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LIVESTOCK AND RAILROADS

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Since approximately two-thirds of the agricultural lands of the United States are devoted to the raising of livestock of some kind and to the growing of feeds for livestock, the importance of the livestock industry in our national economy is readily recognized. This country is on a meat economy basis. It is doubtful if there will be much change in that situation as long as the U. S. remains dominant among nations.

Income from meat animals on the average is about 23% of the total income that farmers and ranchers receive and is the largest single source of farm income.

Five and a half million farms and ranches out of a national total of about seven million were reported by the last census of agriculture as having some cattle, with one and one-half million farms raising or feeding beef cattle. Hogs are raised or fed on nearly four million farms and sheep on two-thirds of a million farms.

The meat packing and processing industry, according to the Bureau of the Census, is the largest industry in the nation on the basis of the total value of the output. The value of the products in 1945 will probably reach over three billion dollars. In eight of the states meat packing is the largest industry, these being Illinois, Iowa, Minnesota, Kansas, Missouri, Nebraska, Colorado and South Dakota.

Coupled with the meat packing and processing is the tremendous industry of marketing livestock which is represented by over sixty large and small terminal public livestock markets which are under federal inspection, are listed and make market reports of receipts and shipments and are under the supervision and jurisdiction of the Packers and Stock Yards Administration of the U.S.D.A. These livestock marketing display and salesrooms with the livestock hotels operated in connection, represent another industry of over a billion dollar size, not counting the value of the animals sold or bought. In addition there are now innumerable smaller markets and auction markets scattered all over the nation, estimated at over 1,000 sales places dealing in livestock mainly for feeding or slaughter purposes.

Normally the people of the U. S. consume from 16 billion to 18 billion pounds of meats annually. In 1943 and 1944 this will total nearly 24 billion pounds and it is estimated at about 22 billion pounds for 1945, OPA notwithstanding.

The immensity and importance of the livestock producing, marketing, processing, sales and distribution can be appreciated. Everywhere in this picture comes transportation which plays the most important economic part in the entire livestock and meat program—it gives place value, time value and dinner table value to the entire industry from the soil to the stomach or dust to dust.

The railroads are the largest owners and operators of stock yards, loading yards and feeding yards.

The total cars of livestock loaded on railroads steadily declined from about 1925 until 1940 when the trend reversed and since that each year up to and including 1944 has seen steady increases. Livestock cars loaded by the railroads in 1923, which was the peak of all time livestock loading on railroads, 1,768,497; 1924, 1,753,042; 1934, 1,074,457, the last million car year; 1940, 658,498; 1941, 650,479, the lowest number loaded on the railroads in 40 years; 1942, 744,400; 1943, 837,437; 1944, 877,657; and in 1945 it is expected that the total will be about the same as in 1944 or possibly just a little less. The million cars a year days are gone.

In 1924 the railroads had about 80,000 stock cars in service.

In 1943 all the railroads of the U. S. had in service 53,960 stock cars. Of this number the five largest livestock carrying railroads operating in the western states own and operate approximately 27,000 of these stock cars or about fifty percent. That leads to the next important statement in connection with transportation of livestock and meat products, i.e., approximately two thirds of all the livestock is produced west of the Mississippi River and about two thirds of all the meat and meat products are used and consumed in the U. S. east of the Mississippi River.

Just by way of comparison—the average freight car capacity (box cars) in 1916 was 41.0 tons while the average load carried in livestock cars was 11.0 tons. By 1943 this freight car capacity had increased to 50.7 tons while the average load of livestock handled in livestock cars had increased to only 12.5 tons.

Livestock has such unusual and inherently different characteristics than any other product or commodity handled by the railroads that its transportation of necessity requires an entirely different treatment. The assembling, preparation for loading, the loading, handling and movement by rail requires an entirely different technique, entirely separate and distinct facilities and specialized types of equipment that can be used for few other commodities than livestock. In addition there must be of necessity provided many extra and special services, extra trains, extra switching, "stock loader" services by train crews and equipment and many other services required and accorded only by and to livestock because of its nature.

