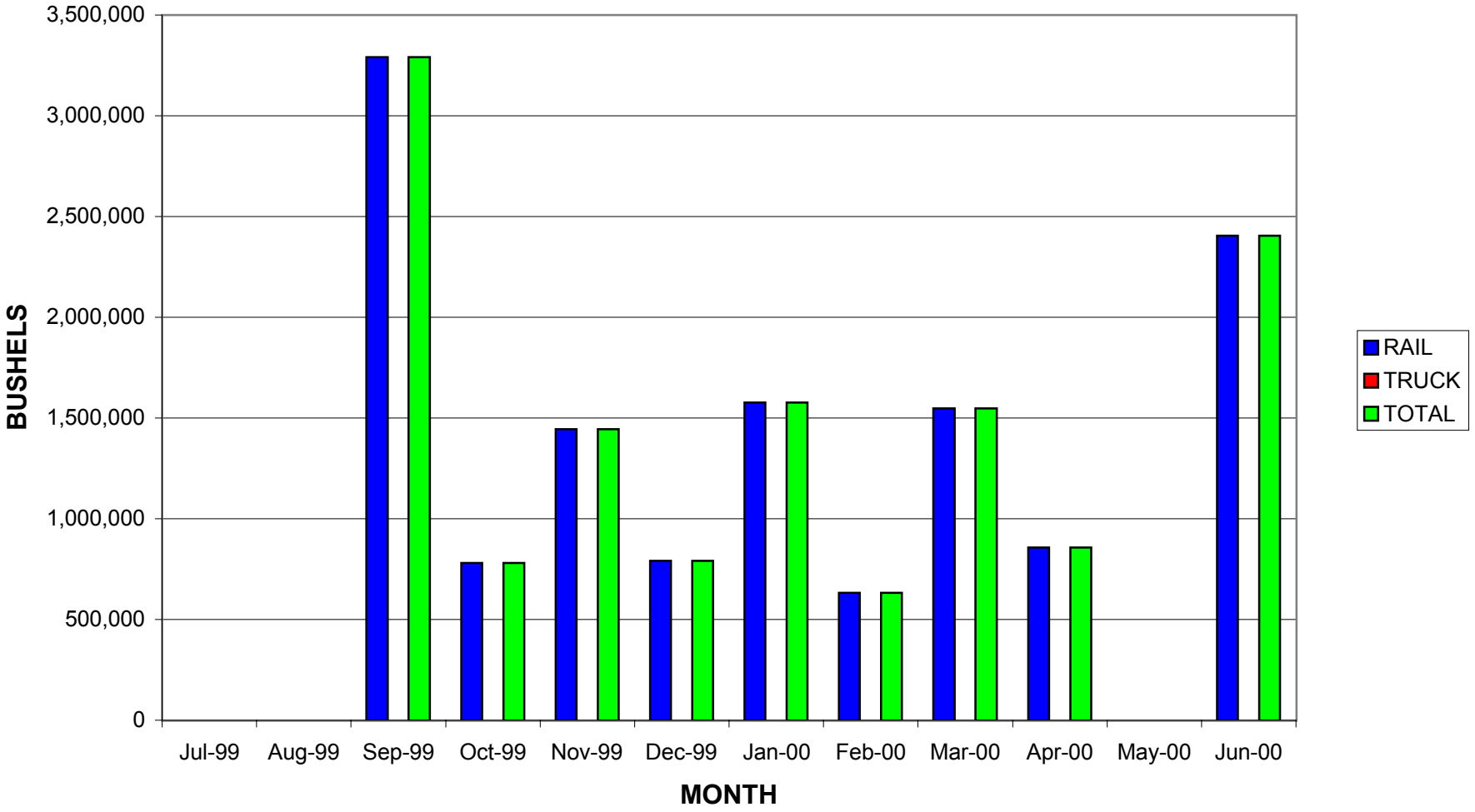
GRAPH 60
MINNESOTA SOYBEAN SHIPMENTS TO DULUTH SUPERIOR
BY MONTH 7/99-6/00



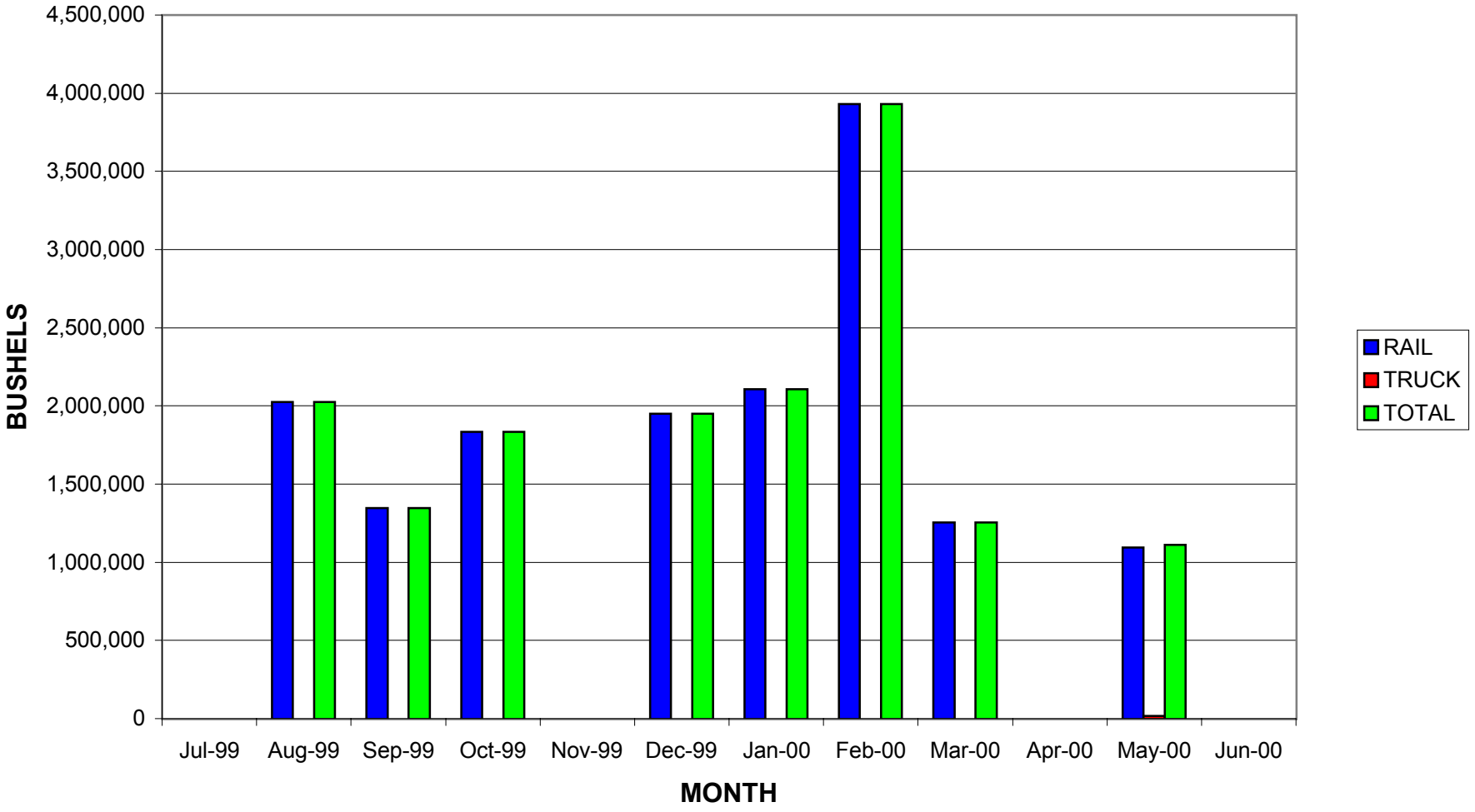
GRAPH 61
MINNESOTA SOYBEAN SHIPMENTS TO MINNEAPOLIS AND RIVER BY MONTH 7/99-6/00



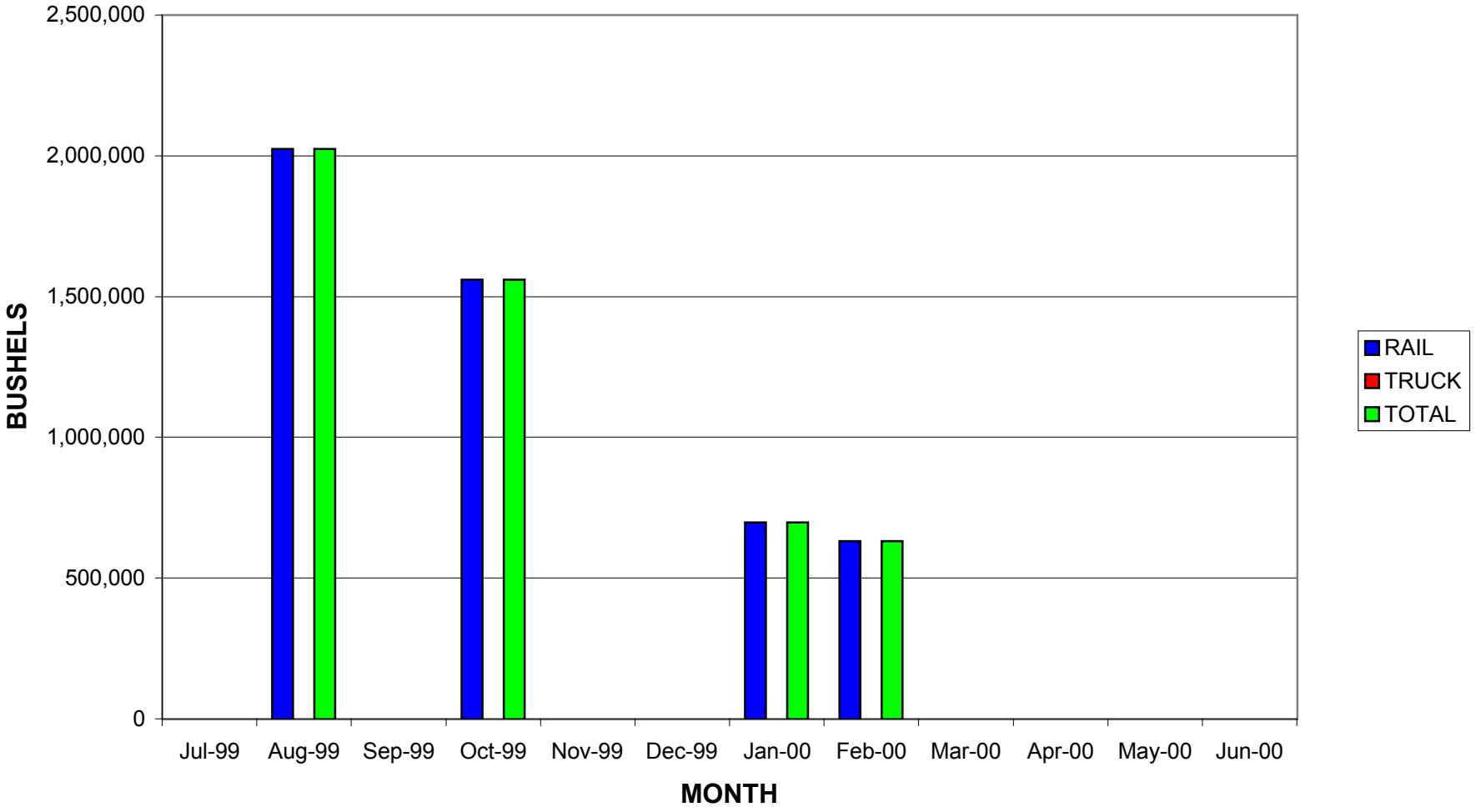
GRAPH 62
MINNESOTA SOYBEAN SHIPMENTS TO PACIFIC NORTHWEST BY MONTH 7/99-6/00



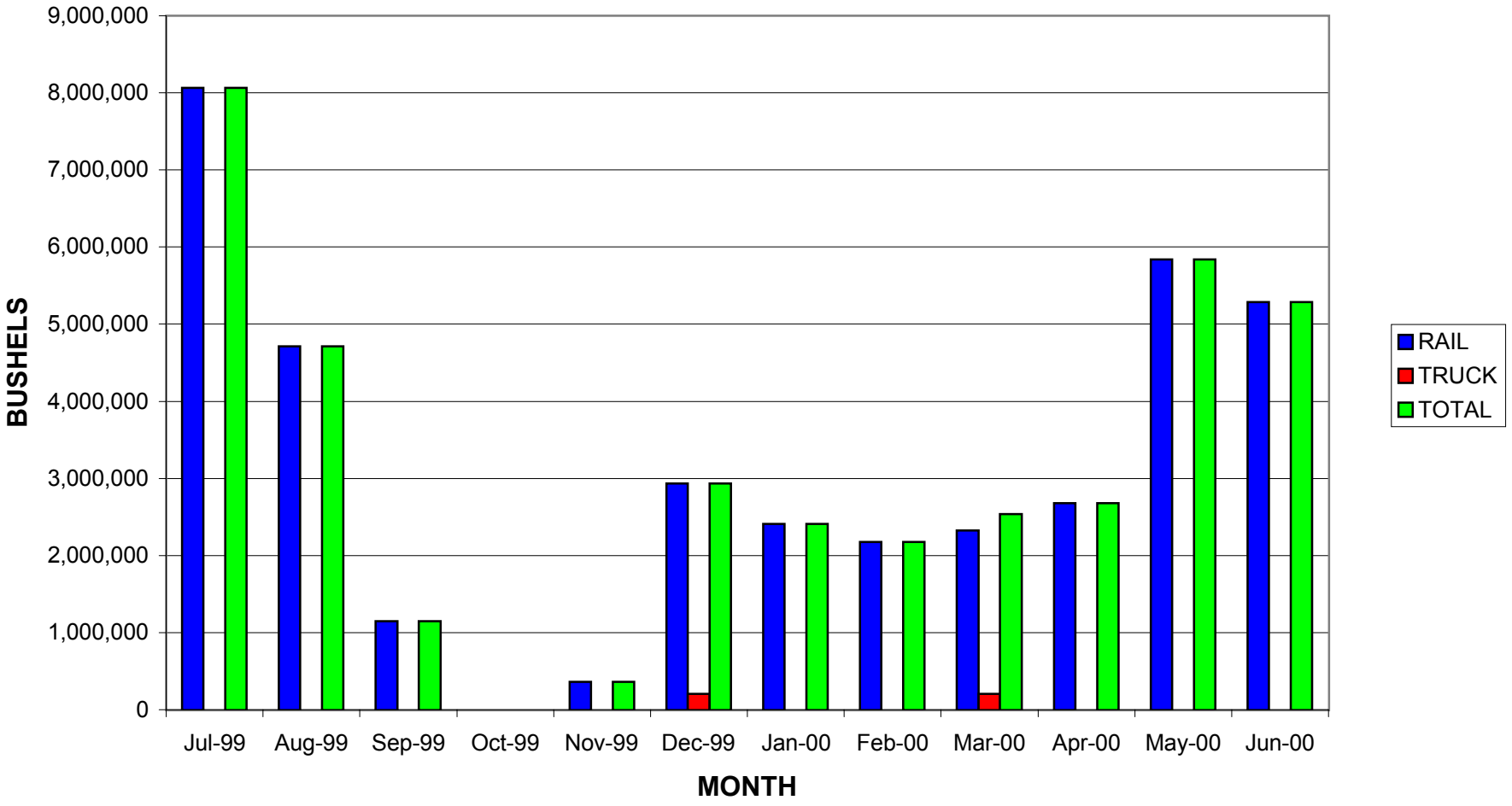
GRAPH 63
MINNESOTA SOYBEAN SHIPMENTS TO CHICAGO AND BEYOND BY MONTH 7/99-6/00



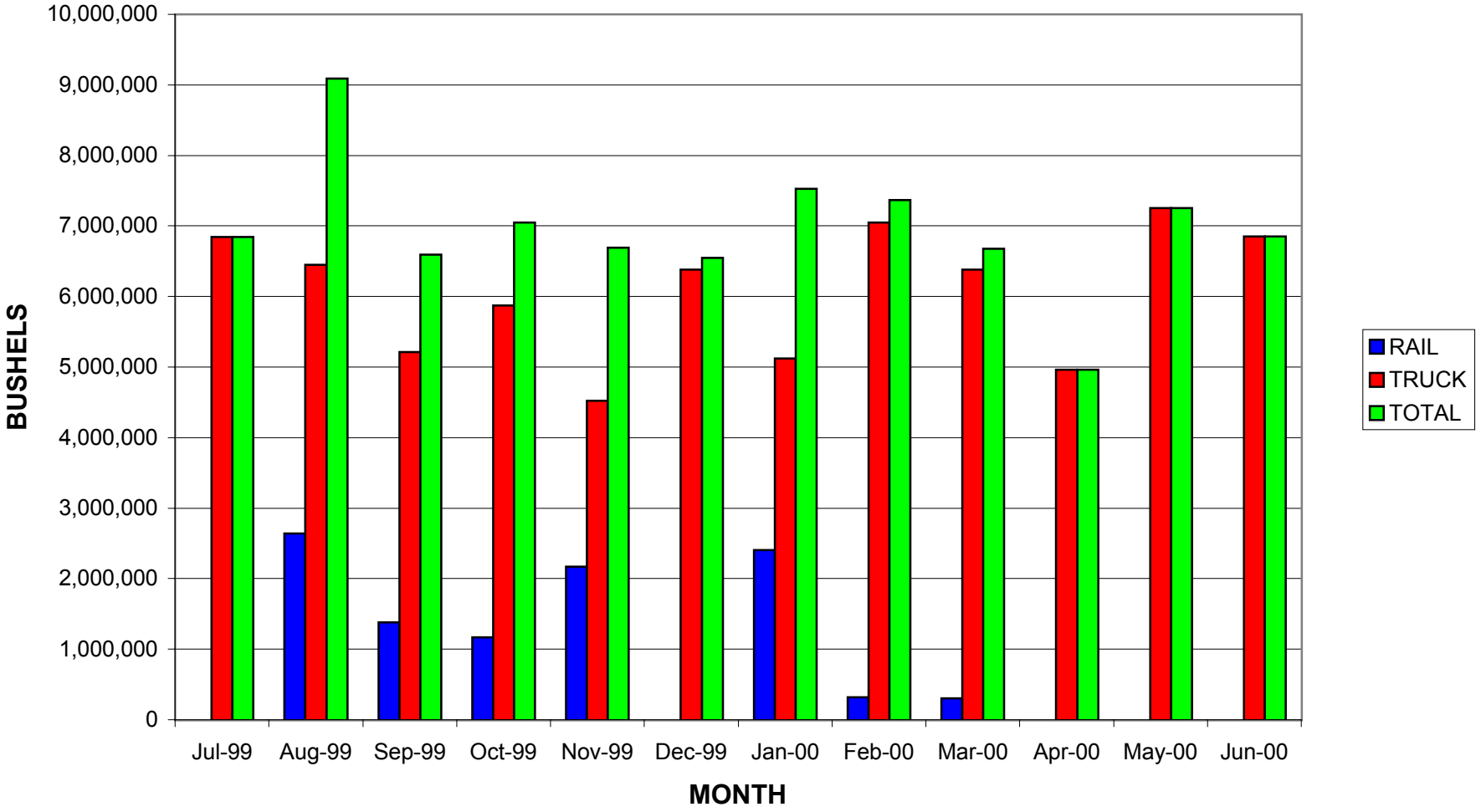
GRAPH 64
MINNESOTA SOYBEAN SHIPMENTS TO KANSAS CITY AND BEYOND
BY MONTH 7/99-6/00



