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How Wheat Producers Can Adjust to Rail Abandonment

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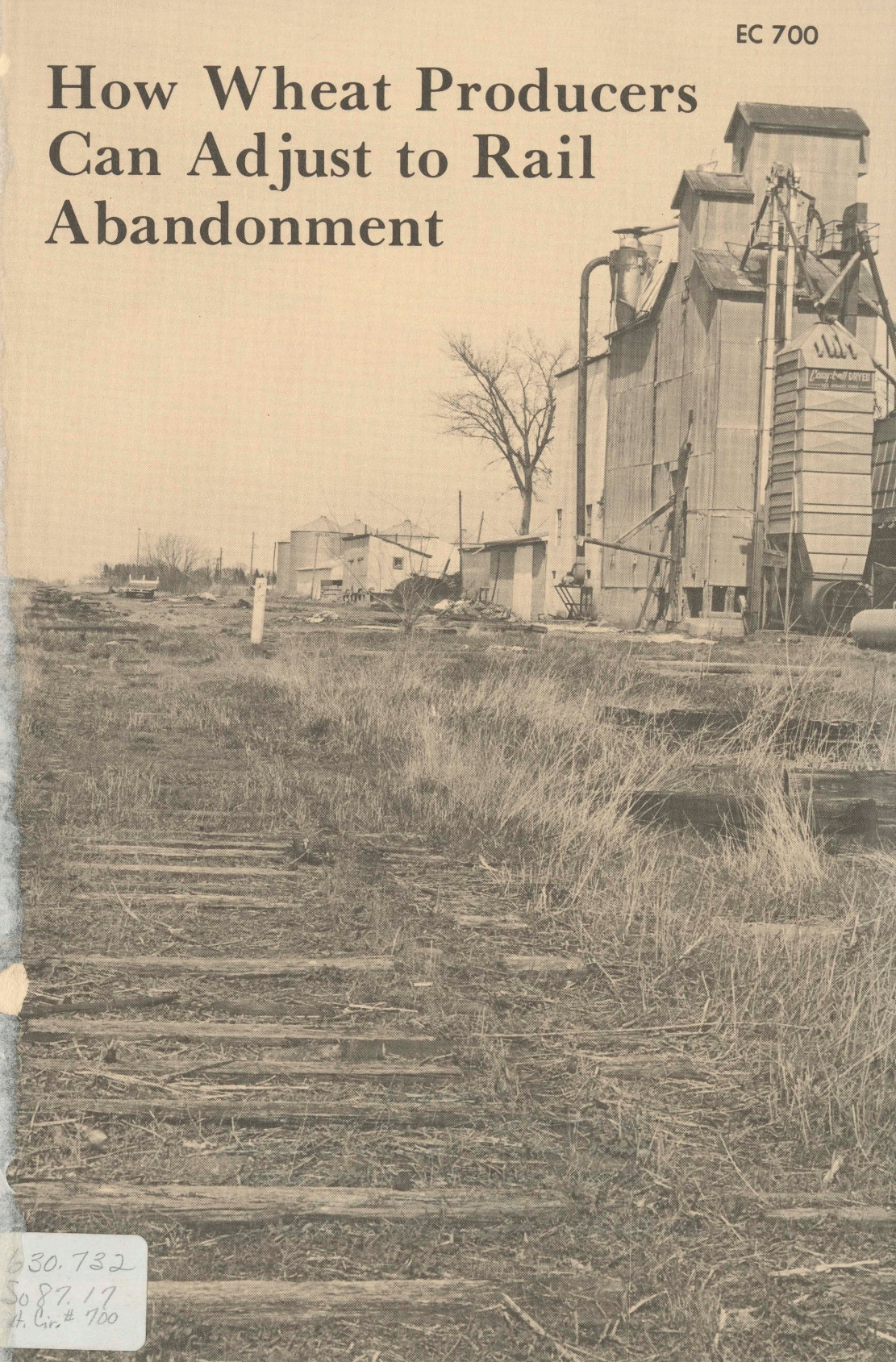

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How Wheat Producers Can Adjust to Rail Abandonment

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Rail transportation has changed dramatically since the first practical railroad began operation around 150 years ago on a 9-mile track of wooden rails with strap iron nailed on top.

That railroad from a Pennsylvania coal mine with a small engine and coal cars that would carry no more than 5 tons was a crude beginning. But the capabilities of railroads for carrying freight and passengers were quickly recognized: Railroads offered the first mechanized system of overland hauling.

The railroad network in the Midwest was built in the late 1800's when overland hauling was limited to horses and wagons, or to the stage coach for passengers. Every community wanted a railroad and, with support from the citizens, the railroads obliged. Throughout the Midwest most people were within 5 miles of a branch rail line and few were more than 20 miles away.

The early rail lines were built with 50- to 70-pound rail, capable of handling the common 40-foot narrow-door boxcar. Bridges and trestles were built to handle loads in the same weight range.

