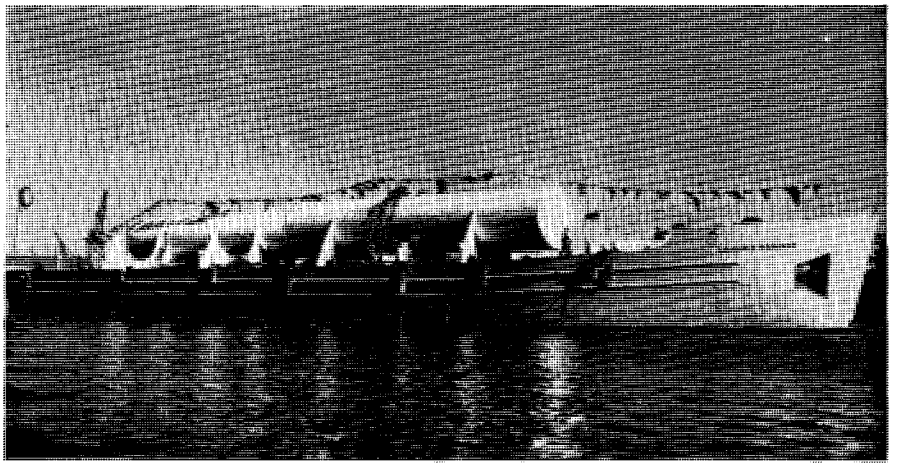
Ag and Food Interprets . . .

- **Ammonia transportation costs getting closer look**
- **Chemical control of roadside weeds hardly begun**
- **British fertilizer use increasing; still below optimum**
- **Food additives bills: injunctive *vs.* licensing approach**
- **Most extensive drought on record hurting farmers**

Ammonia Transportation

Producers take closer look at shipping costs as competition sharpens . . . Barges and trucks arousing interest, may carry bigger share of ammonia



Barges are making a difference in the ammonia marketing scheme in some areas. The new Ammonia Mariner is a factor in bringing down Shell's cost of serving the Northwest

THE PRICE a farmer pays for a ton of anhydrous ammonia may vary as much as $100, depending on where he lives. In "ammonia land" states such as Arkansas and Mississippi, a ton costs him only $125 (as of April 15), but if his farm is in Arizona he pays $225. These are the extremes of anhydrous prices, the price to U. S. farmers averages at $165. One reason for the $100 difference is the cost of transportation, although competitive factors have their influence also.

Recently it has been evident that ammonia producers are taking a sharp look at transportation costs. Shell Chemical, for instance, recently installed a water transportation system between its Pittsburg, Calif., plant and Pasco, Wash., and at the same time announced Pacific Northwest farmers would be getting their anhydrous for $40 a ton less than they had been paying. Of course, transportation savings alone did not account for the $40 price drop, but they certainly accounted for a good part of it—posted rate for major part of this haul, Pittsburg to Portland by rail, is $21.79 per ton.

Another recent development in ammonia transportation was Mid-South Chemical's expansion of storage capacity on an island in the Mississippi River at Memphis. These facilities allow Mid-South considerable flexibility—it can send and receive ammonia at this point by truck, rail, or water. So far this season, Mid-South has received three barge shipments from Houston. These are believed to be the first water shipments of anhydrous via the Mississippi. Anhydrous has, of course, been shipped for some time on the Gulf of Mexico and to Puerto Rico and Cuba.

That a Memphis distributor should receive ammonia from Houston seems surprising, considering that Memphis is practically surrounded by basic ammonia producers. However, this case is not at all atypical. It is symptomatic of the confusion and complication that currently exists in freight rates. One traffic manager says that it is impossible to make any comparison of the cost of transportation by rail, truck, or barge, because a set of figures that would be valid this month may be completely upset next month.

Then, in addition to the complication and confusion in transportation, there is the practice of freight equalization by ammonia producers. This has been a traditional practice in the ammonia industry, but there is no strict adherence to it. Producers have been known to equalize by as much as $25 a ton (ammonia usually sells f.o.b. the works at around $85 to $88 a ton). In general, however, they lose interest fast when freight has to be equalized by as much as $15 a ton. One producer refuses to equalize by more than 10% of his selling price.

Railroads are tending to lower anhydrous rates. In general, however, shipping anhydrous by rail adds a maximum of $20 to $25 a ton to the final selling price of ammonia. One reason for this high cost is that anhydrous is classified by the Interstate Commerce Commission as a chemical. There are efforts to get it reclassified as a fertilizer, the argument being that by the time expansion is complete, some 70% of the total U. S. synthetic ammonia capacity will be going into agriculture. Others, however, feel that railroads will never accede to such a plan. They argue that anhydrous is too valuable a commodity

and that equipment needed to handle a chemical of such a hazardous nature is expensive. They also point out that there are other ways to lower rates.