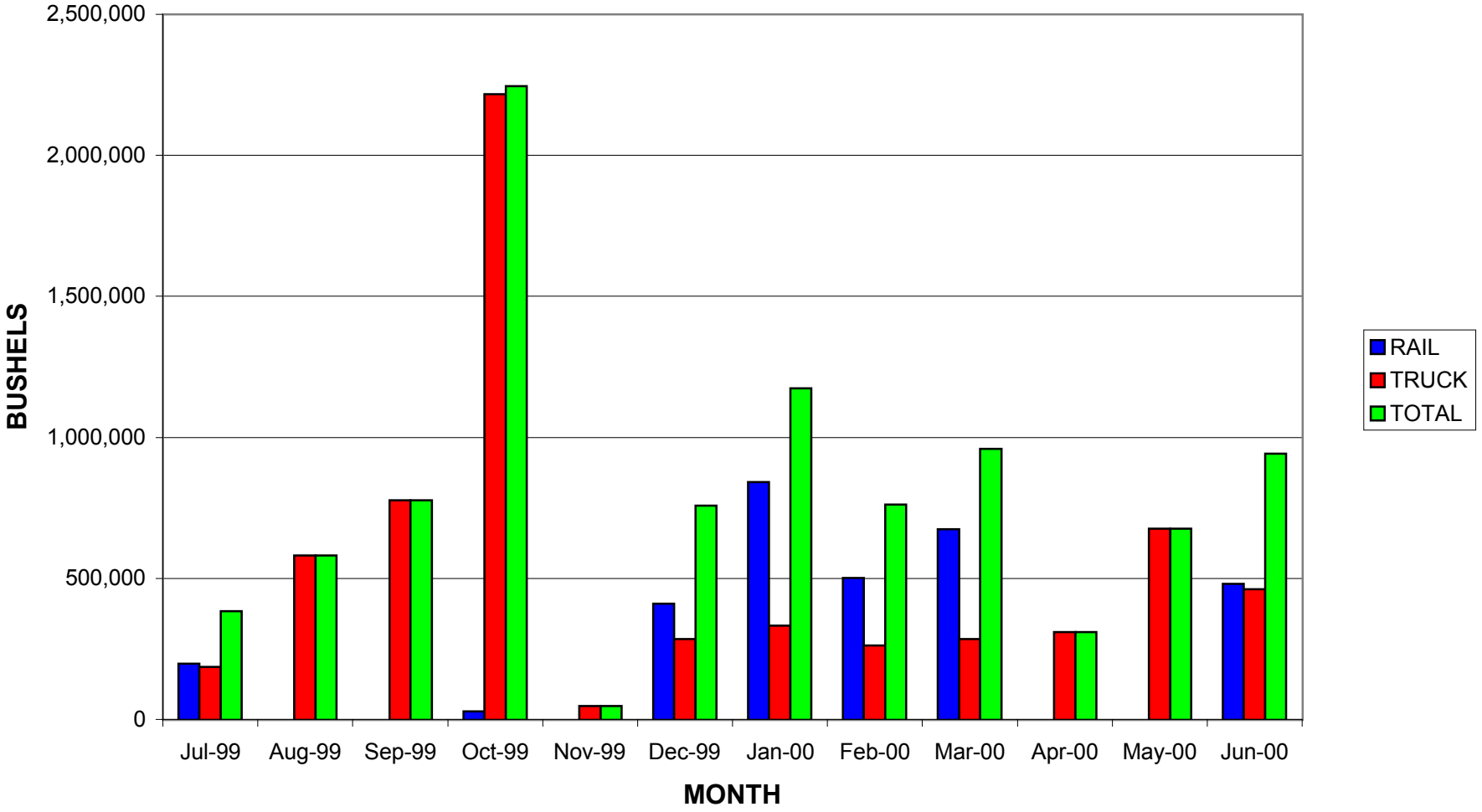
GRAPH 65
MINNESOTA SOYBEAN SHIPMENTS TO MEXICO BY MONTH
7/99-6/00



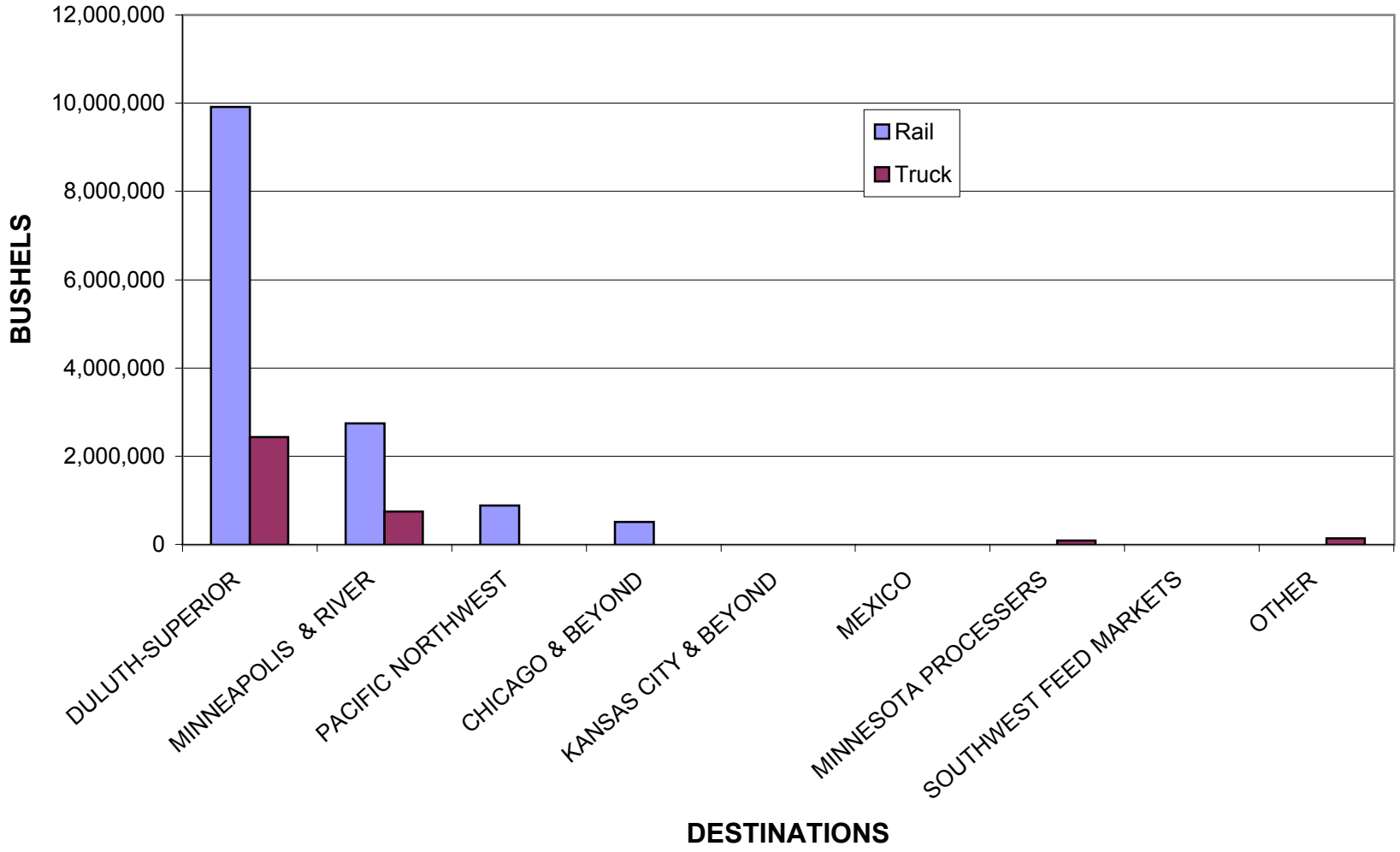
GRAPH 66
MINNESOTA SOYBEAN SHIPMENTS TO MINNESOTA PROCESSORS
BY MONTH 7/99-6/00



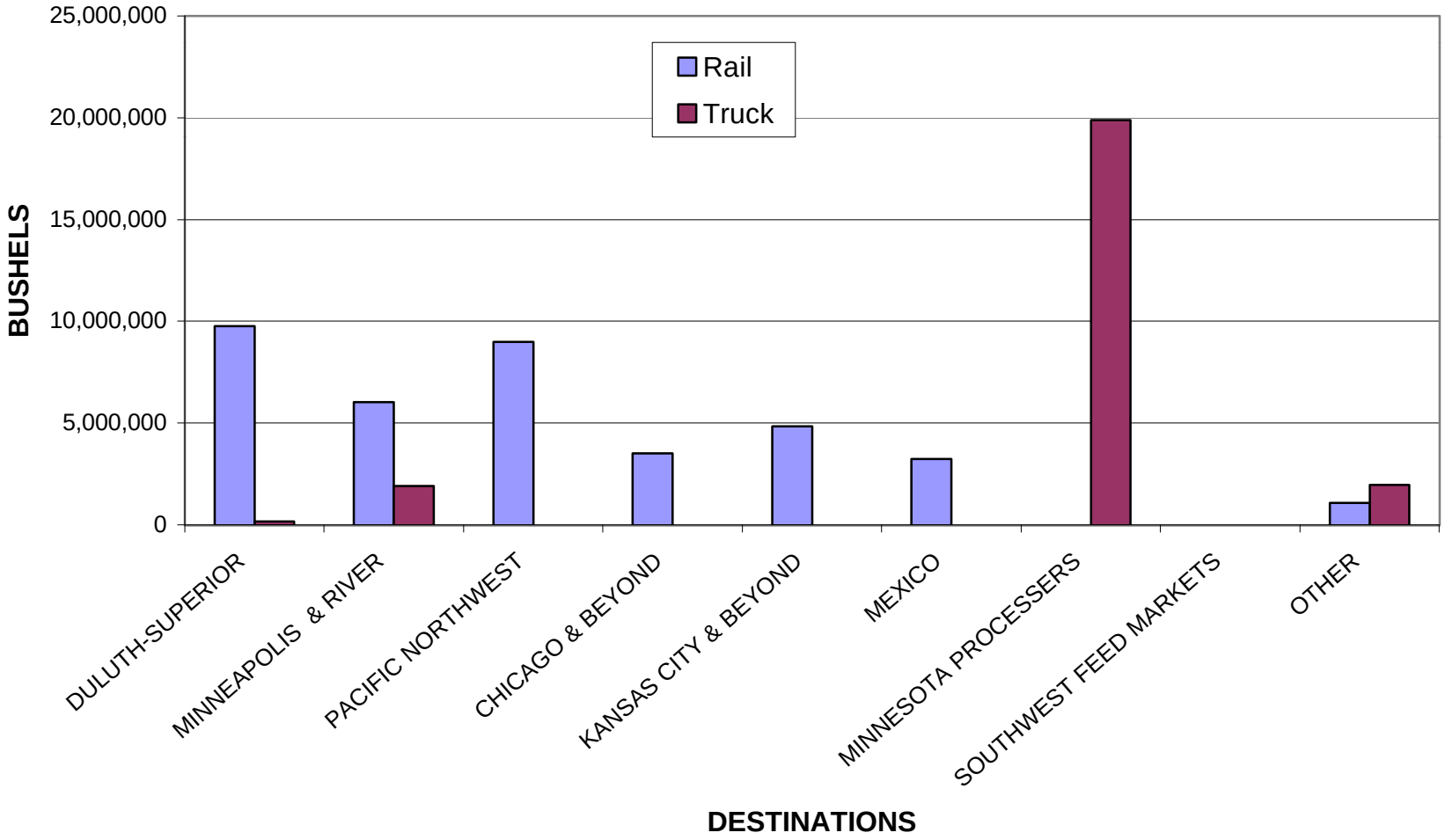
GRAPH 67
MINNESOTA SOYBEAN SHIPMENTS TO OTHER AND UNKNOWN MARKETS BY MONTH 7/99-6/00



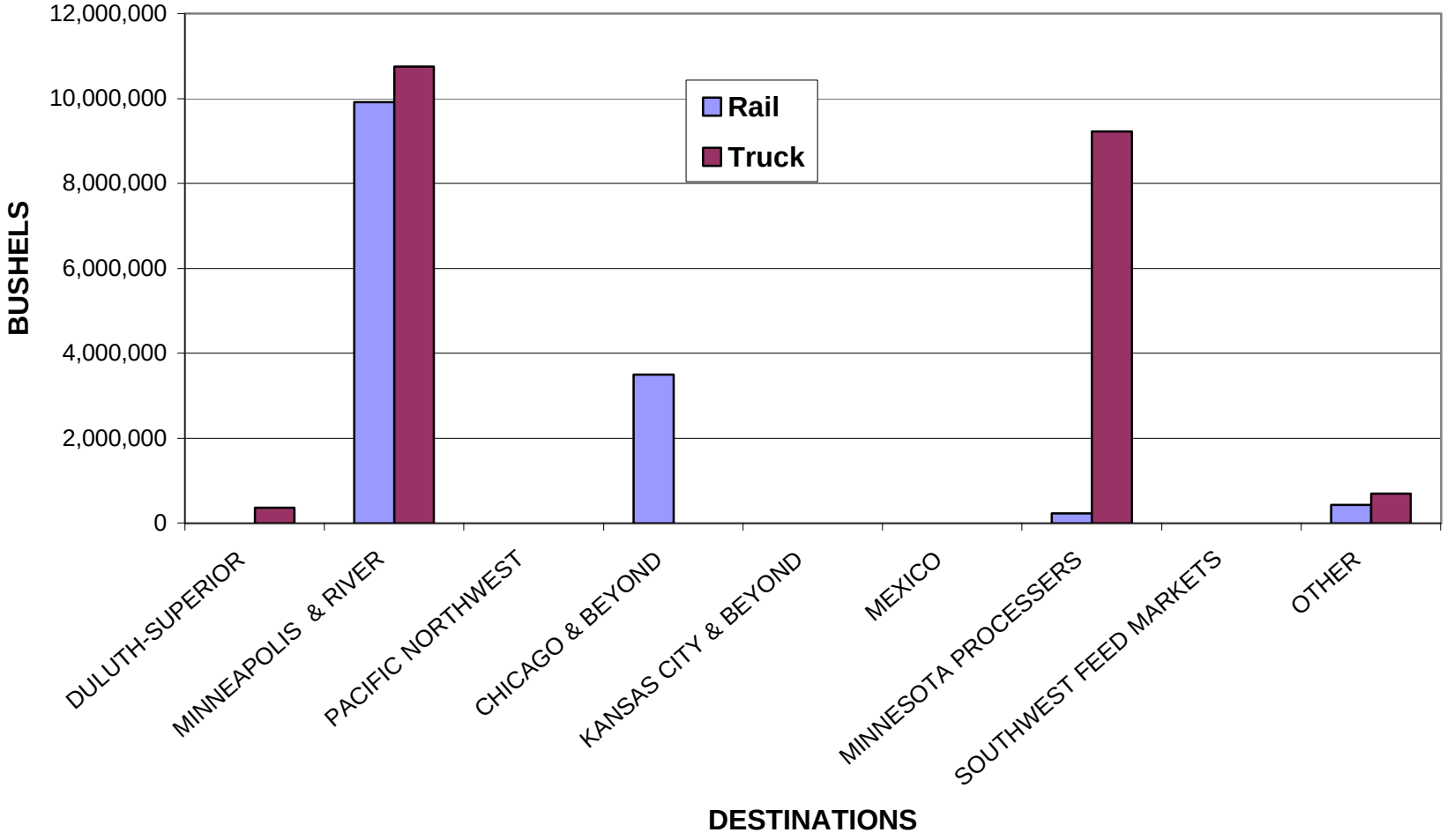
GRAPH 68
ESTIMATED CRD 1 SOYBEAN DESTINATIONS 7/99-6/00
BUSHELS



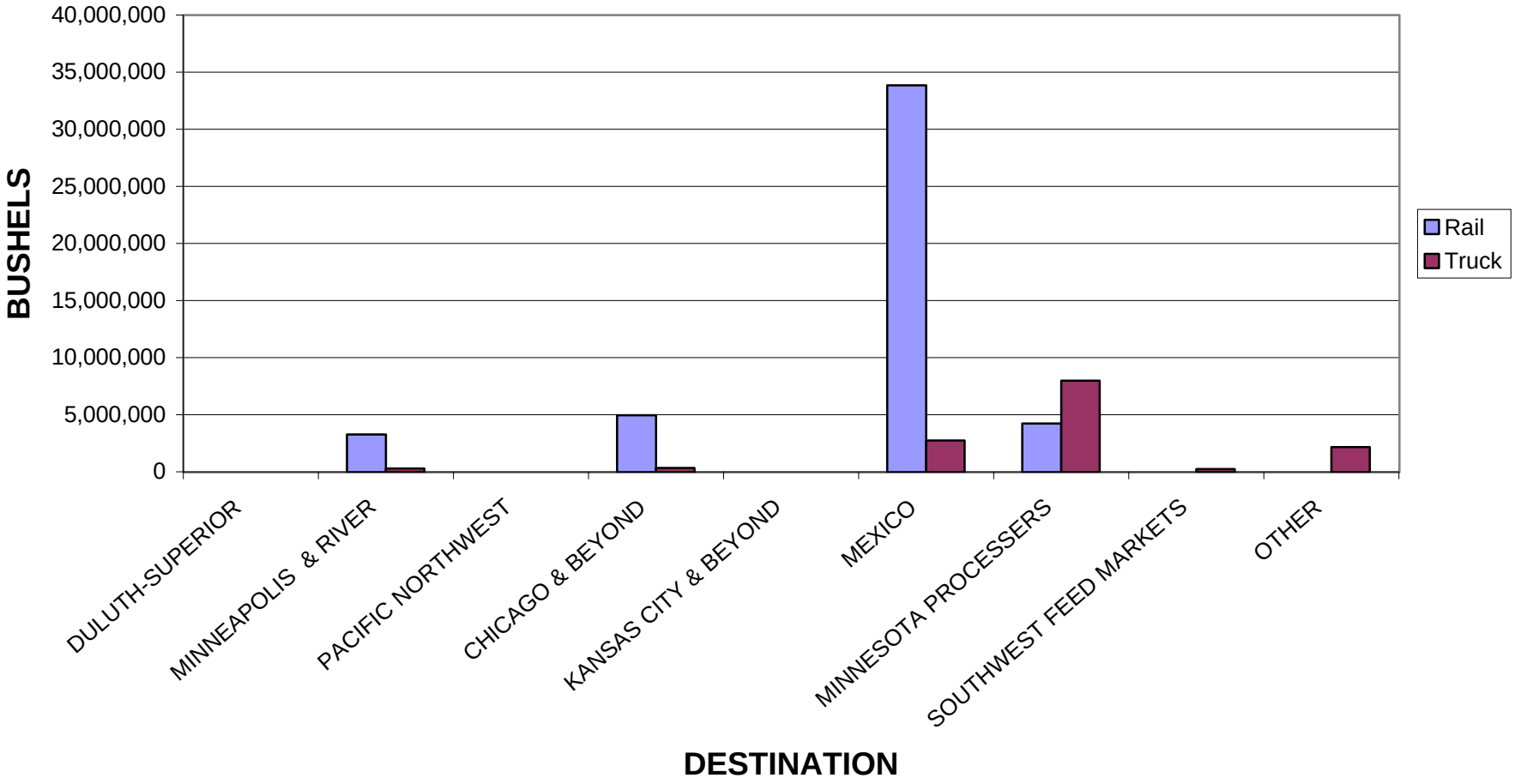
GRAPH 69
ESTIMATED CRD 4 SOYBEAN DESTINATIONS 7/99-6/00
BUSHELS



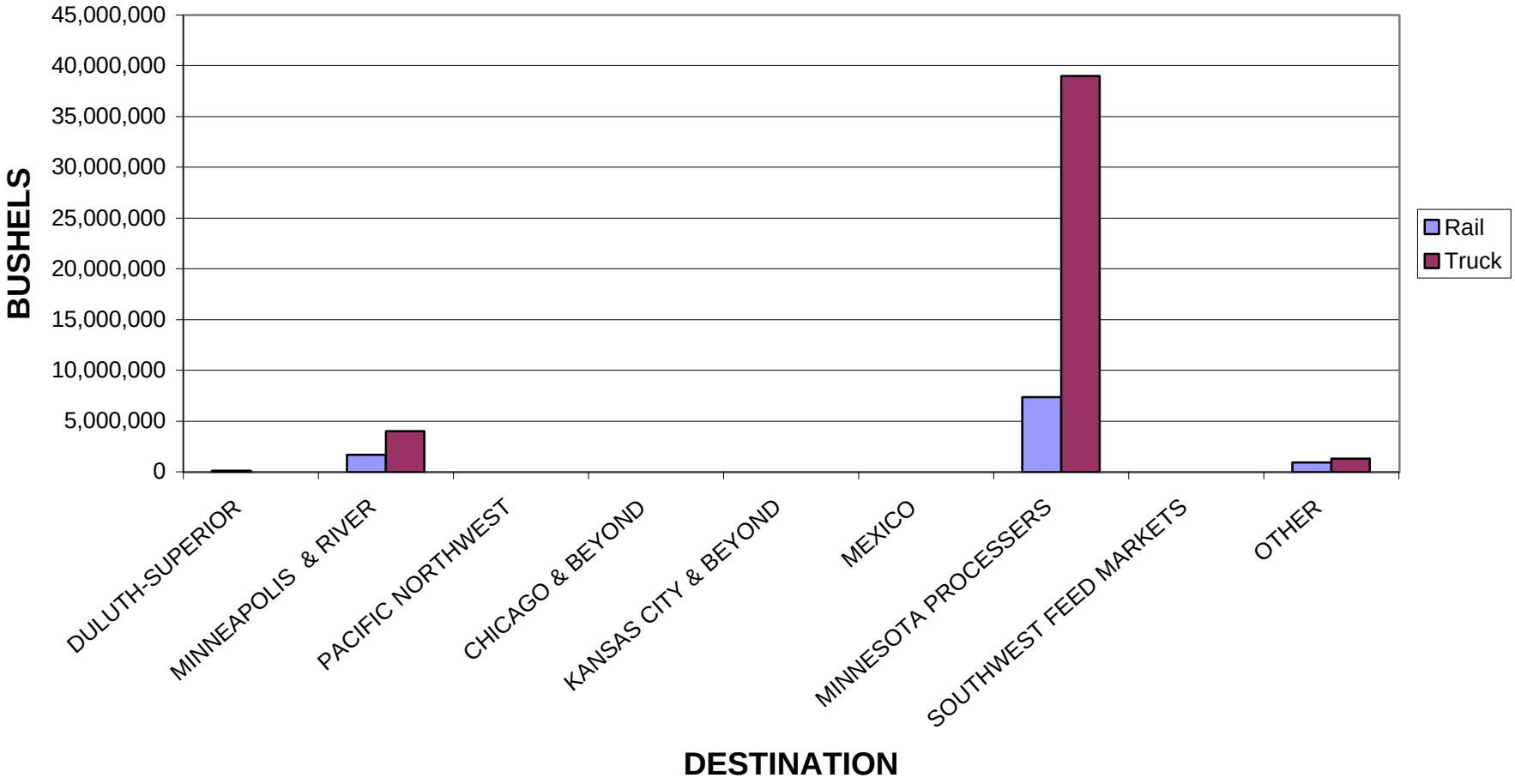
GRAPH 70
ESTIMATED CRD 5 SOYBEAN DESTINATIONS 7/99-6/00
BUSHELS