In the 20th century, technological change became much more rapid, affecting not only the railroads but almost every facet of life. By then, the railroad was no longer the only means of overland transportation. Mechanization in agriculture thinned the rural population. The extensive network of rail lines built in the horse and buggy days was becoming outmoded.

The railroads switch to covered hoppers

Technological changes in railroading also complicated the problem. In the late 1950's, the railroads began to use large special-purpose cars. For grain shipment, the new cars were the jumbo covered-hopper cars with a capacity of 4,400 to 4,750 cubic feet and 100 tons of cargo. These cars were limited to main line tracks and to branch lines which were upgraded with 90-pound rail.

With the larger rail cars, capacity of the nation's rail fleet increased--but the number of rail cars declined. The 40-foot narrow-door boxcar was obsolete and the numbers of those cars, used for many years in grain shipment, declined drastically -- down 62 percent between 1960 and 1973. Boxcars now being added to the rail car fleet are special purpose cars that are not designed nor used for grain hauling.

The lighter branch rail lines are not capable of handling the new heavyweight rail cars. And even if these light lines remain in service, shippers on these lines face the problem of obtaining boxcars which are declining in number.

To be fully functional, branch lines must be upgraded to handle the jumbo freight cars. The cost of upgrading a light rail varies, depending on the condition of ties and the road bed and the number of bridges and other structures on the line. Costs of upgrading typical branch

lines in South Dakota have been estimated at $75,000 per mile, based on 1973 prices. This estimate is based on replacement of about 50 percent of the ties, replacing 60-pound rail with 90-pound rail, and an average of about 20 cars of ballast per mile. Maintenance costs are estimated at 5 percent of the upgrading costs per mile.

To upgrade typical branch lines in North Central Iowa would cost over $46,000 per mile at 1972 prices, according to an Iowa State University study. This includes replacing 35 to 50 percent of the ties and replacing 60-pound rail with used 90-pound. Any major steel bridge upgrading would increase this cost substantially. In addition to the investment cost, there would be maintenance costs each year to keep the track in condition. The ISU study estimated annual maintenance costs for branch line track at $2,350 per mile per year, though four railroads operating in that area indicated they actually spent $5,220 per mile on maintenance of all track and structures in 1971.

Another reason for the switch to jumbo covered hopper cars is that they are less expensive to operate. The ISU study estimated costs of shipping corn in the jumbo hopper cars versus boxcars: In single-car shipments, the variable costs of moving grain from Fort Dodge, Iowa, to Kansas City was about 13 cents per bushel in hopper cars. In boxcars the cost was about 20 cents per bushel.

These are costs to the railroads only, and do not contain the cost to the shipper for preparing boxcars for grain shipment. Nor are the additional costs for both shipper and buyer in loading and unloading boxcars included.

The reduced costs for hopper cars basically stem from the larger car volume, thus reducing handling costs per bushel. In addition, the hopper cars are less costly to purchase on a per

bushel basis than boxcars, have less maintenance costs, and lose less grain during shipment.

The efficiency of handling grain in hopper cars increases further when a larger number of such cars are shipped to a single destination. The railroads feel they can be most efficient and profitable by handling large volumes of grain on long distance shipments. Consequently, the railroads have issued special multi-car rate tariffs to encourage such shipments. For instance, in 1972 the single-car exports rate for moving corn from Fort Dodge to New Orleans was 25.76 cents per bushel. The three-car rate was 23.52 cents, the 50-car rate 21.84 and a 115-car rate with a sizable guaranteed volume was 17 cents. The multi-car rates apply only to the jumbo covered-hopper cars.

Consequently, grain elevators on light branch rail lines have a number of problems even if they're not faced with line abandonment. The lines can handle only the standard boxcars, which are becoming increasingly difficult to obtain. Inability to use larger hopper cars also prohibits these elevator operators from taking advantage of the lower rail rates available on multi-car shipments of the jumbo hopper cars. In addition, many elevators would have to build or improve their loading and storage facilities if tracks were upgraded and covered hoppers were used.

Railroads view branch lines as the weak link in their system. Consequently, the railroads have abandoned many lines and seek to abandon more. About 60,000 miles of rail lines have been abandoned since 1920, with about 14,000 of those miles abandoned since 1962.

Therefore, it's likely that many more grain producers and shippers will face the problem of rail abandonment in the future. Shippers or producers do have a number of alternatives.

You have several alternatives to abandonment

Formation of a rail users group might be beneficial. All users of the rail line can organize to discuss mutual problems and possible solutions. The basic problem they face will be to increase revenue on the line for the railroad. That can be done basically only by increasing volume or reducing costs. The group may be able to generate additional traffic for the line, or help the railroad to reduce costs. Or they could agree to accept higher rail rates in order to keep the line in operation.

Another step might be for the rail users organization or another private group to purchase the line and operate it as a short-line railroad. This group must reduce costs, however, or still face the basic problem of inadequate volume and income. In addition, unless they're able to pay for costly improvements, rail line users will still have trouble obtaining rail cars and be unable to use the economical jumbo hopper cars.