It follows, therefore that the rules, regulations and conditions under which livestock is transported by railroad as well as the rates or charges must in general be carried in separate and distinct tariffs that deal only with livestock. Livestock is normally moved under what is known as commodity rates or mileage rates. The commodity rates when named are based on what is known as mileage or distance and are as prescribed by the I.C.C. under the decision known as the 17,000 part 9 case. These commodity rates are lower per hundred pounds and produce less revenue per car, per car mile or per ton mile of transportation service performed than in the case of most other commodities. When compared with the average number of

pounds or tons per loaded car handled it is found that livestock is one of the lightest loading commodities handled by the railroads, averaging about 11 to 11.5 tons per car. Light loadings per car combined with a scale of very low rates per hundred pounds produces a low rate of return per loaded car, per car mile or per ton mile.

There is no product or commodity handled by the railroads of America that requires as much attention, as many specialized facilities and as much service at as low a cost as does the transportation of livestock. Livestock, as the name implies *is alive*, and a living commodity that requires food, water, rest, humane treatment and such care and attention that will prevent or minimize injury, crippling, mortality, undue or excess shrinkage or bruising in transit.

Livestock is the only commodity or product that moves on and off cars under its own power although at the same time requiring more human assistance and direction than any other product. Because of its own locomotive ability livestock is frequently in difficulty and the hazards of transportation are increased because of that ability to become mobile at the wrong time, in the wrong direction or under improper conditions or situations.

All of this is pointed out here to show that the rail future of livestock transportation is not too bright especially when it is considered that the trucks, using and operating over public highways have in the past fifteen years taken over more than fifty percent of all the livestock transportation. In 1941, before the war started, truck-highway transportation was delivering nearly two-thirds of all the livestock to the principal livestock markets of the country. With all the hue and cry about truck shortages, gasoline rationing, lack of truck parts, truck drivers going into the armed services and in to more essential war work, notwithstanding these things, the trucks have increased the volume of livestock handled each year since 1941 with the peak of livestock hauling reached in 1944, exceeding the previous high year of 1943 by 11% according to U.S.D.A. figures. Of course, the railroads increased the volume of livestock hauled in the same years. In 1944 the railroads with less equipment, fewer stockyards, less motive power and certainly less manpower in the operation of trains, in switching crews and particularly to handle livestock at stockyards and feed yards, handled the largest volume of livestock ever moved by the western railroads.

The railroads of the west will in 1945 probably handle almost as large a volume of livestock as was handled in 1944. It may not be quite as large due to less hogs, less sheep and probably slightly less cattle going to market from the western ranges. There was such a heavy movement of cattle last fall and continuing into this spring that the volume is expected to be a little less this fall.

What is the future for the rail transportation of livestock? It always fluctuates up and down with the numbers of livestock produced on farms and ranches and the western railroads always feel this production variation and the ups and downs more than do the eastern lines. On the other hand

the eastern lines have consistently and completely lost a greater volume and percentage of the livestock traffic to the trucks than have the western lines. The reasons are obvious. After the war the western lines will feel the inroads of truck competition more keenly and completely than they have in the past. There is no argument against the fact that the trucks can haul livestock, more conveniently for the producer, the market and the processor. They can't haul at the present time as cheaply nor in the mass volume nor as safely as can be done by the railroads. The trucks have found out that their livestock rates have been and still are too low, that they can't continue to give away transportation and still stay in business. And the farmers and the users of truck transportation have also found out that the highways have to be paid for and maintained either by the users of these highways or else by the taxpayers.

For the livestock transportation future we need not look for lower rates unless some new and vastly cheaper methods of handling and transporting livestock can be found. It costs money to maintain and operate thousands of railroad country loading stockyards, hundreds of transit feed yards and over fifty thousand stock cars that cost about \$2500 to \$3000 each. The rates in too many instances now are recognized by the I.C.C. as too low to be compensatory to the railroads. Therefore, any combinations of truck and rail hauling of livestock in the future, which does seem reasonable and practical, will have to be on a basis that will make it economically sound to both the trucks and the railroads.

Undoubtedly there are now many improvements, short-cuts and more efficient practices that can be put into effect, and will be in the very near future, that will reduce the cost of handling livestock to market. It will have to be so if the livestock producers, marketers and processors wish to maintain an adequate system of both short and long distance, little and big shipments of livestock. All of the principal railroads have been for some time and are continuing to retire and abandon country loading yards that are little used, stock cars that are not worth repairing and will never be replaced, and transit feed yards whose cost of operation greatly exceeds their income.

Faster freight train schedules for livestock as well as for all kinds of freight will be definitely in the picture as soon as the war is over and the railroads have a return to a more normal volume of traffic. Whereas it is only possible now to run livestock 500 to 600 miles before the 28-36 hour law compels stopping for feed, water and rest it will undoubtedly be possible in the not too distant future after the war to make runs up to a thousand or twelve hundred miles.