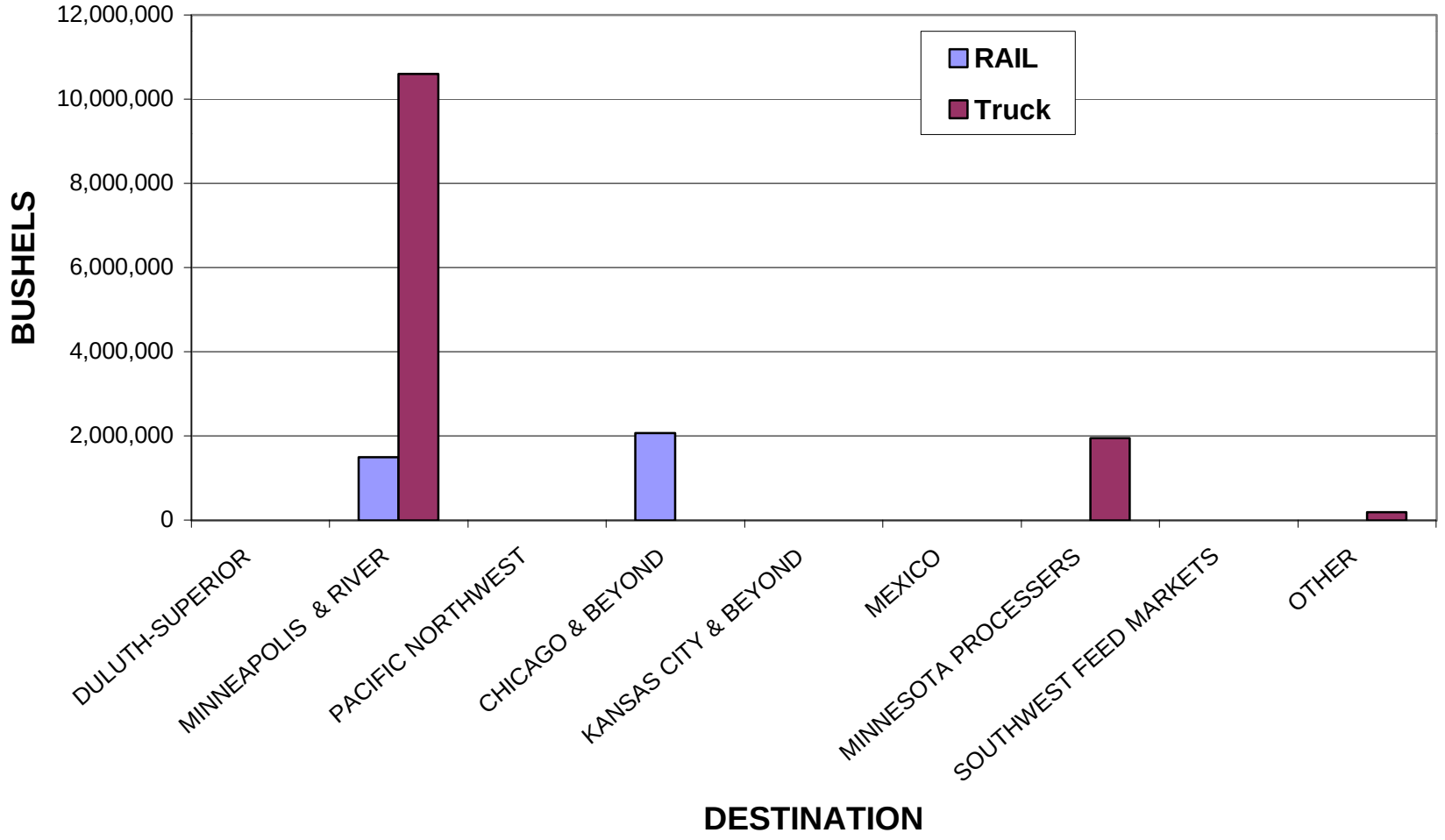
GRAPH 71
ESTIMATED CRD 7 SOYBEAN DESTINATIONS 7/99-6/00
BUSHELS



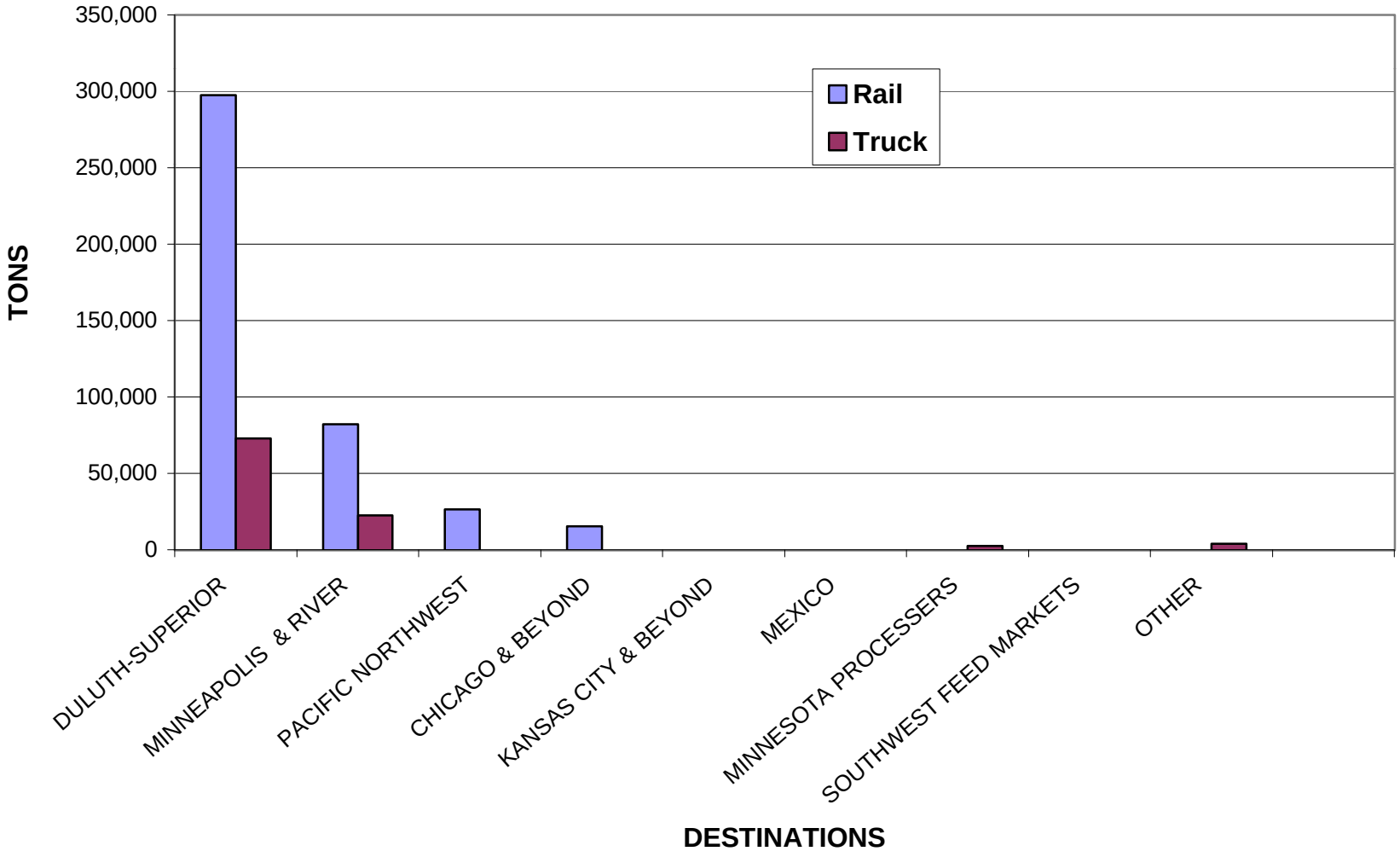
GRAPH 72
ESTIMATED CRD 8 SOYBEAN DESTINATIONS 7/99-6/00
BUSHELS



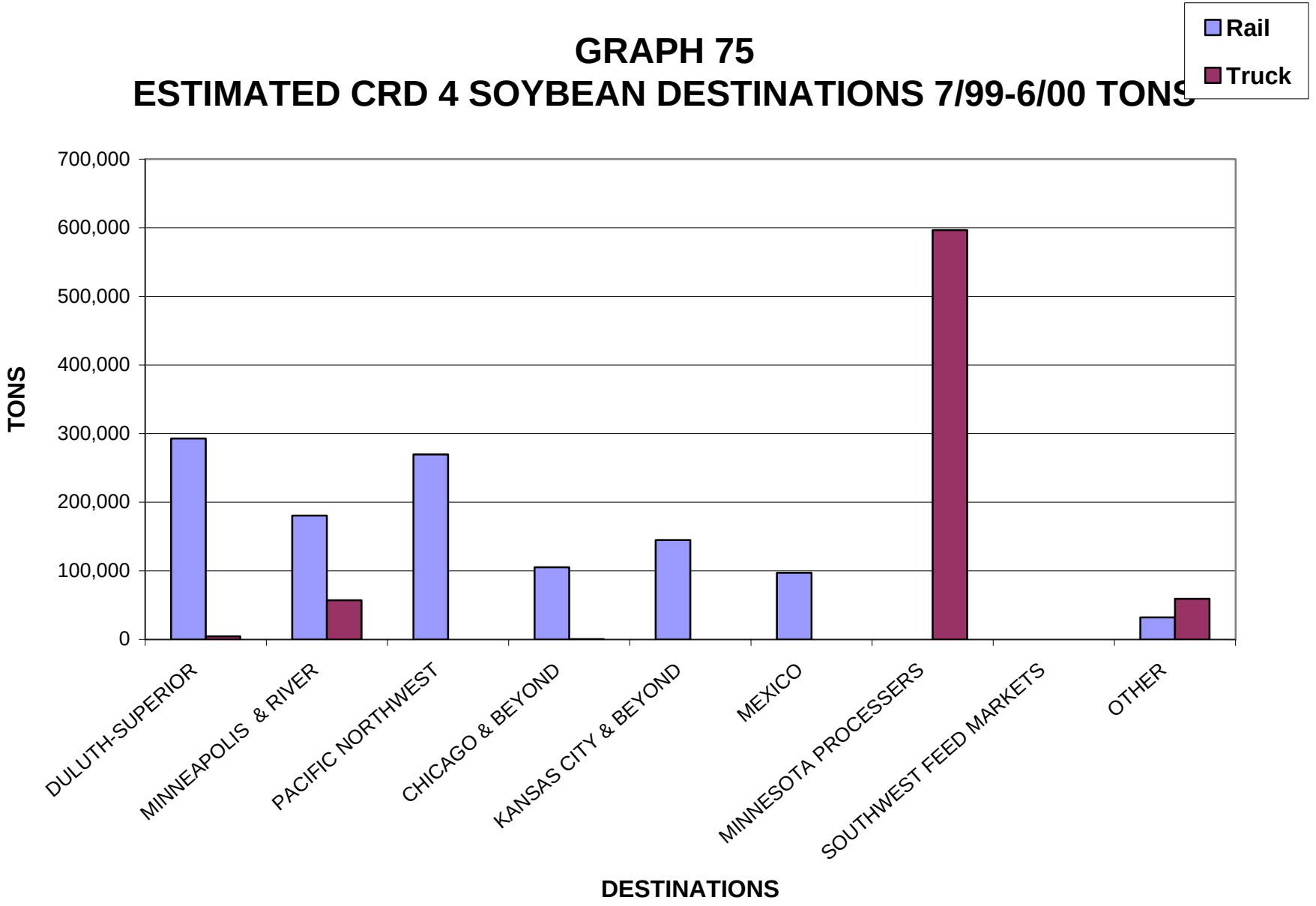
GRAPH 73
ESTIMATED CRD 9 SOYBEAN DESTINATIONS 7/99-6/00
BUSHELS



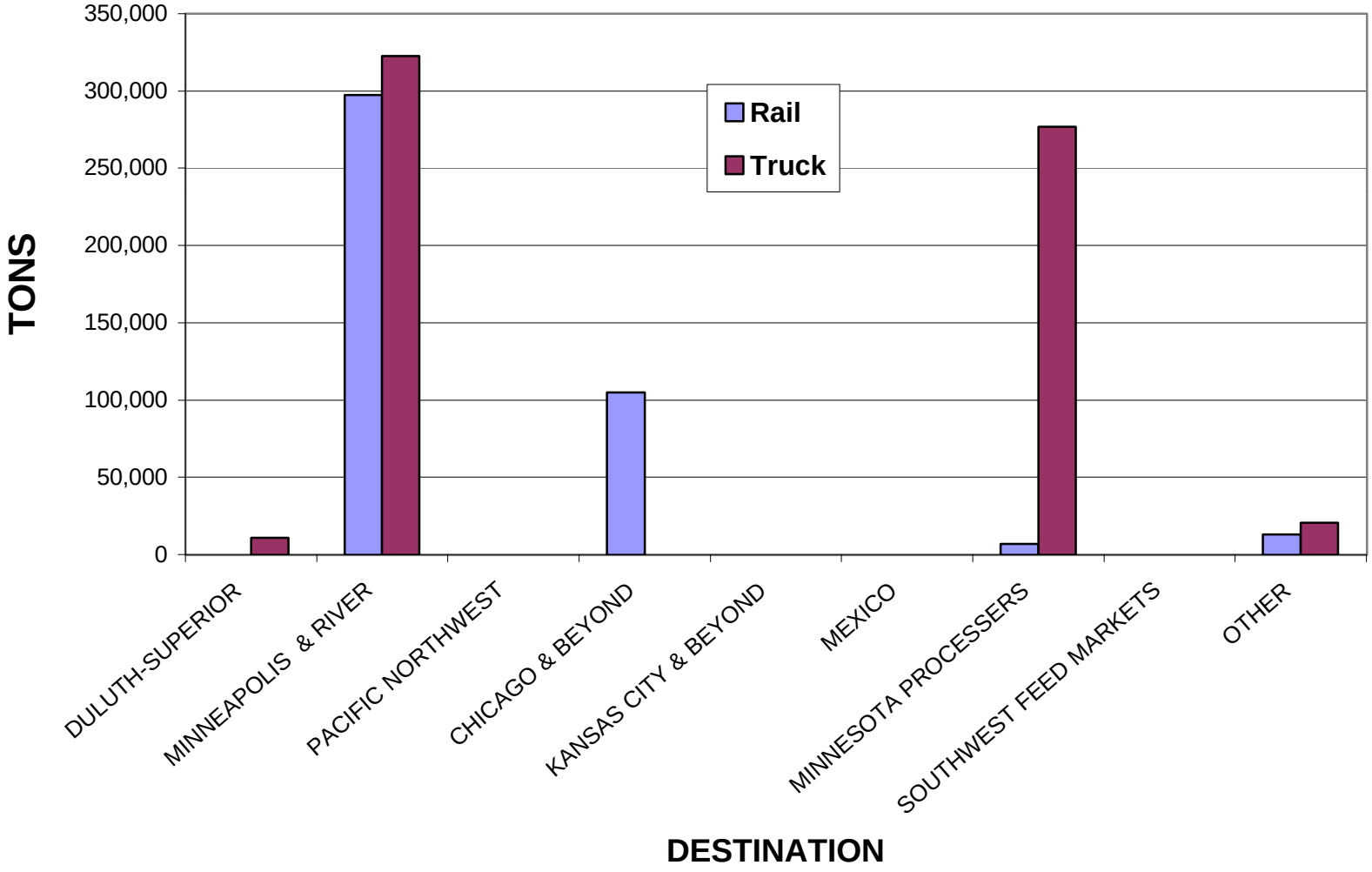
GRAPH 74
ESTIMATED CRD 1 SOYBEAN DESTINATIONS 7/99-6/00 TONS



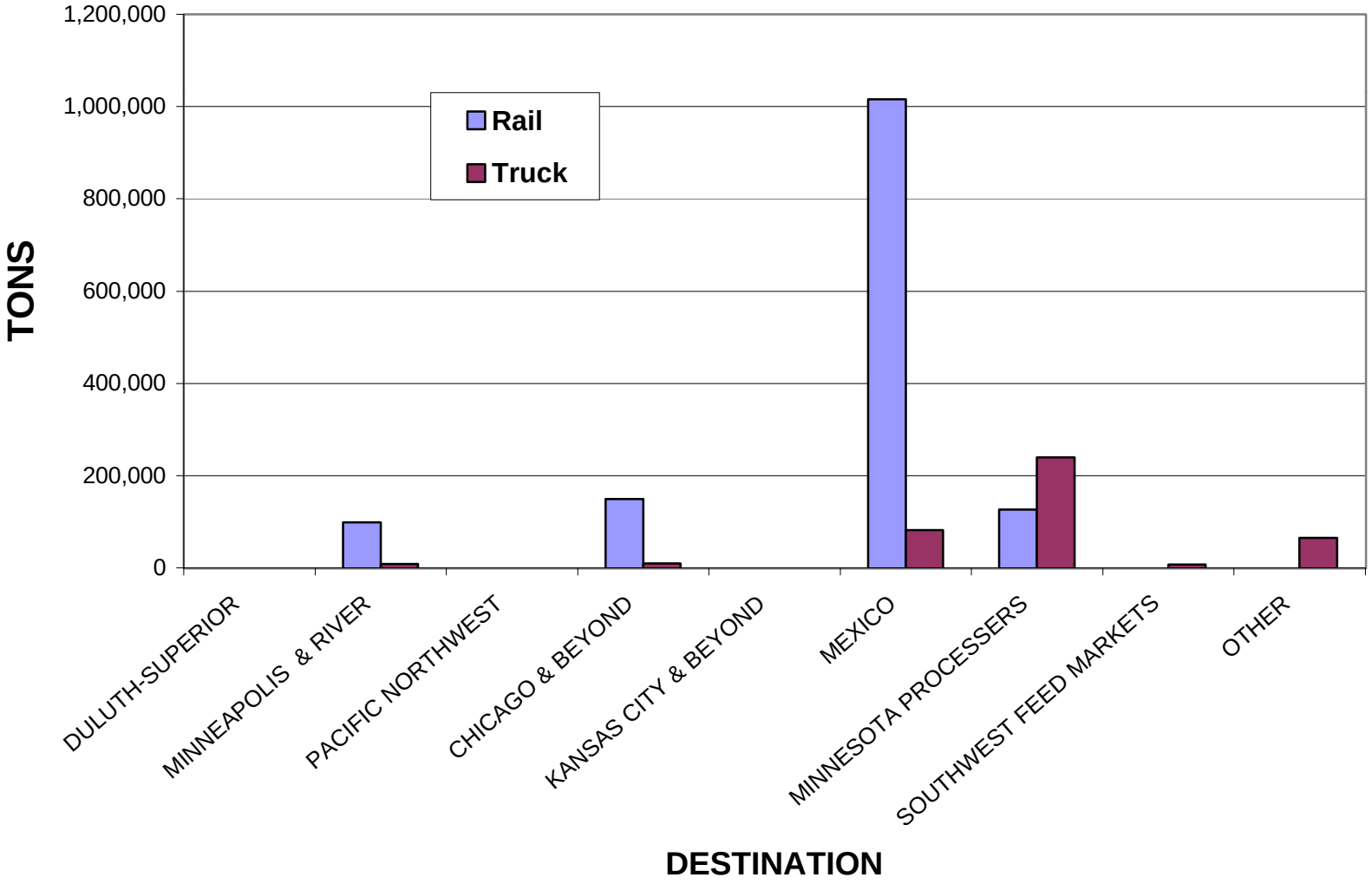
GRAPH 75
ESTIMATED CRD 4 SOYBEAN DESTINATIONS 7/99-6/00 TONS