Trucks haul a substantial amount of ammonia, in addition to delivering it to the farmer customer. Estimates of truck transportation costs range between 40 and 60 cents per round trip mile (for a maximum capacity of 15 tons). The longer the haul by truck the higher the cost per ton-mile, the opposite being true of rails.

Generally speaking the economic maximum haul for a truck is about 250 miles. Yet, there are situations in which a longer trip is economical. San Jacinto Chemical, for instance, makes a 500-mile truck haul from Houston to West Texas, because rail shipment takes two weeks. Rental of a railroad car (most of which hold 26 tons) for two weeks adds about $2.00 a ton to the haulage charge. Truckers, on the other hand, will make an empty run and return to West Texas at less cost, the one-way trip taking only about 12 hours.

Variability of freight rates across the nation sets up some interesting anomalies. For instance, a Texas ammonia producer needs to equalize by only $3.00 or $4.00 a ton to meet competition in Florida; shipping ammonia by rail from Lake Charles, La., to Houston costs $4.00 a ton, but shipping it from Houston to Lake Charles costs $8.00 a ton. Thus, freight rates and/or willingness to take bigger equalizations make it possible for one producer to ship into another's backyard. Such situations allow ammonia from the Midwest to sell competitively with California ammonia in the Pacific Northwest.

Because of the cost of and confusion in land transportation, many inland ammonia producers are looking into the possibilities of water transportation. A barge line reports that it has had inquiries from an ammonia producer recently and there is talk that another producer is considering building dock facilities, its plant being located near a navigable river.

Water transportation has a reputation for being less expensive, but it has its limitation also. In general, water transportation is economical if there is large consumption of the product in a small area near the terminal. Barges for ammonia are expensive to build and they have capacities in the neighborhood of 1000 tons. That means that a large storage space must be available at the terminal, and terminal costs are high.

Some barges now in use were originally built for liquified petroleum gas, traffic in which is heavy during ammonia's off-season. Nice as such a solution would be, there are hitches here also—while propane tanks may be rated at 250 pounds or more, in some areas a working pressure of 265 pounds or more is required for some types of ammonia storage tanks.

Transportation's part in the marketing of anhydrous ammonia is difficult to isolate from the interplay of competition, but it is not difficult to see that its part in the final selling price of ammonia is considerable. As more and more ammonia expansion is completed and competition becomes more acute, there will undoubtedly be more and more effort to rewrite the role of transportation into a minor one.

Roadside Weeds

Most highway departments merrily mow along despite New York's saving of $60 a mile with chemicals. Result: a market awaiting development

SALESMEN PUSHING HERBICIDE purchases by state highway departments might easily draw their pitch from the Canadian Department of Agriculture and its recommendations: "Modern equipment makes roadside spraying easy. Modern chemicals make roadside spraying effective and economical. Chemicals control weeds on roadsides at half the cost of cutting and the results last much longer."

The department further states that roadsides serve as a bridgehead for the invasion of farmers' fields by weeds. Seeds, transported along the road by vehicles, soon spread to surrounding fields.

Nothing, they say, could be more discouraging to a farmer, who is trying hard to keep his place clean, than the sight of neglected roadsides. On the other hand, if a farmer sees familiar weeds and brush effectively controlled along the roadside, he often decides to apply the same treatment on his own fields. Thus, a roadside is one of the nation's best show windows for chemical weed control.

"Brownouts" along highways where brush control programs have been in effect are no doubt an obstacle difficult for many state officials to face squarely. The lack of skilled labor to apply chemicals properly has also posed a problem. In spite of these difficulties, some officials are slowly awakening to the advantages of herbicides, but many states have yet to get their programs into full swing.

Slow Increases Expected

Some states like Arizona and New Mexico have little need for an extensive weed control program because of their arid climate, and others (Arkansas and North Carolina), for various reasons, are still mowing right along in the same old way. Idaho and Utah rely almost entirely on their counties to carry out spraying activities which, they say, permits them to do all of their spraying at the right time of the season and at the proper time of the day when wind velocity is low.

At least a half dozen states (Florida, New Jersey, Maine, Louisiana, Missouri, and Texas) haven't moved beyond the experimental stage with their programs; they are still trying to determine which are the most effective weed killers for their areas, and how to apply them properly. Prospects for increased herbicide usage in most of these states for the next few years appear rather slim. Some officials say they have yet to reach any

The chemical spray truck for roadside weeds hit the economy target in a few spots, but most of the state highway departments still have to be sold