There has not been much improvement or change in the construction of stock cars or stockyards in the last 25 years. More stock cars are now of the 40 foot length. Most new ones being built are of that length. There have been some improvements also in the inside construction of cars that insures better handling of the stock. There is not much opportunity here for

any revolutionary changes, improvements or reductions in either weight or cost of the equipment. The inherent characteristics of livestock, previously referred to, limits the possibilities of changes, refinements and improvements. Until such time as the kind and animal natures of the product can be changed, and that is just about as likely as to change human nature or Mother Nature, the types and kinds of equipment and the services rendered by the railroad in animal transportation will of necessity remain much as they are now. Reducing mortality, crippling and bruising has been accomplished by railroads. It can be reduced more.

In combinations of truck-rail haul, pick-up and assembly service, more convenience with no sacrifice in volume or mass transportation, and faster schedules probably lies the greatest hope of the industry in better livestock transportation of the future. It may cost more unless some economies can be worked out.

In connection with the transportation of livestock it is only reasonable to point out here the importance of the livestock products and by-products. This includes wool, hides, fresh meat, packing house products of all kinds and also dairy and poultry products. It is pertinent here to point out that to a very large extent our whole food economy particularly our meat usage and distribution is predicated upon the use of the refrigerator car of which the railroads own and operate more than 100,000, private car lines and other industries own and the railroads operate an additional 31,000 refrigerator cars, commonly referred to as "reefers." The average modern refrigerator car costs from \$5500 to \$8500 depending upon kind, size and the use to which it is to be placed. It has a revenue loading capacity of 70,000 to 132,000 lbs. and a bunker (water) ice capacity (one bunker in each end) of from 6500 to 14,600 lbs.

The movement of fresh meats in volume has generally been eastward from the meat processing centers at Chicago and the Missouri Valley to thickly populated areas of the eastern third of the U. S. Packing house products, so called, which consist largely of smoked, salted, cured, frozen, cooked or processed meats move in volume in all directions from the processing centers and from both large and small plants.

With the development of the meat packing and livestock processing business on the West Coast and the decentralization of the meat industry in the midwest, packing house products as well as fresh and frozen meats have tended to move in all directions where it appeared to the processor or packer that there was a possible outlet or a chance for profit. The war conditions have, of course, upset all normal processes and economic laws of distribution, supply and demand. What the situation will be after the war has been completely won in the Pacific is difficult to estimate. It is definite, however, that there will be many improvements in "cool" and "colder" transportation. Much research has been and is being done along this line.

The transportation of domestic wool by rail is largely a seasonal matter even in normal times. It is more so in war time when wools are bought by

one government agency, stored by another and sold by another. It requires the use of only first class box car equipment of the larger sizes and a movement that is in one direction—from the range producing areas and ranches of the west to the processing, marketing and manufacturing centers of the east.

Boston and the immediate area around Boston is the processing and manufacturing center for wools. Chicago and St. Louis and Philadelphia are also important but the total volume moving to the other three places would not equal that going to the Boston area.

Rates and minimum weight requirements have been established over a long period of time based on experience in handling, value of the commodity and other factors which must always be considered in rate making.

Wool transportation also involves the furnishing of some type of loading point facilities, of weighing the bags, checking the lots and loading. Wool is usually shipped direct from shearing pens "in the grease," without washing or grading, in large burlap bags that weigh from 200 to 400 lbs. each and load from 80 to 125 bags per car. Prior to war times ten days free storage was allowed in cars at origin points. This cannot be done under war time conditions due to the urgent need for all box cars.

Following the war there will be some improvements and changes in the handling of wools from producer to manufacturer. It appears likely that most of these will be in methods of shearing, sacking, baling, washing, storage and handling rather than in transportation facilities.

Faster movements, improved methods of assembling, classifying and distributing at lower costs must be included in any future rail plans for the handling of agricultural products. Refrigeration, aeration, ripening of some products in transit, retarding others, safety, on time performance, dependability and mass or volume transportation, especially at peak seasons of production, will continue to be the most important features of rail transportation.

Research and experimentation will develop improvements in rail transportation of many agricultural products after the war, but livestock will not be one of those affected to any great extent or with revolutionary ideas, methods or equipment.