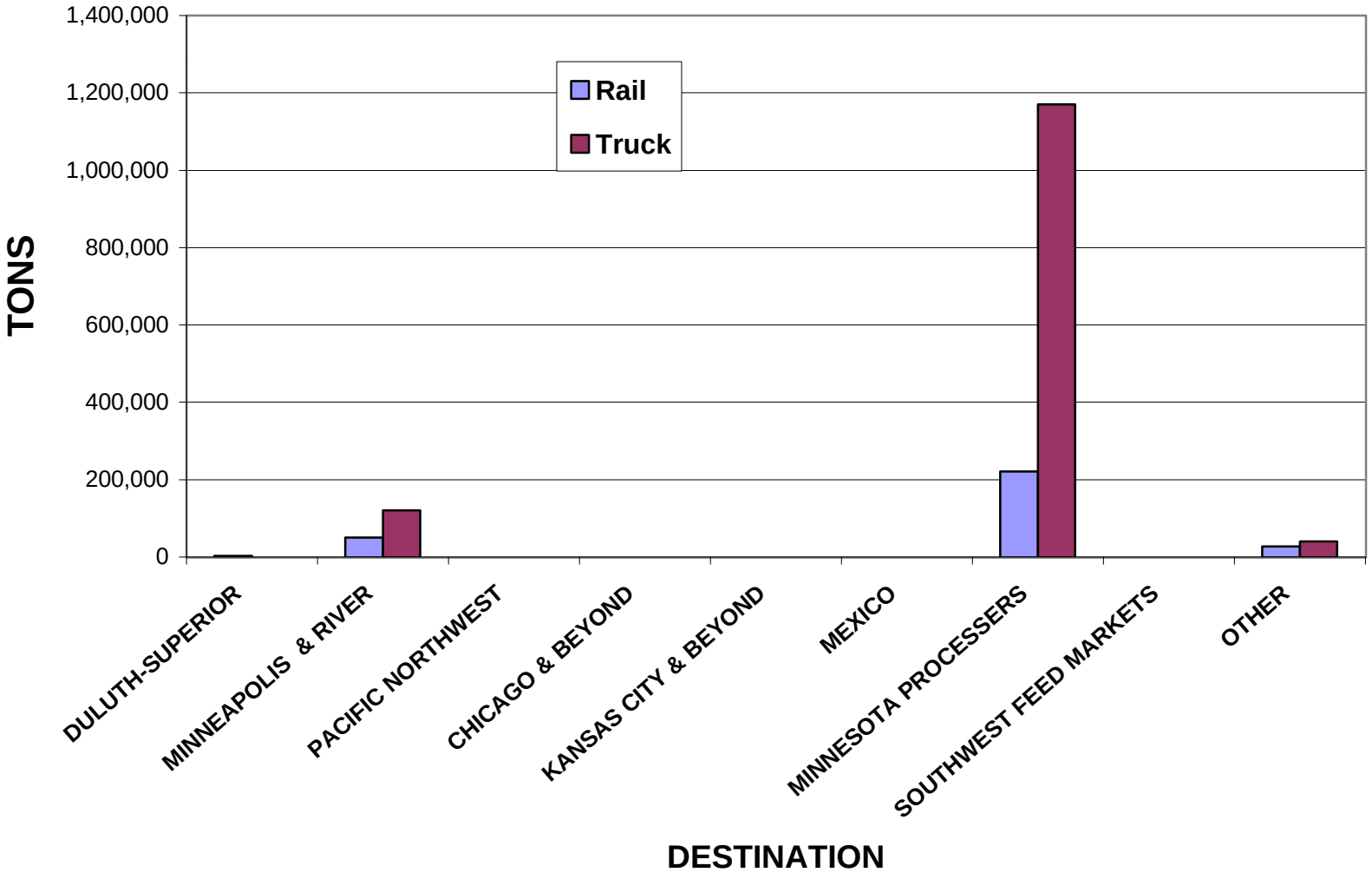
GRAPH 76
ESTIMATED CRD 5 SOYBEAN DESTINATIONS 7/99-6/00 TONS



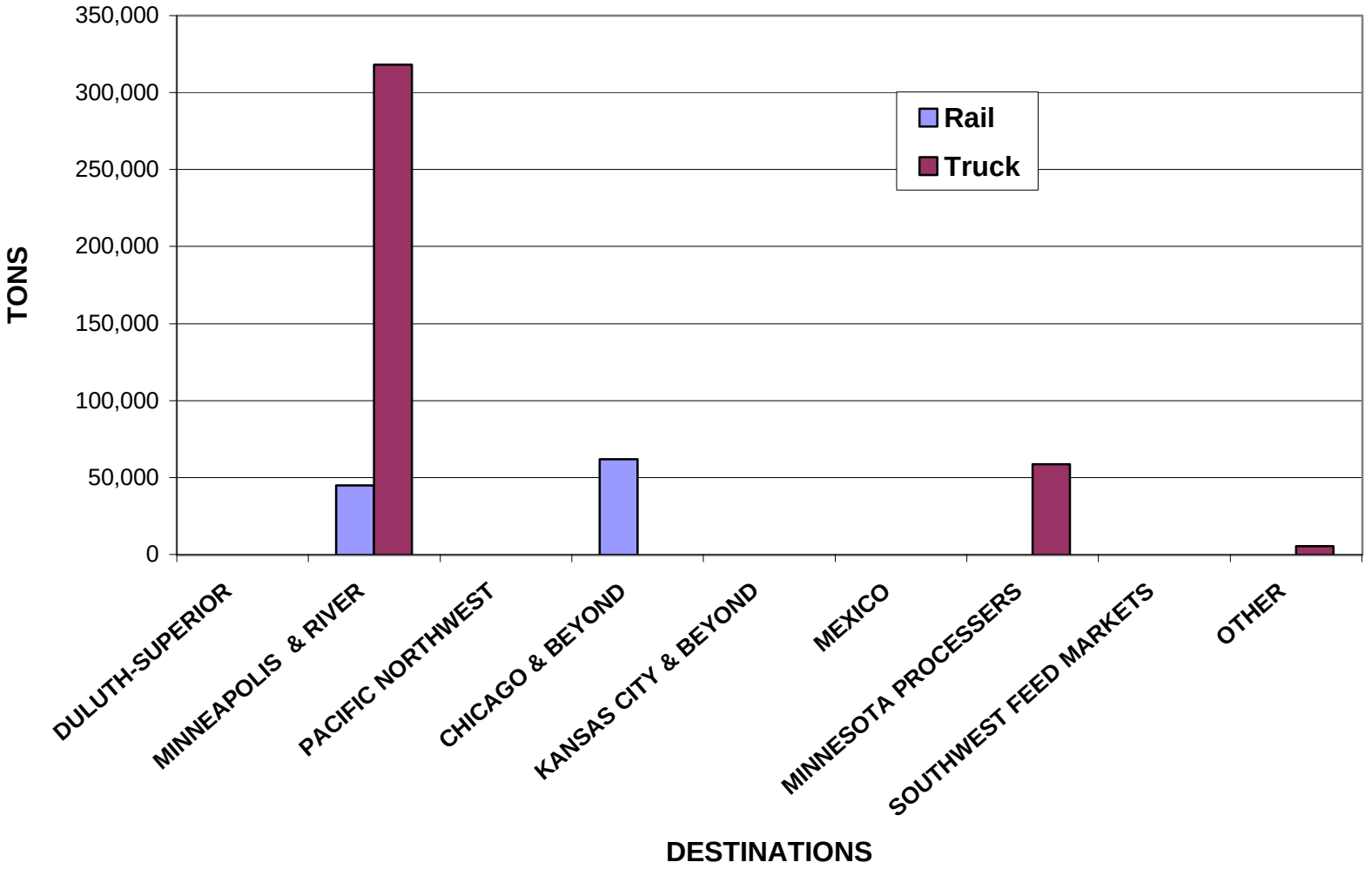
GRAPH 77
ESTIMATED CRD 7 SOYBEAN DESTINATIONS 7/99-6/00 TONS



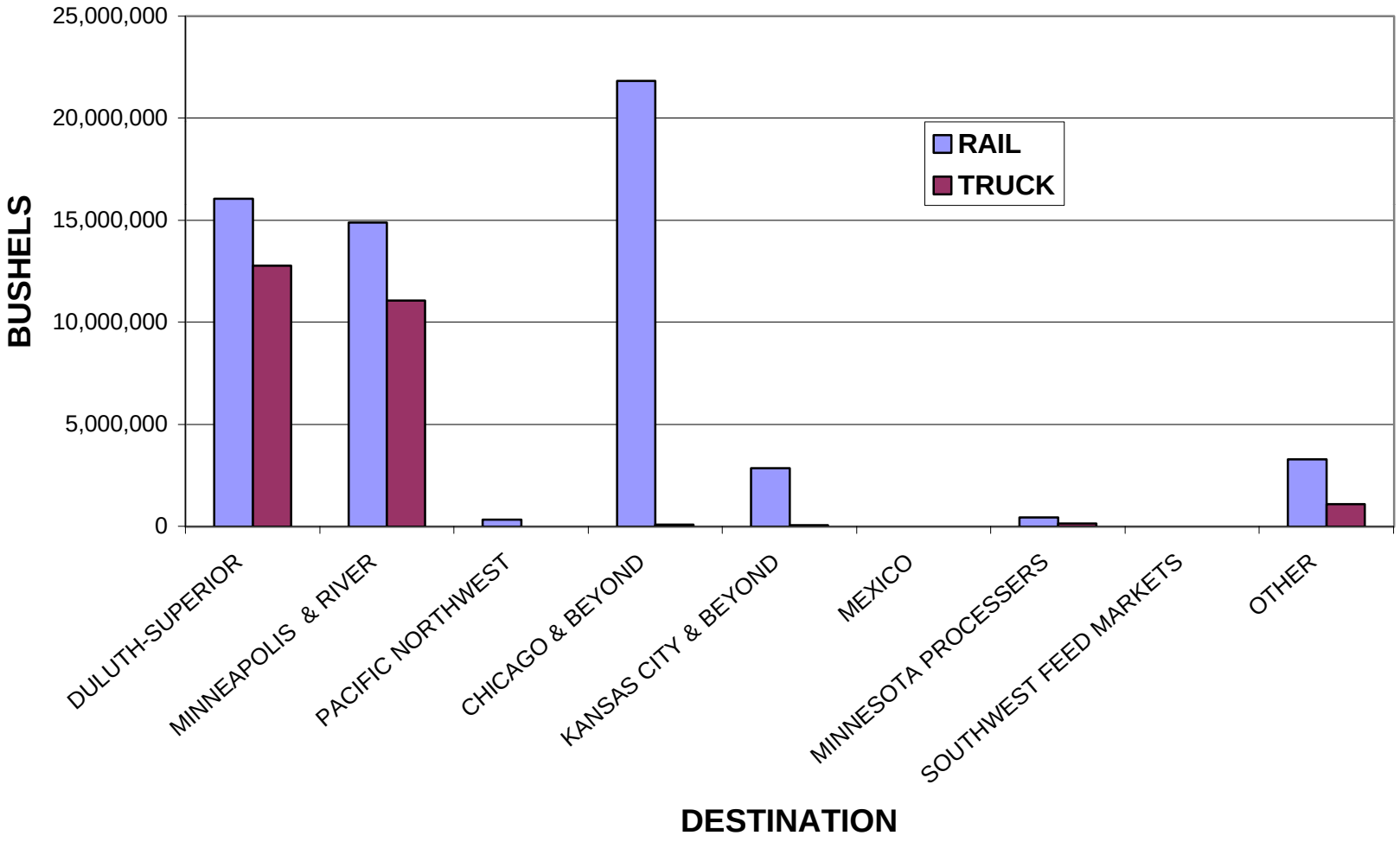
GRAPH 78
ESTIMATED CRD 8 SOYBEAN DESTINATIONS 7/99-6/00 TONS



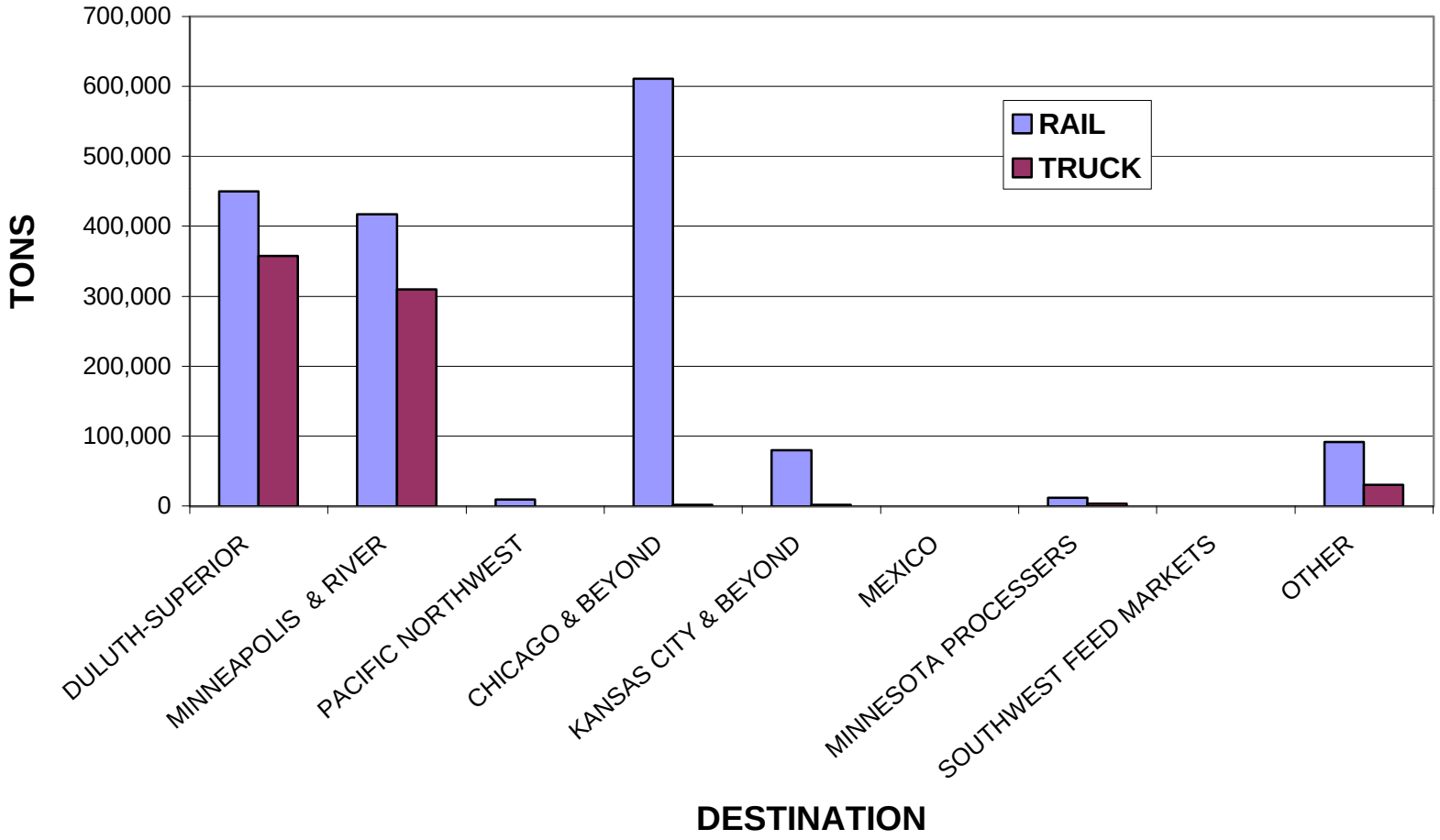
GRAPH 79
ESTIMATED CRD 9 SOYBEAN DESTINATIONS 7/99-6/00 TONS



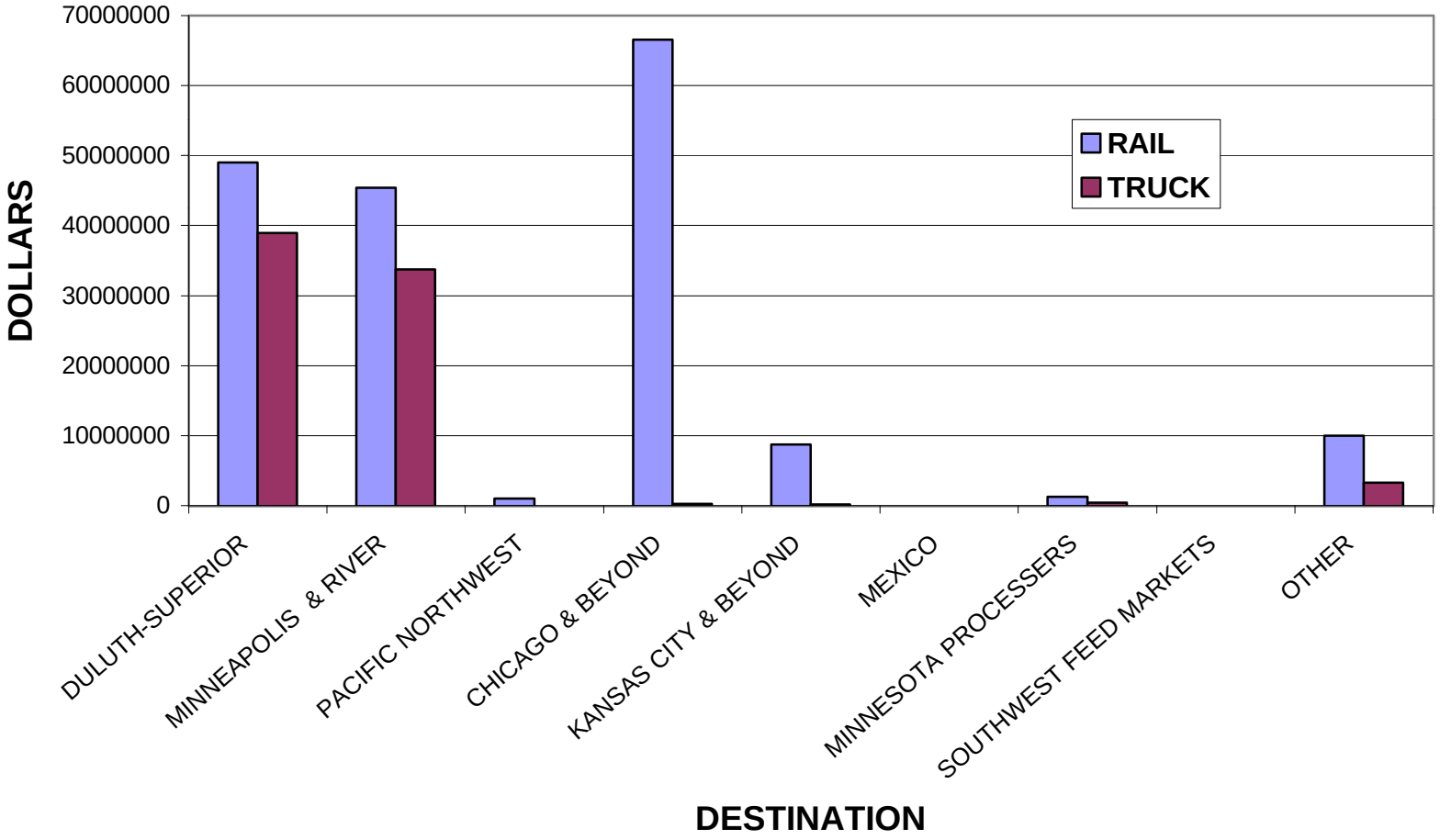
GRAPH 80
MINNESOTA WHEAT SHIPMENTS IN BUSHELS 7/99-6/00



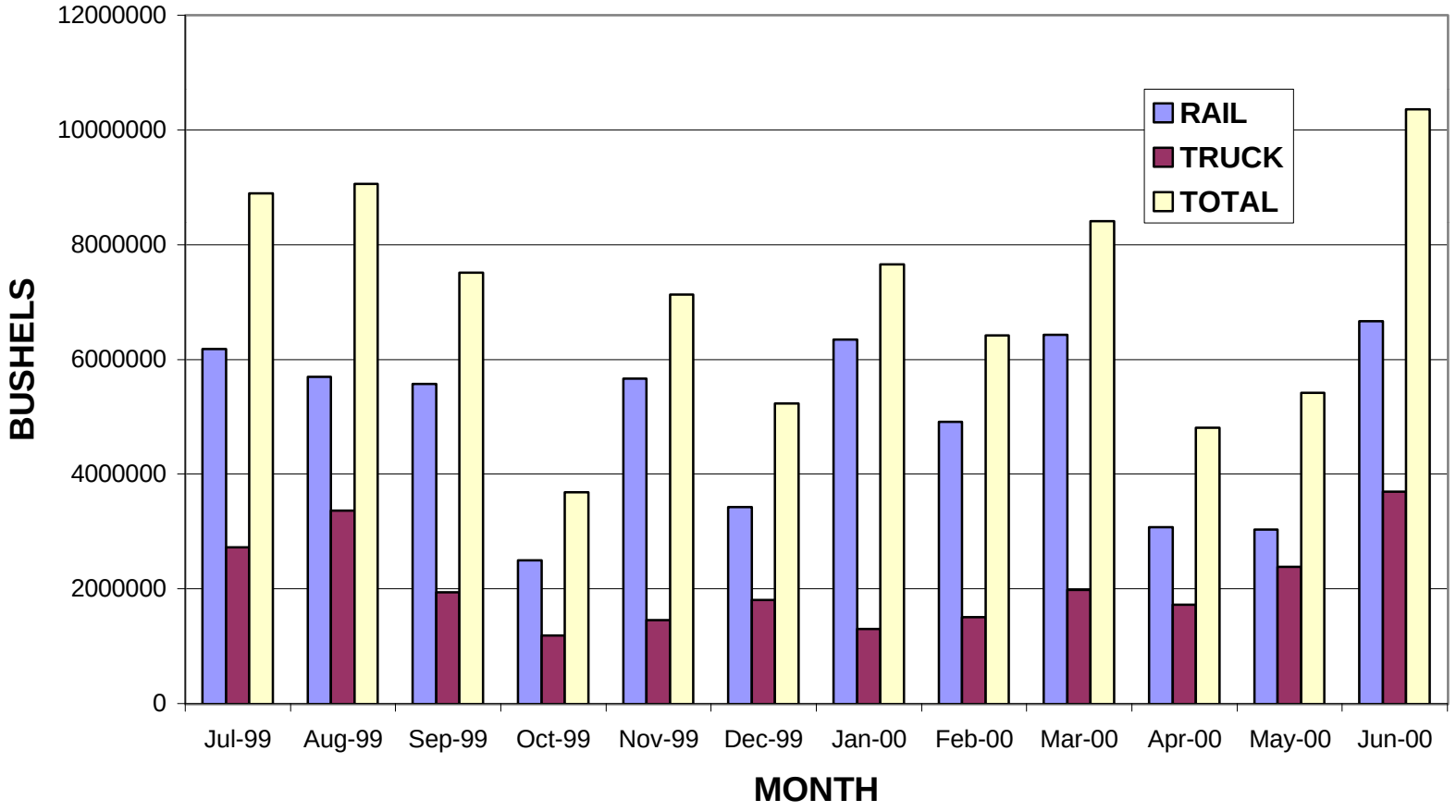
GRAPH 81
MINNESOTA WHEAT SHIPMENTS IN TONS
7/99-6/00