The users also could fight rail abandonment, and may be able to save the line. More than likely, they'll only be able to delay abandonment. But, even if the line continues in operation, it will still have the problems of the light line. Users will not be competitive on grain bids with multiple-car shippers.

Another possibility, if the rail line continues in operation, would be to buy or lease rail cars that can be operated on the light line. However, the smaller covered-hopper cars needed for light rail lines are in short supply since all new covered hoppers are of the 100-ton variety.

In some instances, user organizations have loaned money to the railroads to maintain or upgrade the track to handle the jumbo hopper

cars. The railroad then repays the loan on a per-car-shipped basis. This option appears to be open only to shippers on selected lines.

Another option to those facing rail abandonment is to use trucks for grain shipping. For short distance hauls, trucks can haul grain competitively. For long distance hauls--those over 175 or 200 miles--the costs by truck are likely to be more expensive than rail shipments. A truck-rail shipment agreement may be mutually negotiated and acceptable to all parties.

Subterminal plan works in corn growing areas

Another alternative for growers and shippers would be to adjust to rail abandonment by using a system of subterminal or large elevators on mainline railroads. These subterminals or large elevators would ship massive quantities of grain trucked in from country elevators.

A study of the subterminal system in Iowa showed that such a system, using 115-car trains operating continuously between north-central Iowa and Gulf of Mexico ports, would return about 7.8 cents per bushel more than the traditional single-car shipping system used before multi-car rates were introduced in the area in 1971.

The subterminal system for this 6½-county area would require maintaining 27 percent of the rail lines existing there in 1971, and about one-third as many cars, reduce the amount of additional investment needed, and require a minimum amount of additional storage facilities for future production expansion.

The increased revenue to the area on grain shipments comes from savings in overall transportation costs. Most of the savings--82 percent--

comes from greater use of the large volume multi-car shipments and accrues to the shippers. Reduced maintenance of the rail system accounts for the remainder of the savings.

The system returning the greatest amount of revenue to this area, according to the Iowa State University study, would use six subterminal elevators handling up to 18 million bushels of grain per year. All existing country elevators would still be used to collect grain from farms, store it, and later truck it to the subterminals for shipment.

Some of the savings on transportation would be passed on to farmers so that the subterminals would receive the large volume of grain needed for the low shipping rates. Some of the savings also should go to the country elevators to cover trucking costs to the subterminals.

Adjustments need to be made in wheat areas

Though results of the Iowa study cannot be directly applied to wheat growing areas, some insights can be gained. First, the system in the Corn Belt that returned the greatest revenue required only six subterminals--or about one per county--in a heavy cash grain producing area. Fewer subterminals probably would be needed in areas where more grain is fed to livestock or trucked to river terminals. Fewer subterminals and smaller unit trains probably would be required in the wheat producing areas, where the lower yield per acre, as compared to corn, produces lesser volume over the same acreage.

Two South Dakota State University studies (in 1968 and 1972) of elevator location and size tend to support the findings of the Iowa State study. The lower production density of grain crops per acre and substantial on-farm

storage in South Dakota has combined to promote a grain elevator industry that is relatively small as compared to the Midwest Corn Belt. As a consequence, a few large elevators located on main lines could serve as subterminals. This type of system would make use of many existing facilities; however, additional investments in storage and loading facilities would be required in most cases at the selected elevator sites.

The 1972 study shows that 22-26 large elevators would meet the minimum cost solutions for 23 counties west of the Missouri River. Since most of these elevators would be between 1 and 1.5 million bushels in storage capacity, it is questionable whether unit trains of 50 to 115 cars could be regularly used. However, it could be expected that multi-car shipments could regularly be made. However, multi-car and unit train rates for wheat have not been generally used in South Dakota, and uncertainty still exists concerning their availability. Thus, any solutions making use of these rates must be tentative until rates are firmly established for wheat by the railroads.

The national wheat marketing system now has a network of huge grain terminals, not characteristic of the grain market of the Midwest. Some wheat terminals might be converted to a subterminal operation. Or, should the nation adopt a grain reserve program, these terminals would be ideal for that type of storage.

Under the subterminal system, country elevators would have to change their operations from selling directly to merchandisers and processors through local subterminals. Under the subterminal system, country elevators will need to look increasingly to hedging as a way of earning storage income until the grain can be trucked out of the elevator. Future growth might be limited; though in many cases, growth

already has been curtailed by restrictions of the light branch rail lines.

Cooperation among grain shippers would be essential. If each mainline elevator attempted to become a subterminal, the result would be overbuilding and investing in more shipping facilities than may be required.

A system of subterminals can be designed so that each can obtain the quantity of grain needed to take advantage of high-volume lower-cost shipping rates, with each subterminal having its set of satellite elevators to feed in grain.

There is one thing to be cautious of in cooperative efforts: Private firms engaging in such cooperative planning should seek legal advice, since any cooperative effort that might be interpreted as reducing competition or price fixing would be a violation of anti-trust laws.

In summary, there are a number of ways in which growers and shippers can adjust to rail-road abandonment. The proper adjustment can be determined only after an examination of all the facts in each particular situation.

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