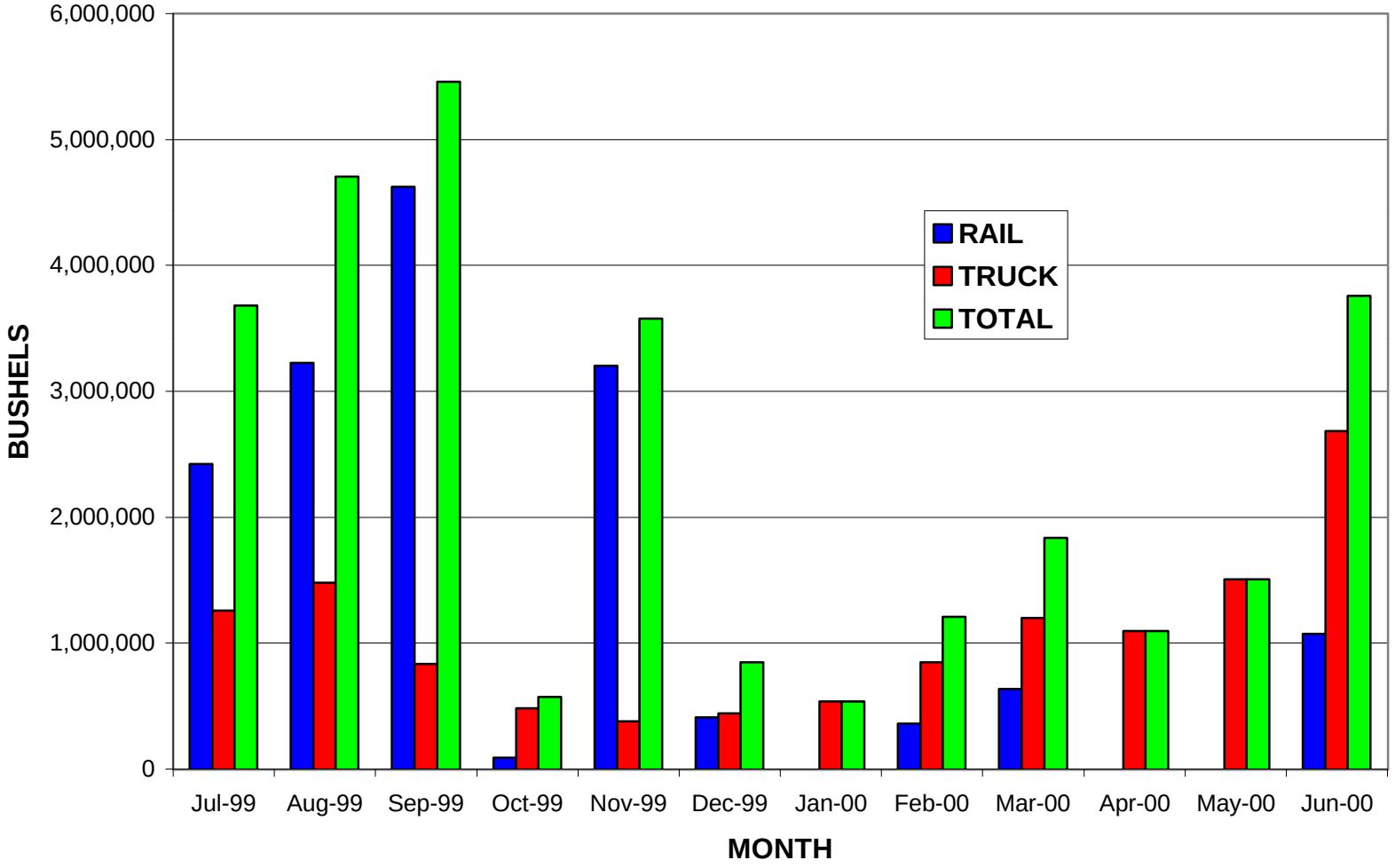
GRAPH 82
VALUE OF MINNESOTA WHEAT SHIPMENTS 7/99-6/00 AT $3.05 PER BUSHEL



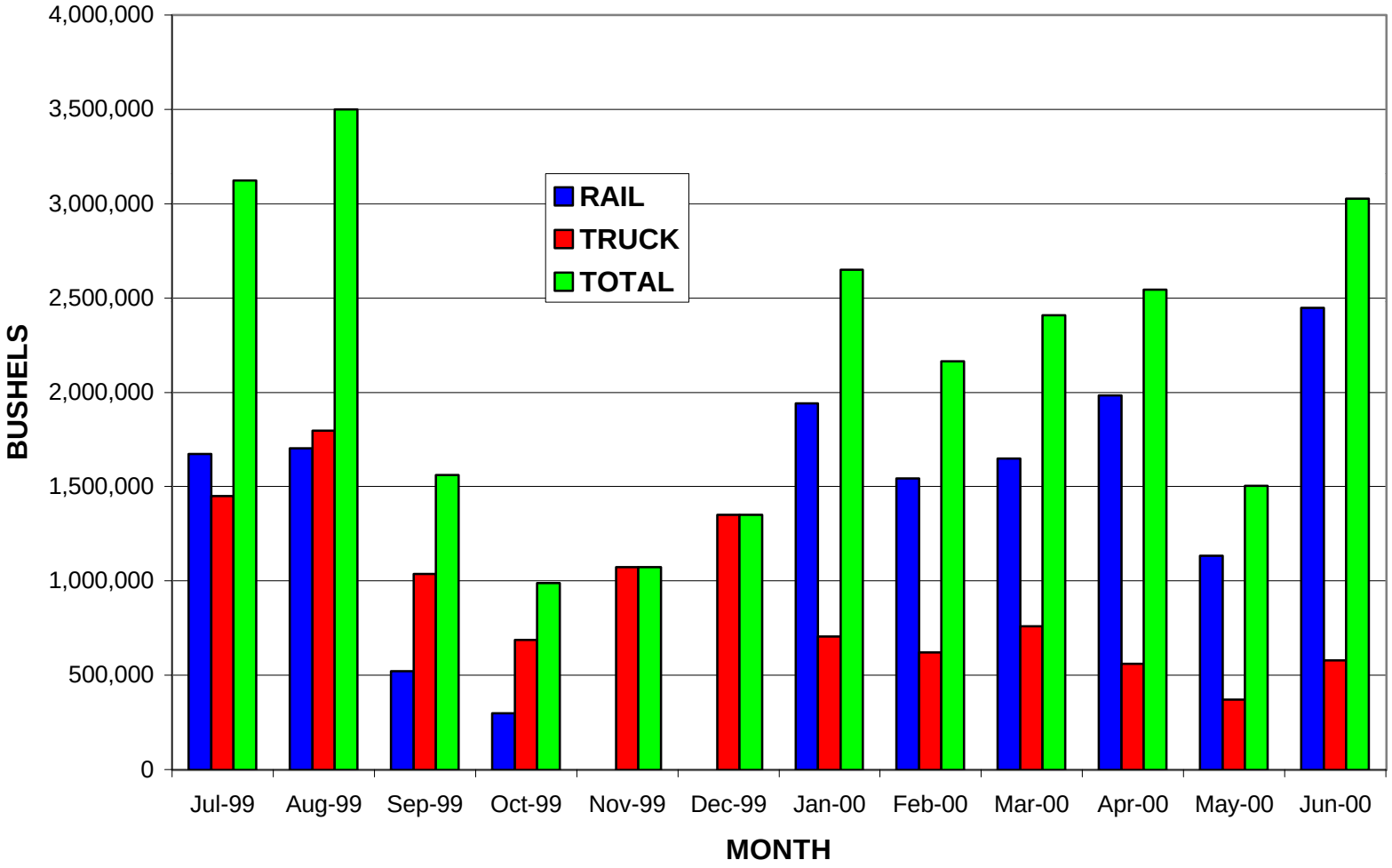
GRAPH 83
MINNESOTA WHEAT SHIPMENTS BY MONTH 7/99-6/00



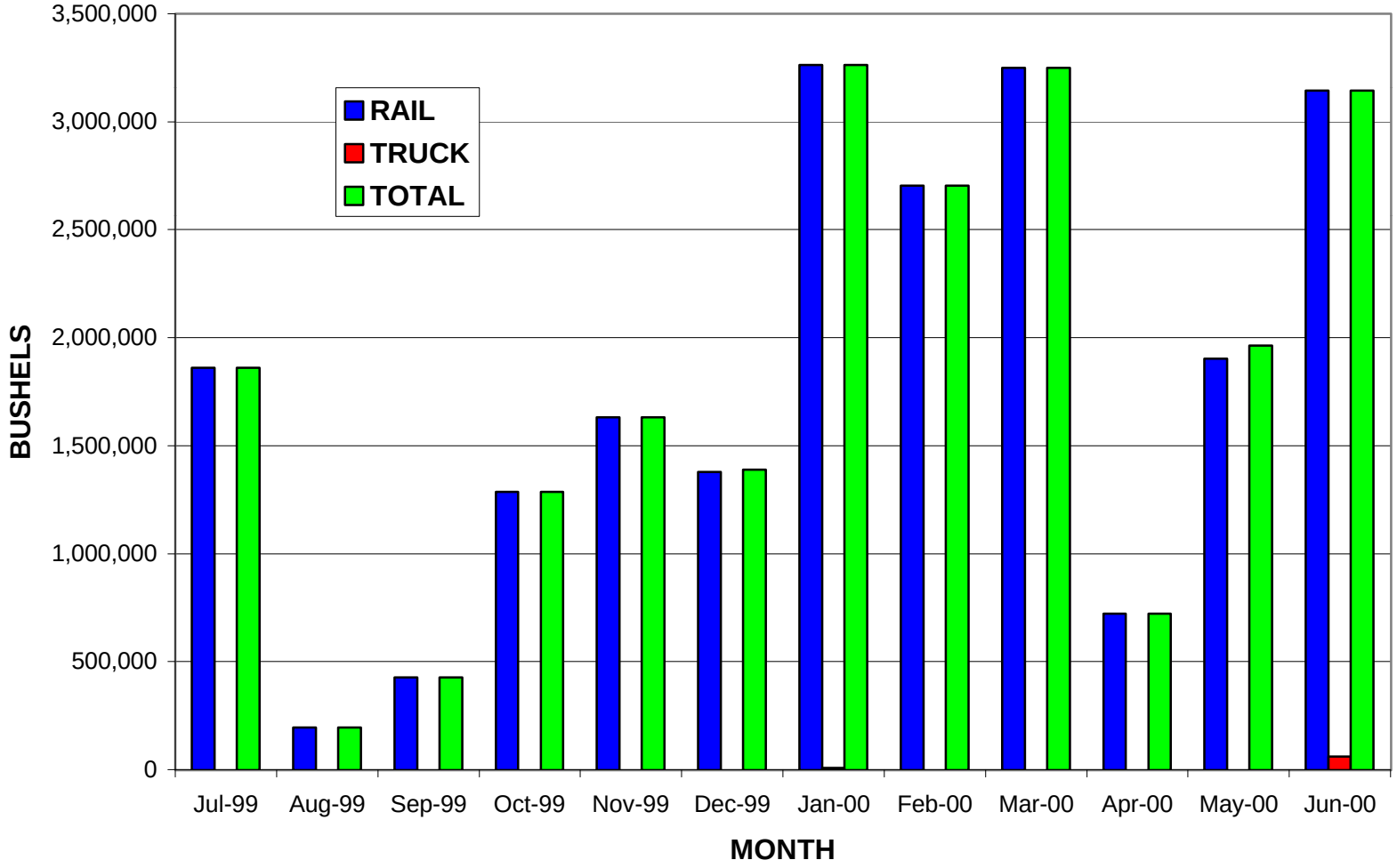
GRAPH 84
MINNESOTA WHEAT SHIPMENTS TO DULUTH SUPERIOR BY MONTH
7/99-6/00



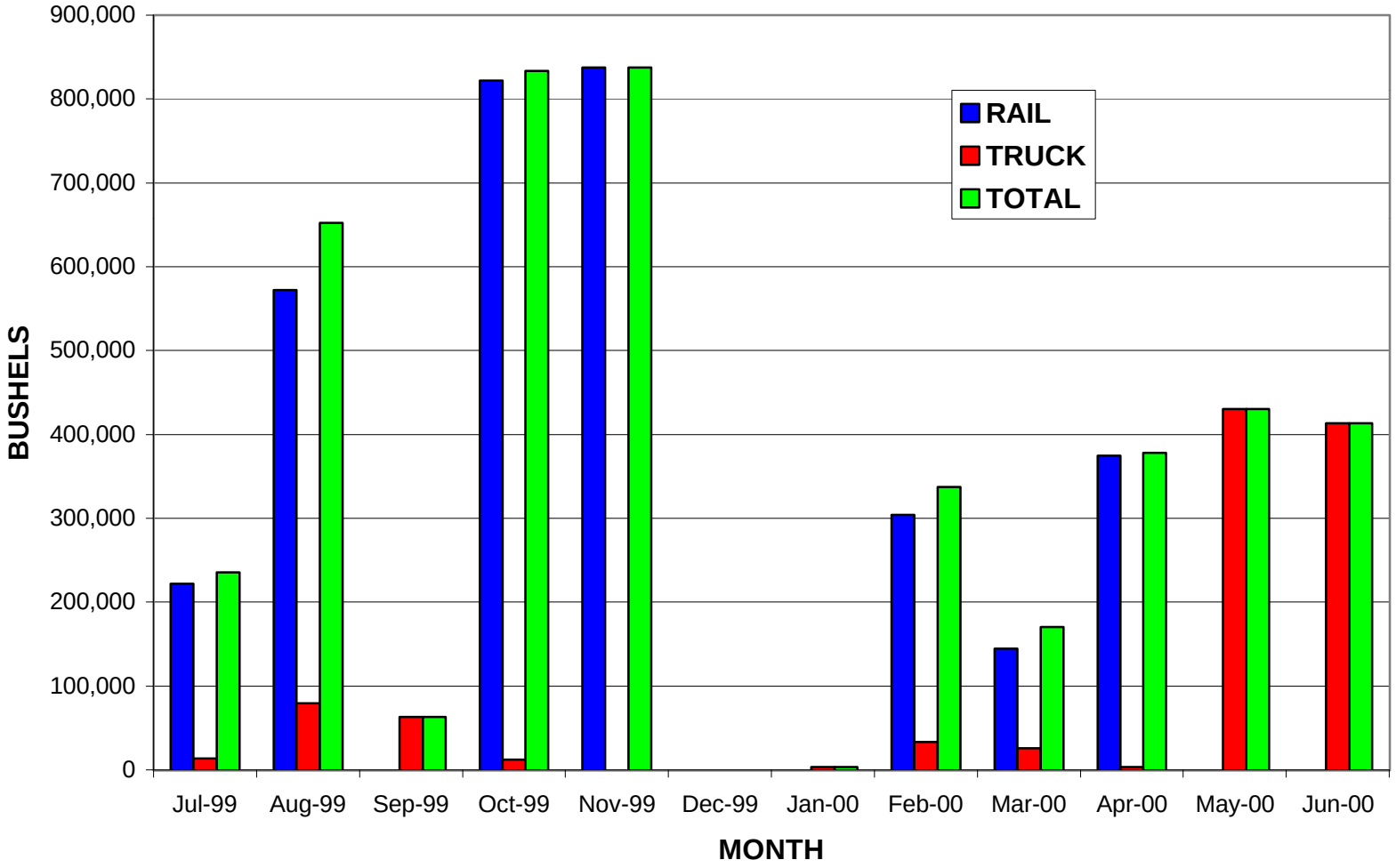
GRAPH 85
MINNESOTA WHEAT SHIPMENTS TO MINNEAPOLIS AND RIVER PORTS BY MONTH 7/99-6/00



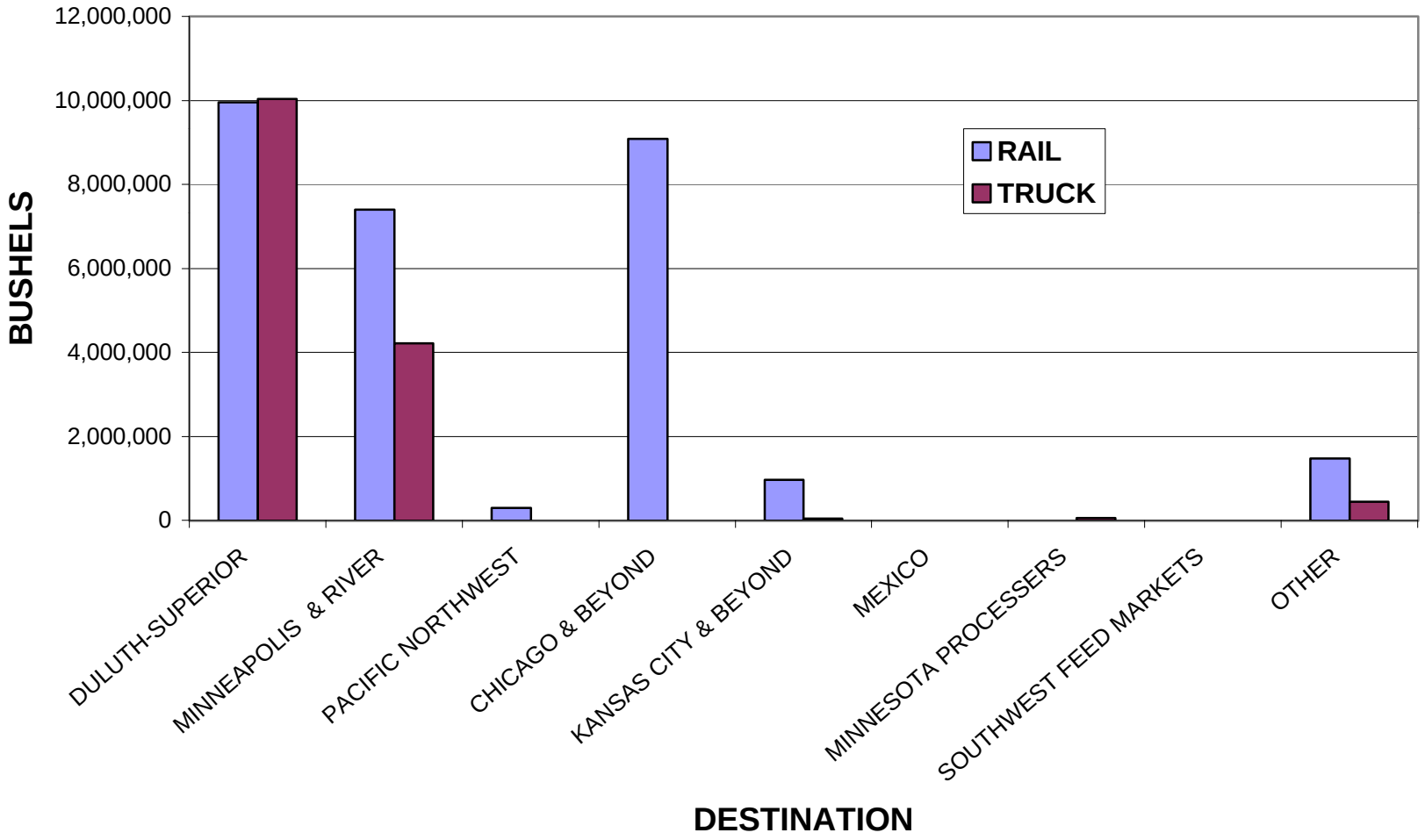
GRAPH 86
MINNESOTA WHEAT SHIPMENTS TO CHICAGO AND BEYOND BY MONTH 7/99-6/00



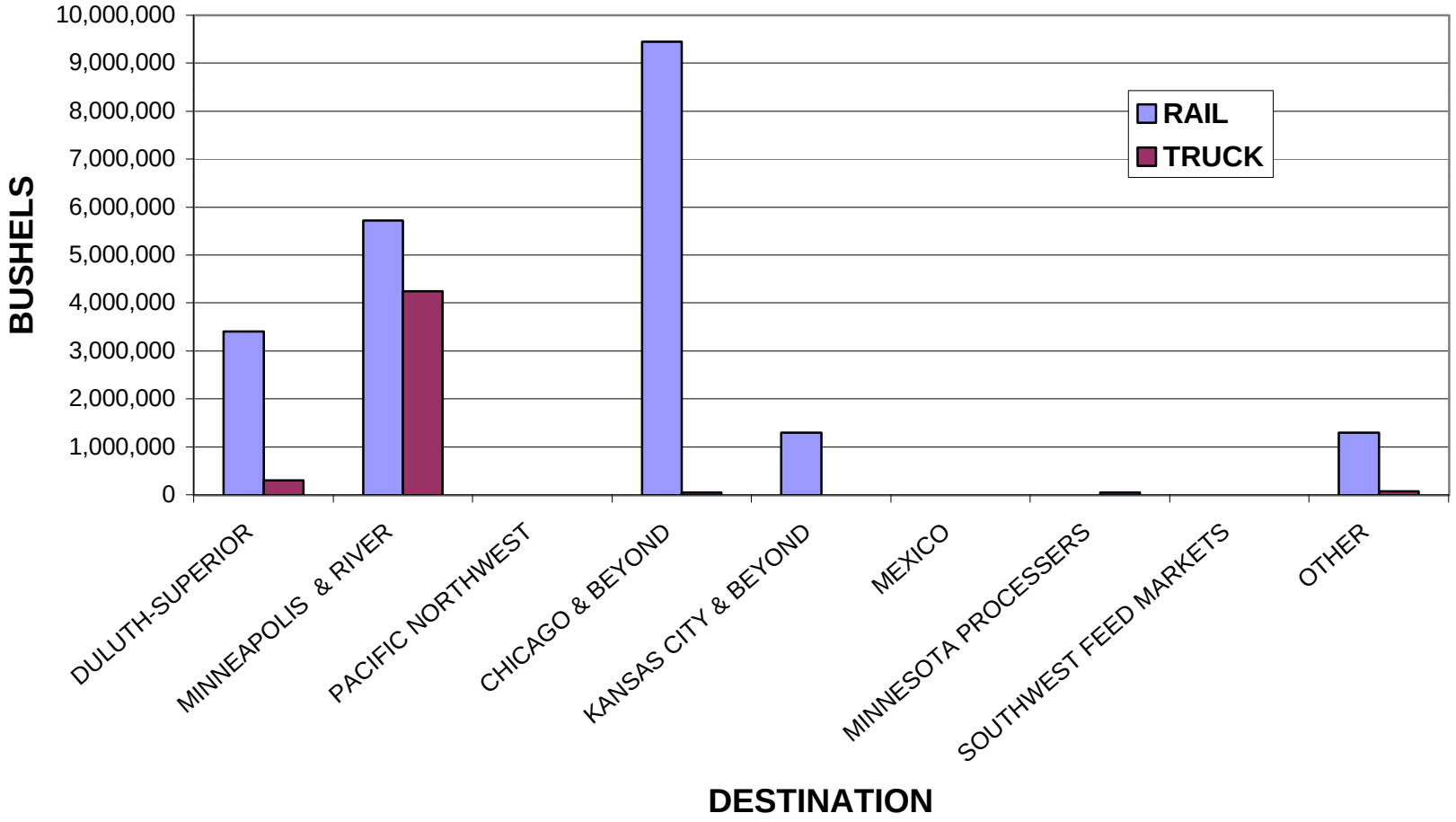
GRAPH 87
MINNESOTA WHEAT SHIPMENTS TO OTHER DESTINATIONS BY MONTH 7/99-6/00



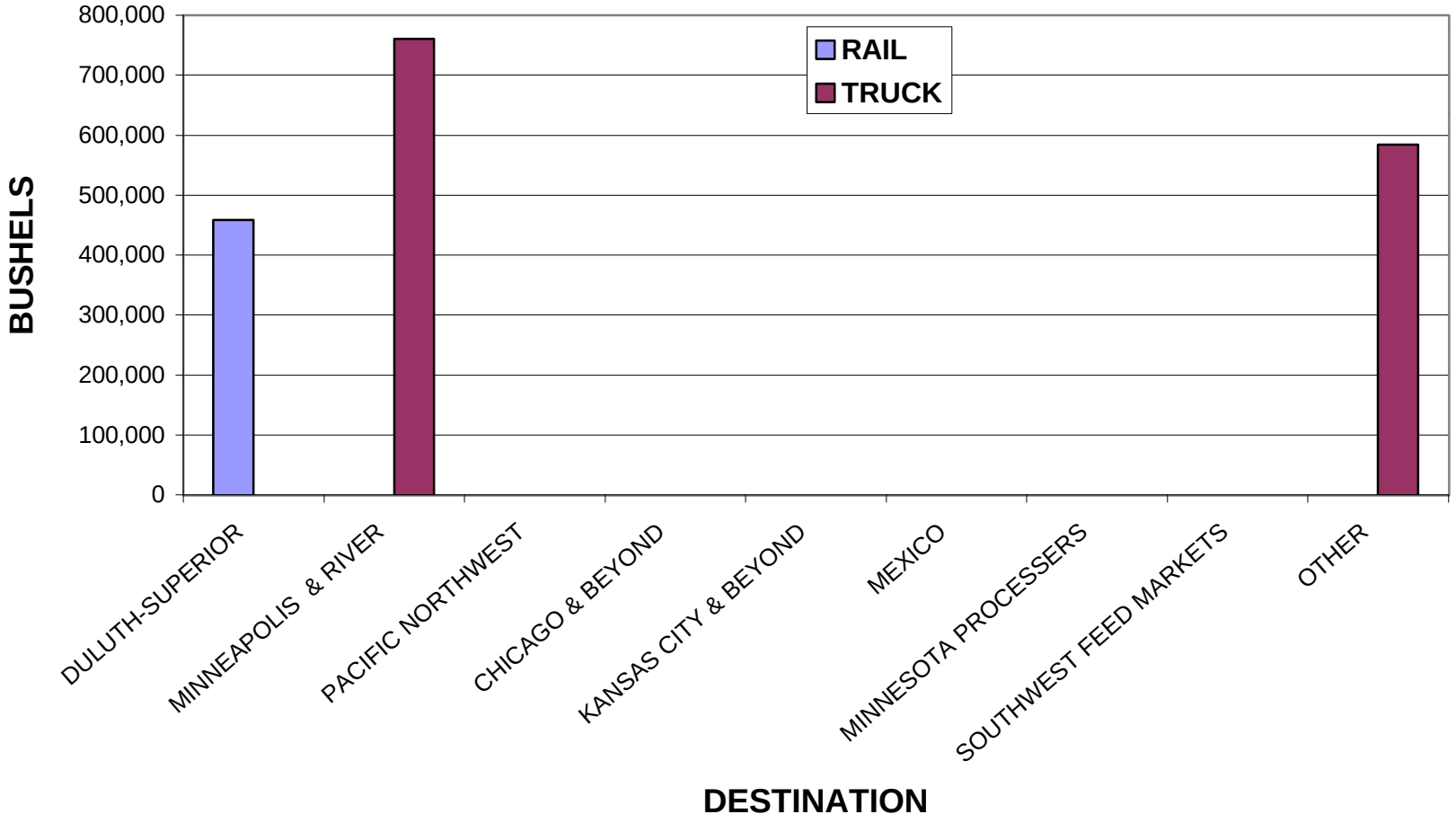
GRAPH 88
CRD 1 WHEAT SHIPMENTS IN BUSHELS
7/99-6/00



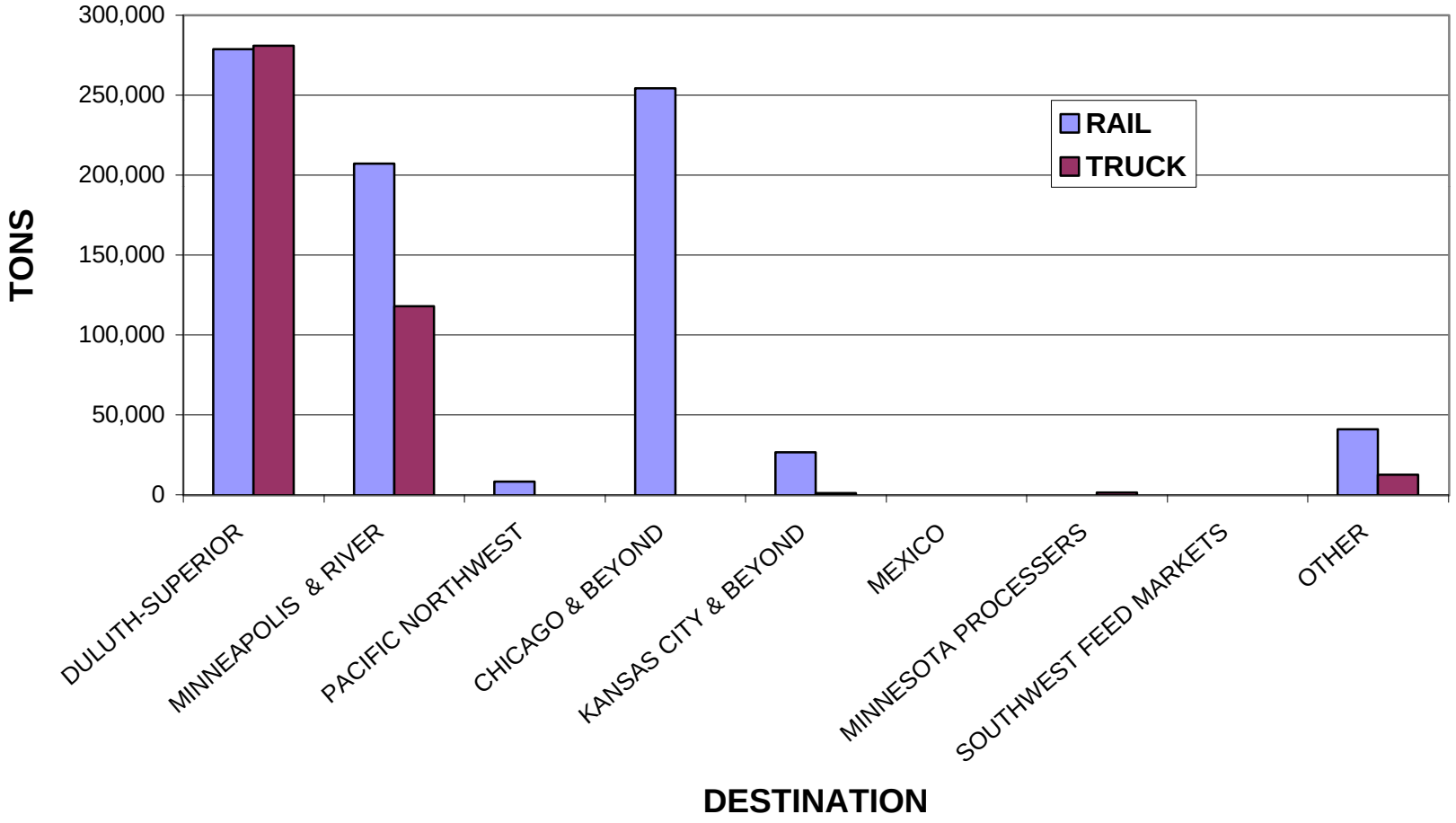
GRAPH 89
CRD 4 WHEAT SHIPMENTS IN BUSHELS
7/99-6/00



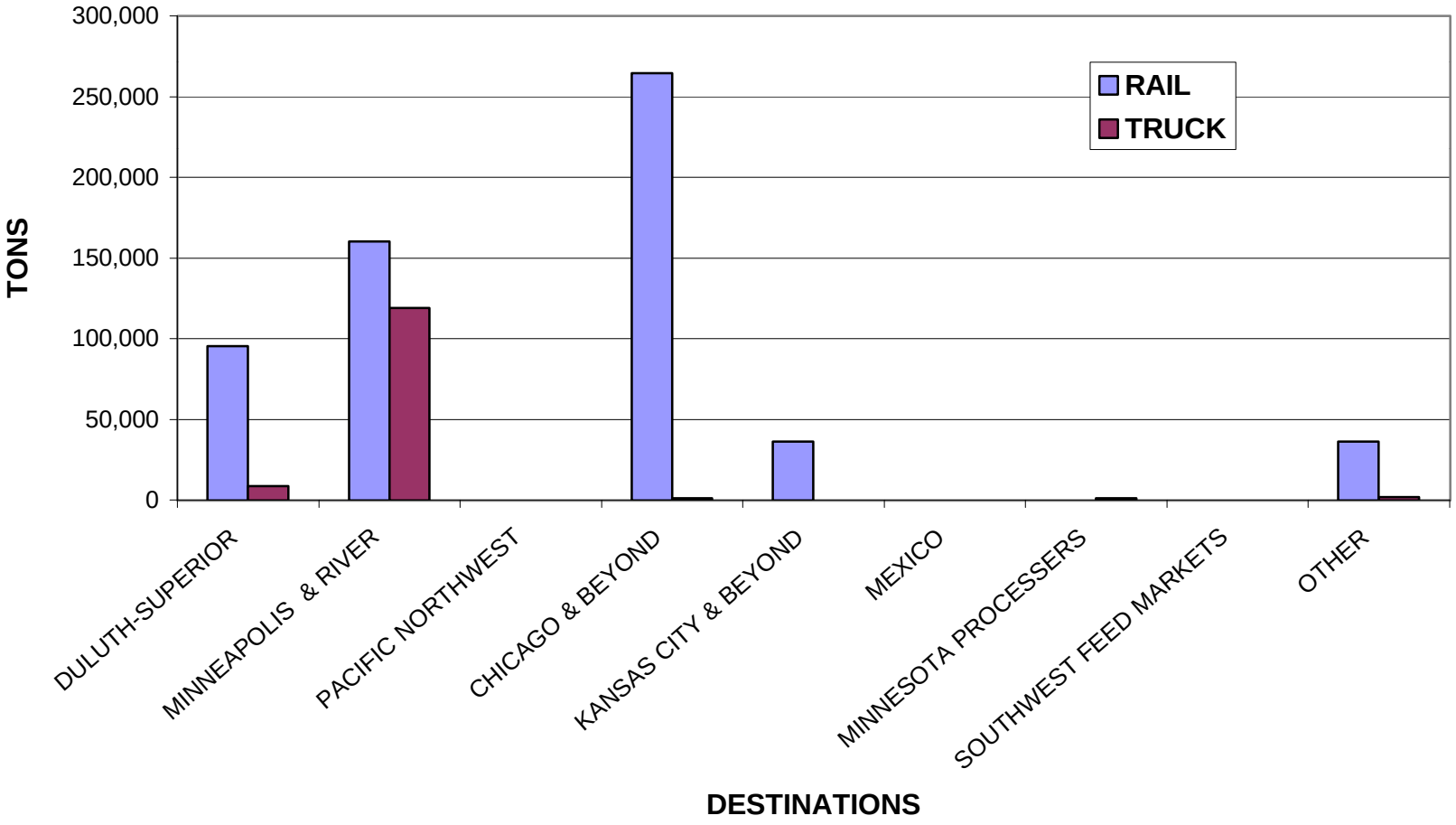
GRAPH 90
CRD 5 WHEAT SHIPMENTS IN BUSHELS
7/99-6/00



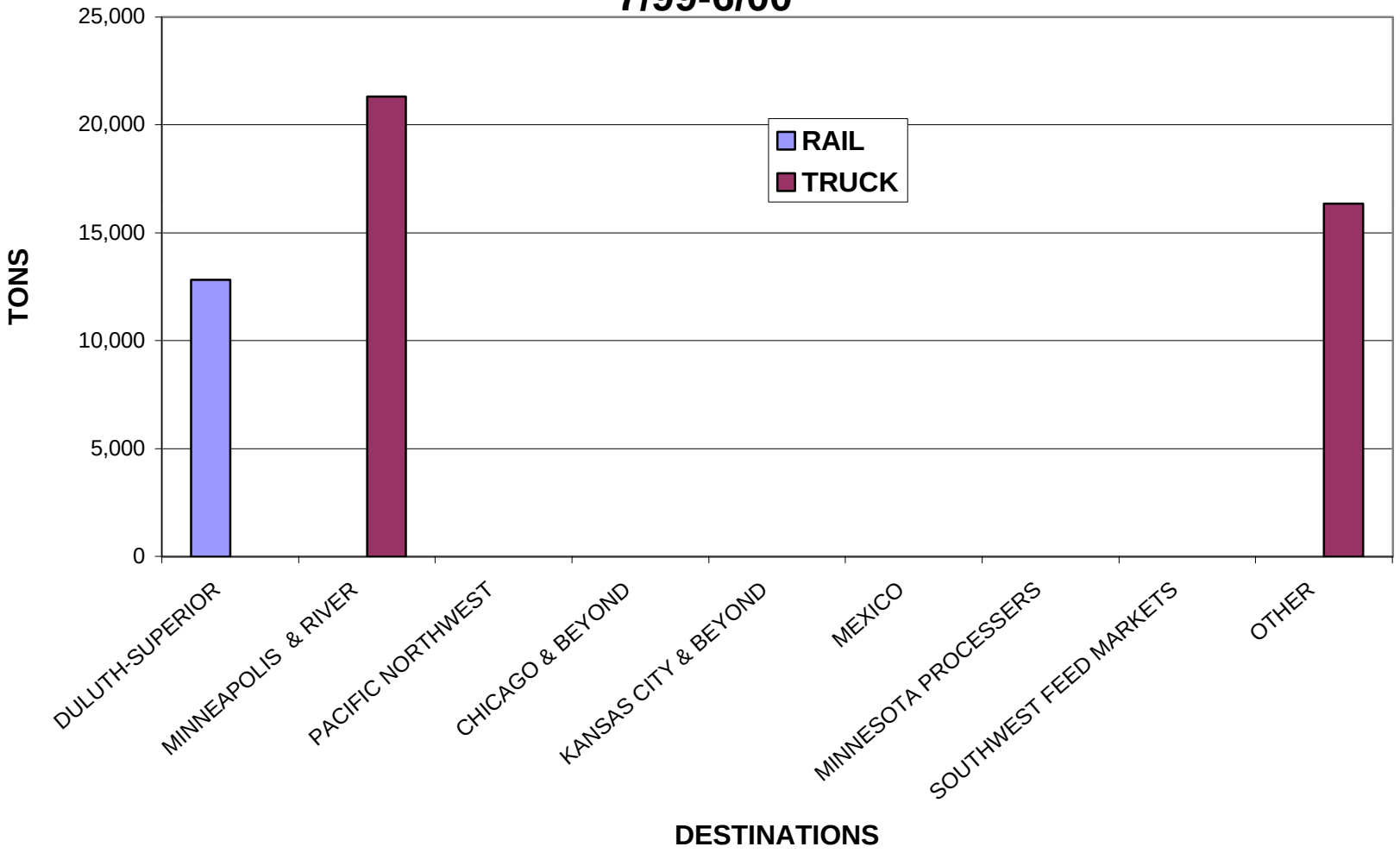
GRAPH 91
CRD 1 WHEAT SHIPMENTS IN TONS
7/99-6/00



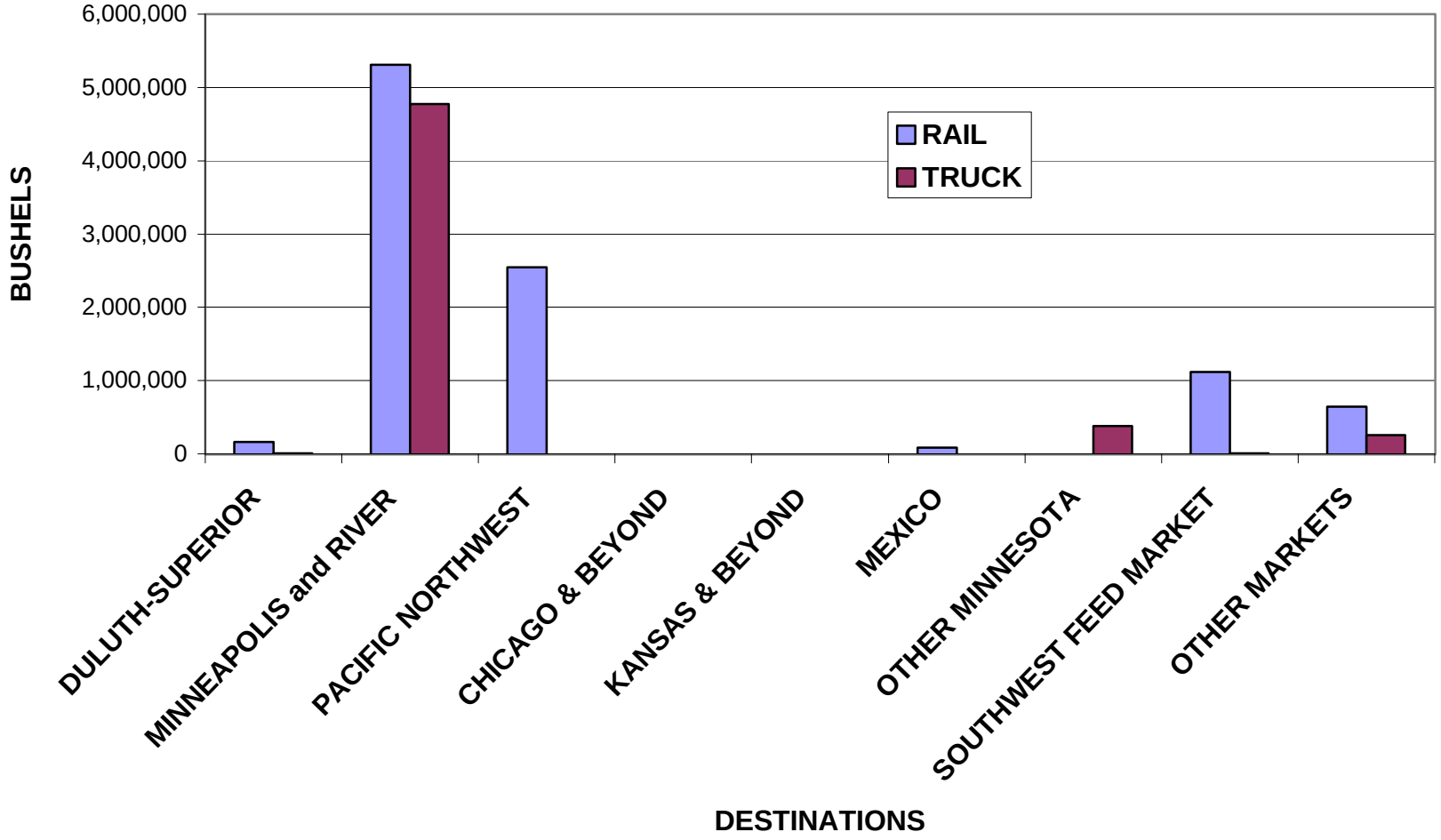
GRAPH 92
CRD 4 WHEAT SHIPMENTS IN TONS
7/99-6/00



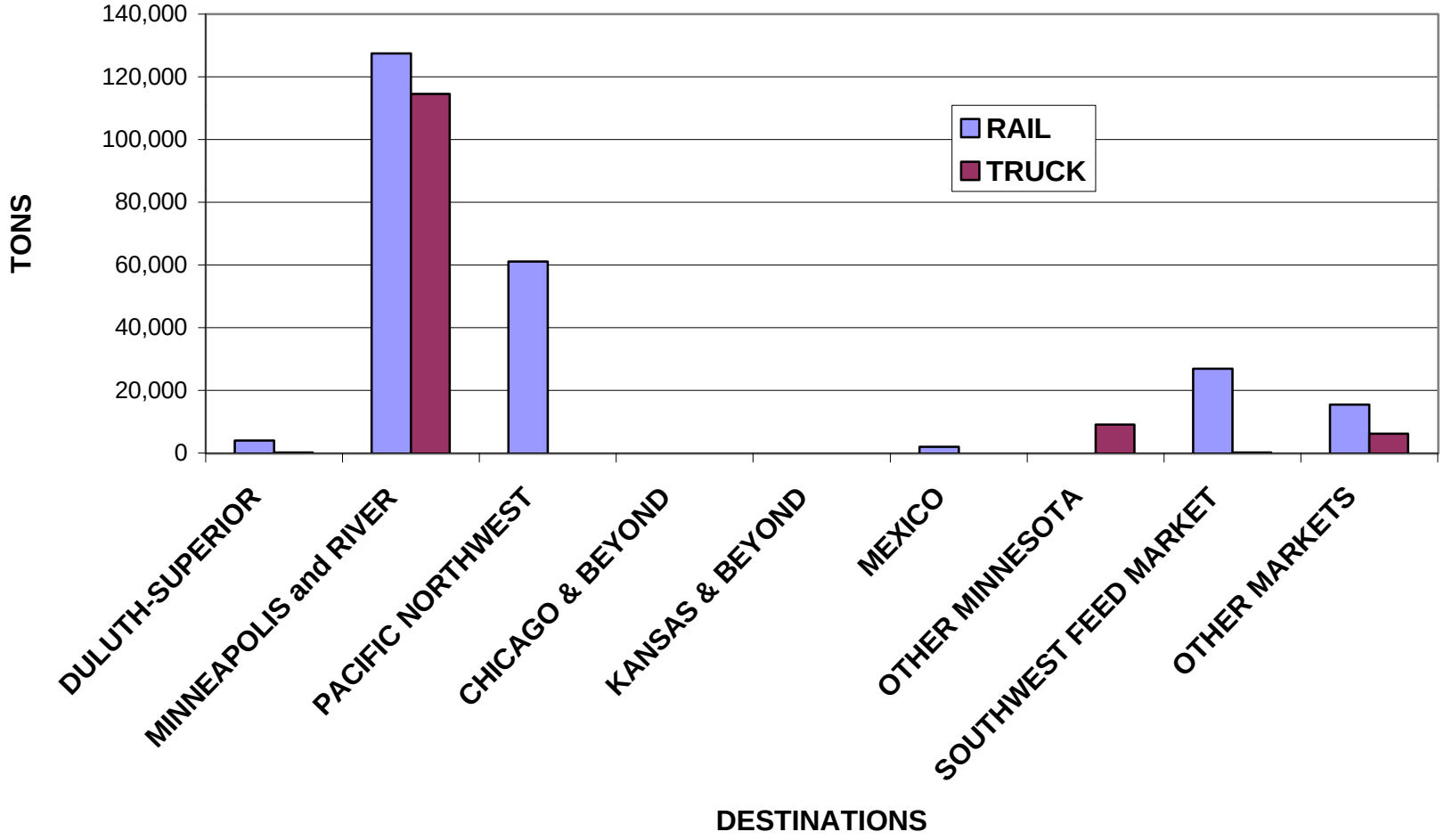
GRAPH 93
CRD 5 WHEAT SHIPMENTS IN TONS
7/99-6/00



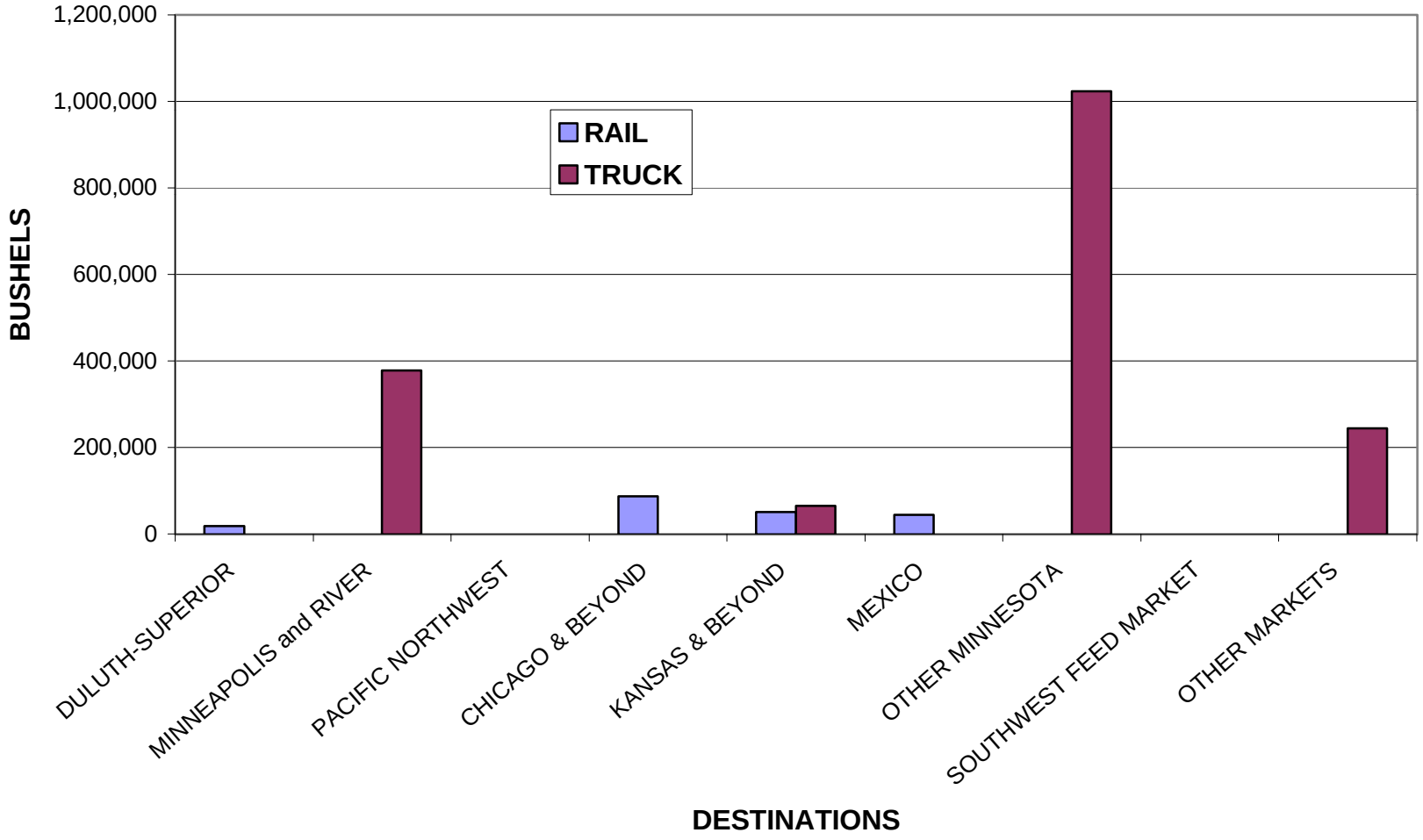
GRAPH 94
MINNESOTA ELEVATOR BARLEY SHIPMENTS BY DESTINATION IN BUSHELS 7/99-6/00



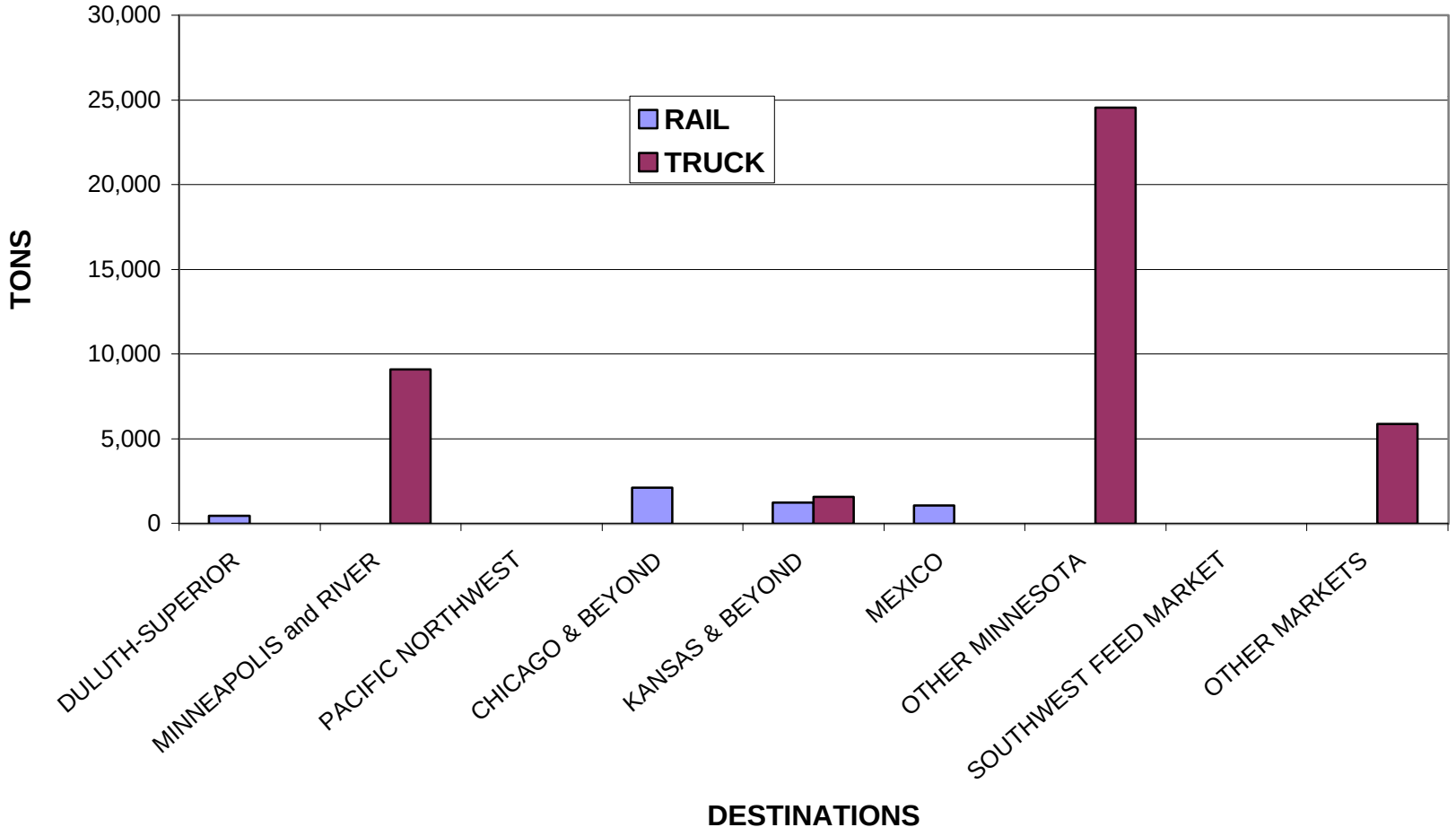
GRAPH 95
MINNESOTA ELEVATOR BARLEY SHIPMENTS BY DESTINATION IN TONS 7/99-6/00



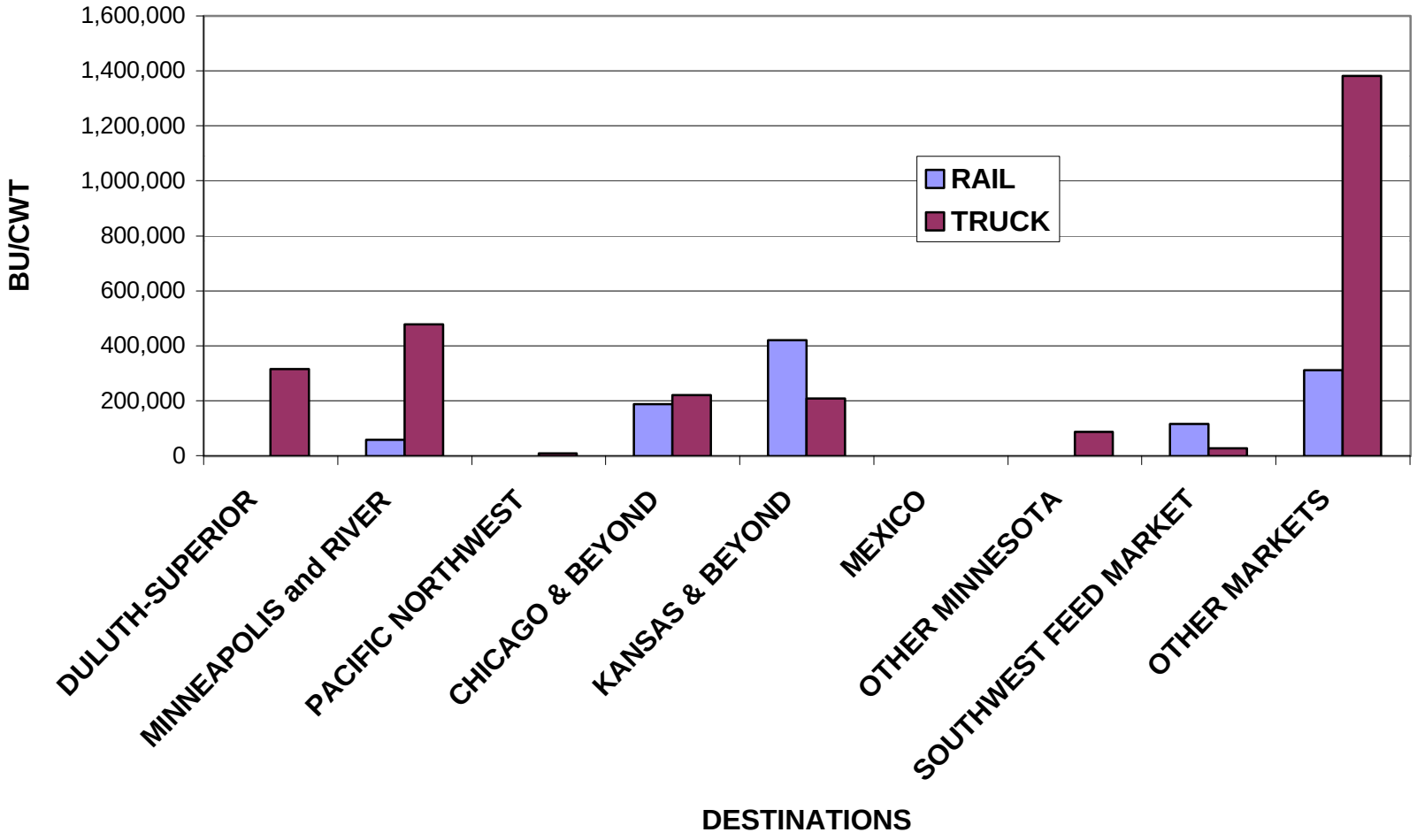
GRAPH 96
MINNESOTA ELEVATOR OAT SHIPMENT DESTINATIONS IN BUSHELS 7/99-6/00



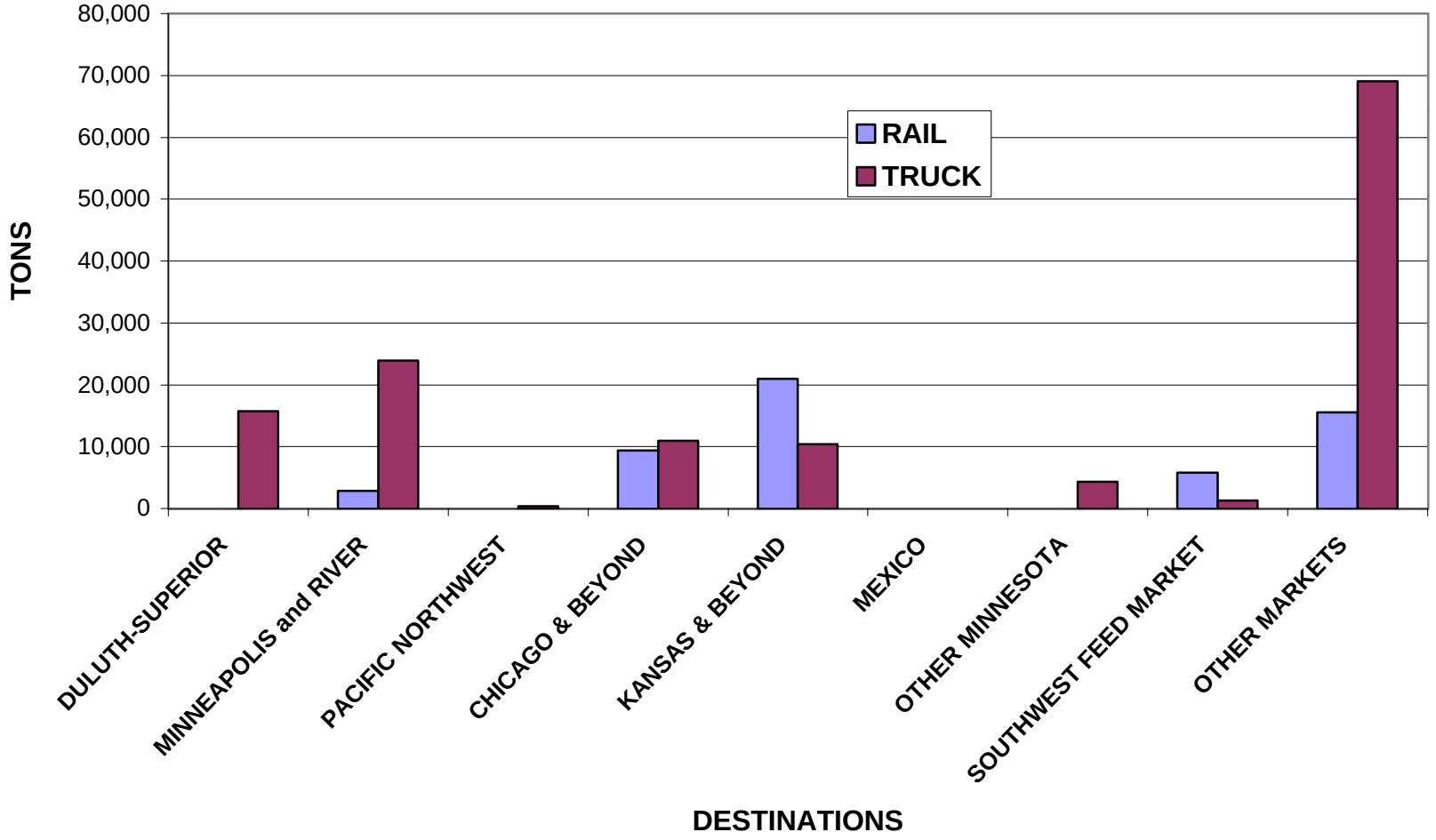
GRAPH 97
MINNESOTA ELEVATOR OAT SHIPMENTS BY DESTINATION IN TONS 7/99-6/00



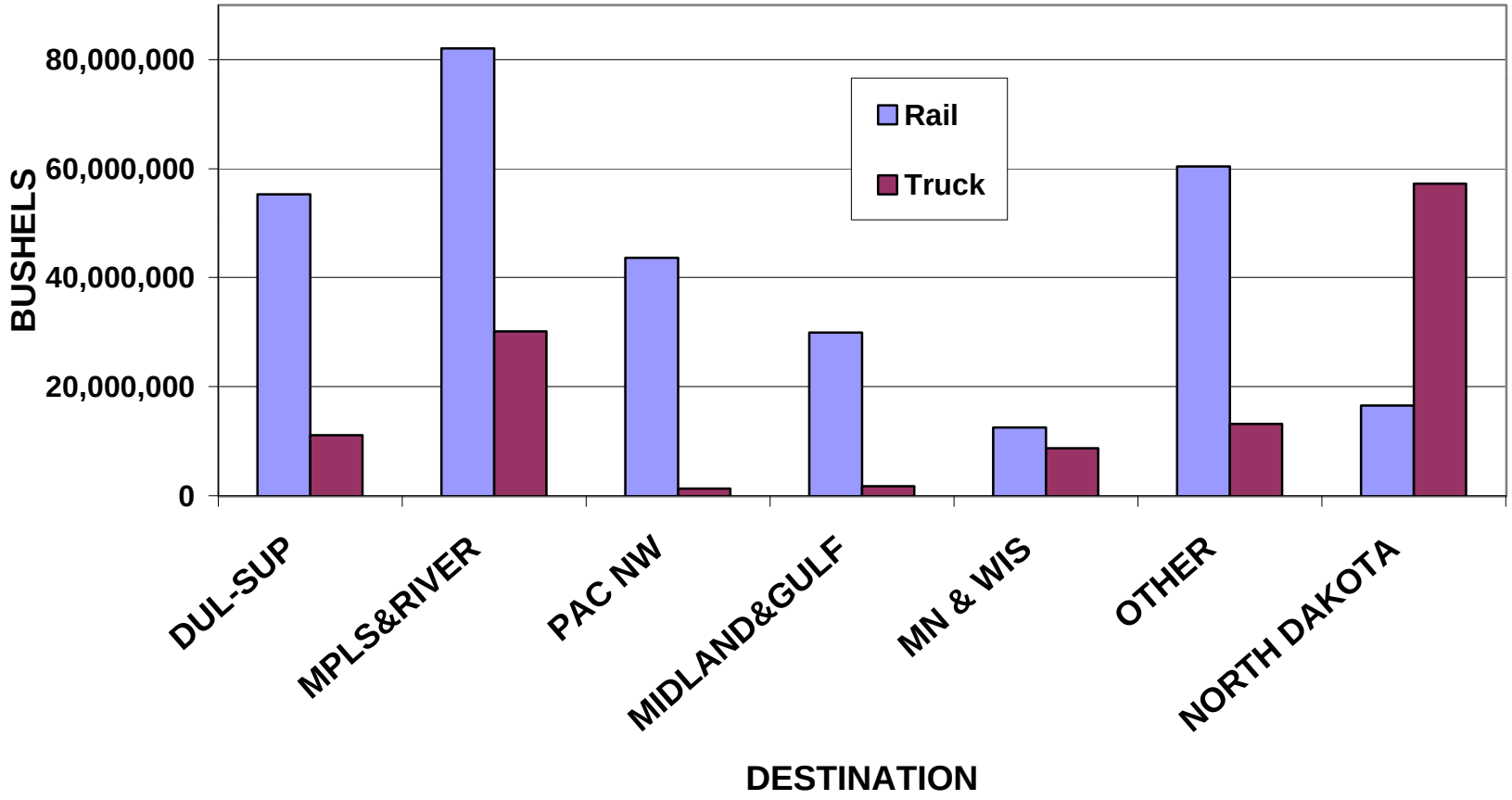
GRAPH 98
MINNESOTA ELEVATOR OTHER CROP SHIPMENTS BUSHELS/CWT 7/99-6/00



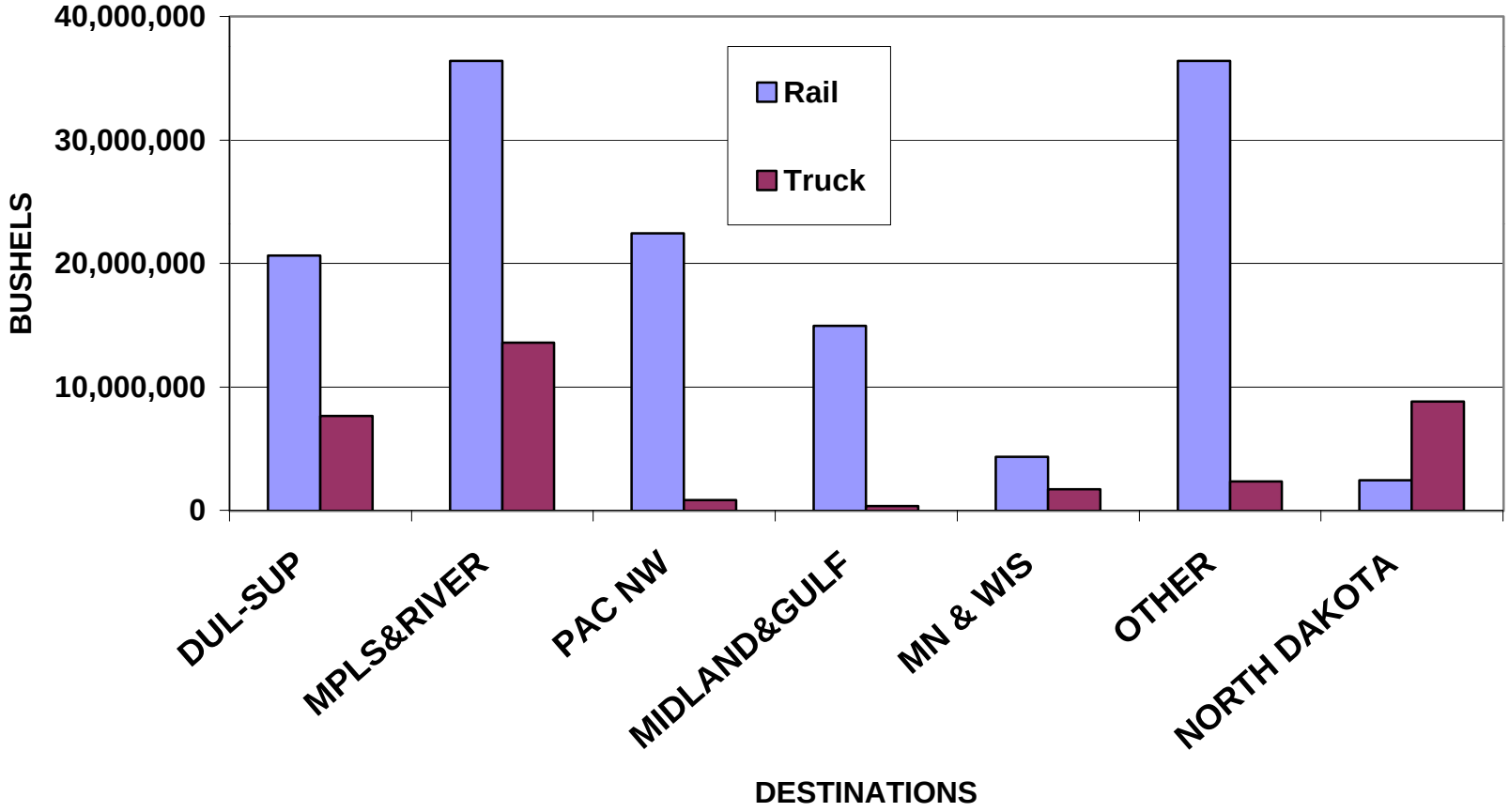
GRAPH 99
MINNESOTA ELEVATOR OTHER CROP SHIPMENTS IN TONS 7/99-6/00



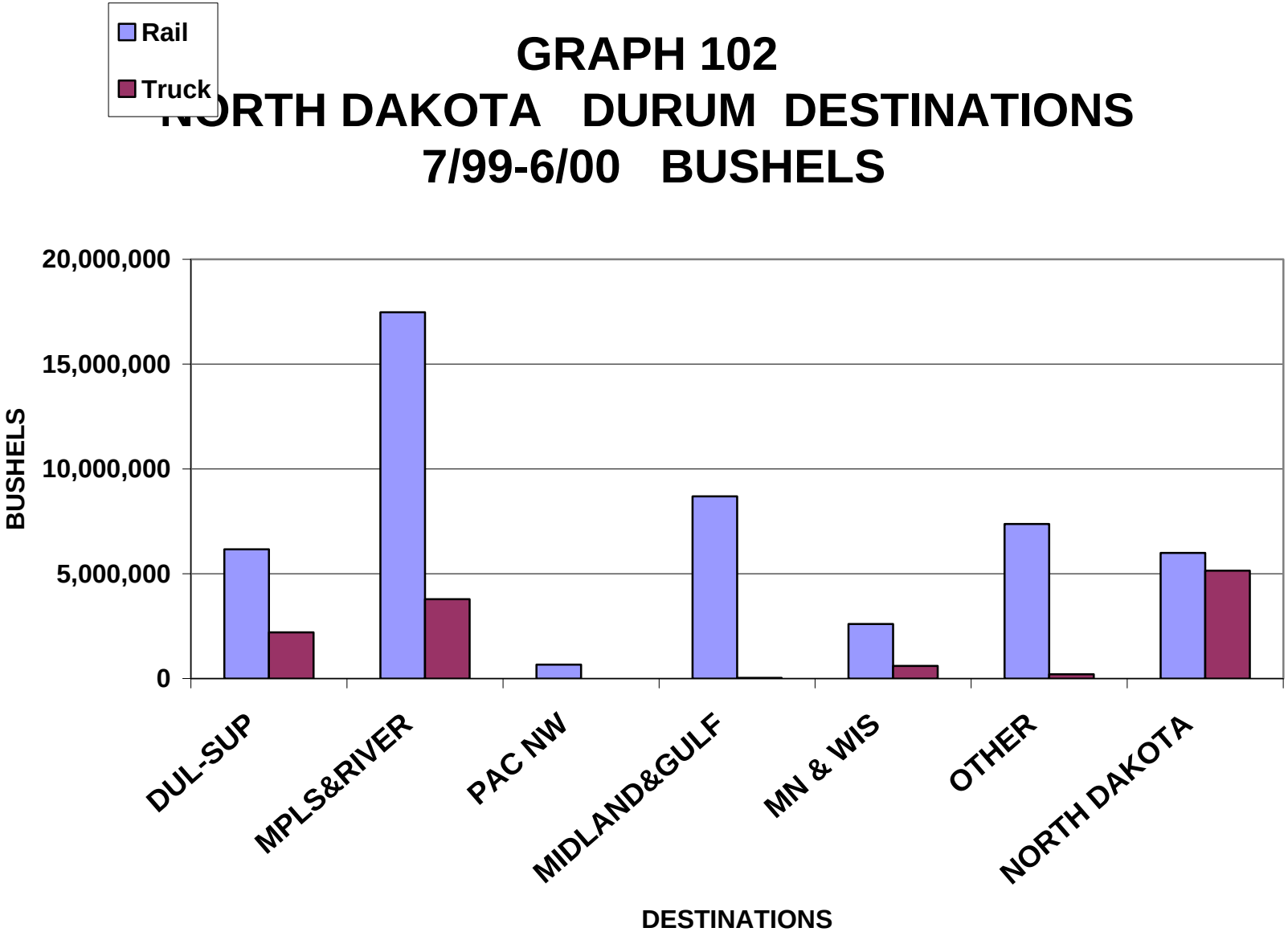
GRAPH 100
NORTH DAKOTA ALLGRAIN DESTINATIONS
7/99-6/00 BUSHELS



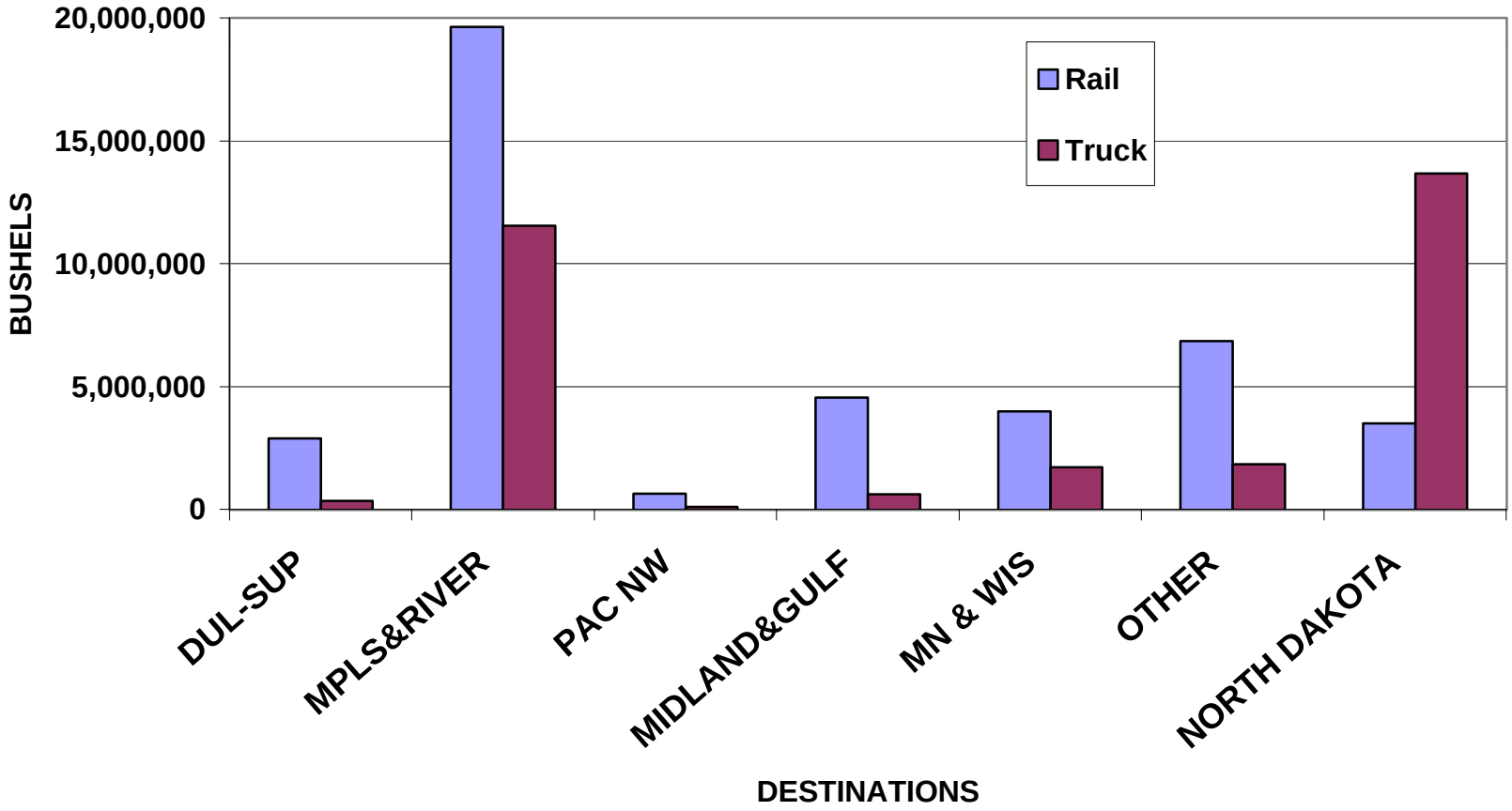
GRAPH 101
NORTH DAKOTA WHEAT DESTINATIONS 7/99-6/00 BUSHELS



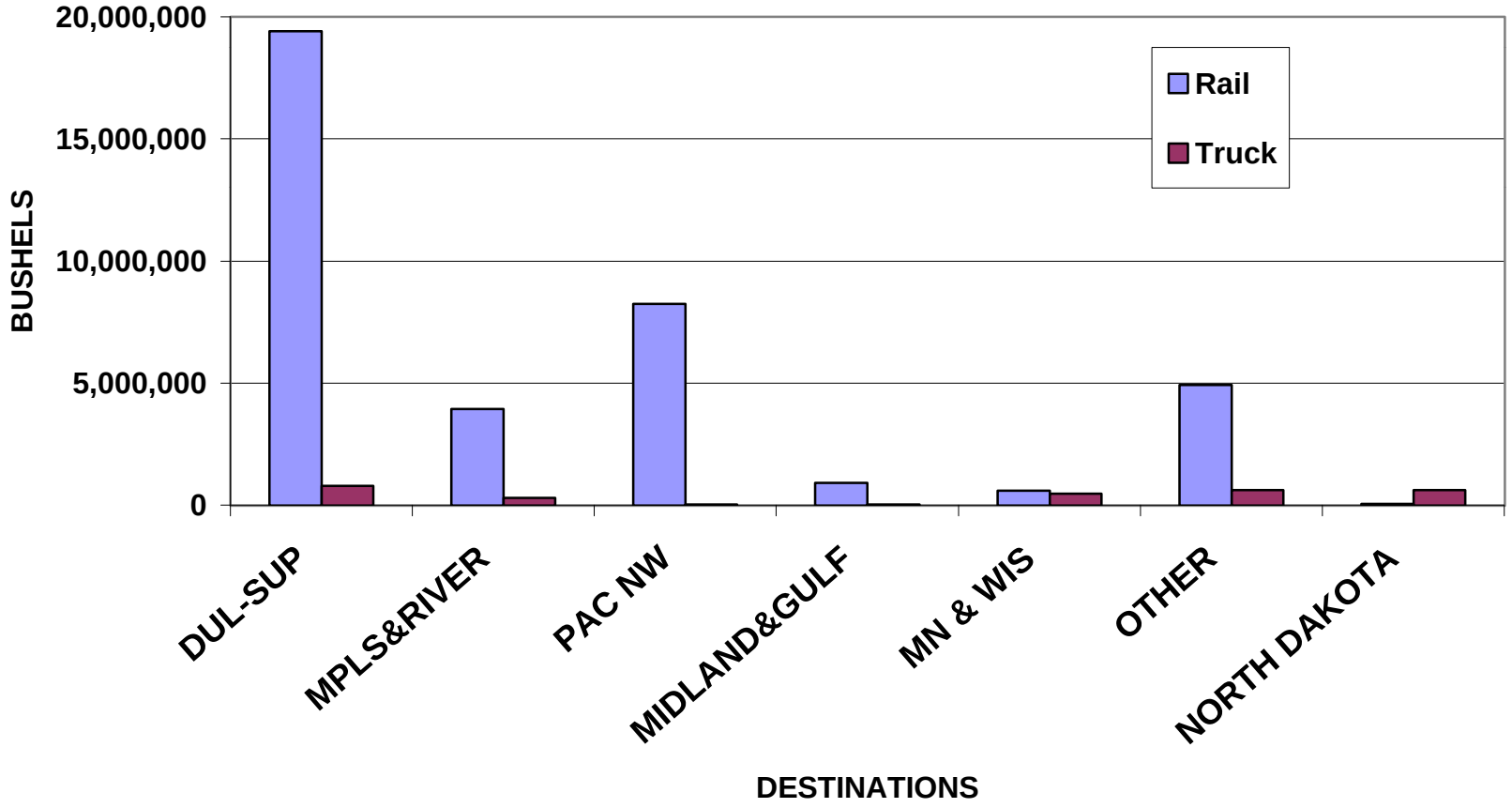
GRAPH 102
NORTH DAKOTA DURUM DESTINATIONS
7/99-6/00 BUSHELS



GRAPH 103
NORTH DAKOTA BARLEY DESTINATIONS
7/99-6/00 BUSHELS



GRAPH 104
NORTH DAKOTA SOYBEANS DESTINATIONS
7/99-6/00 BUSHELS



GRAPH 105
NORTH DAKOTA CORN DESTINATIONS 7/99-6/00
BUSHELS