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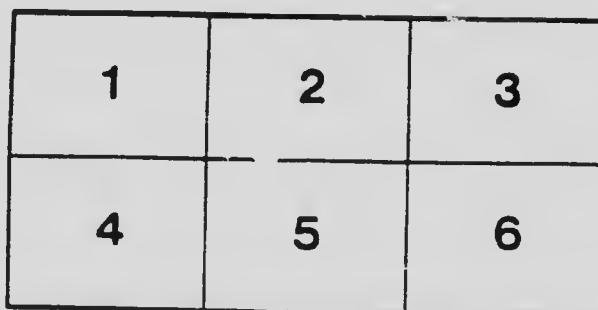
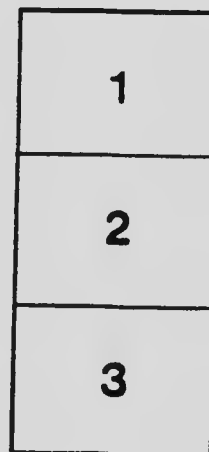
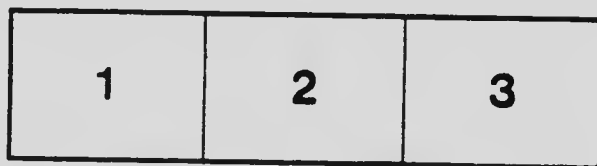
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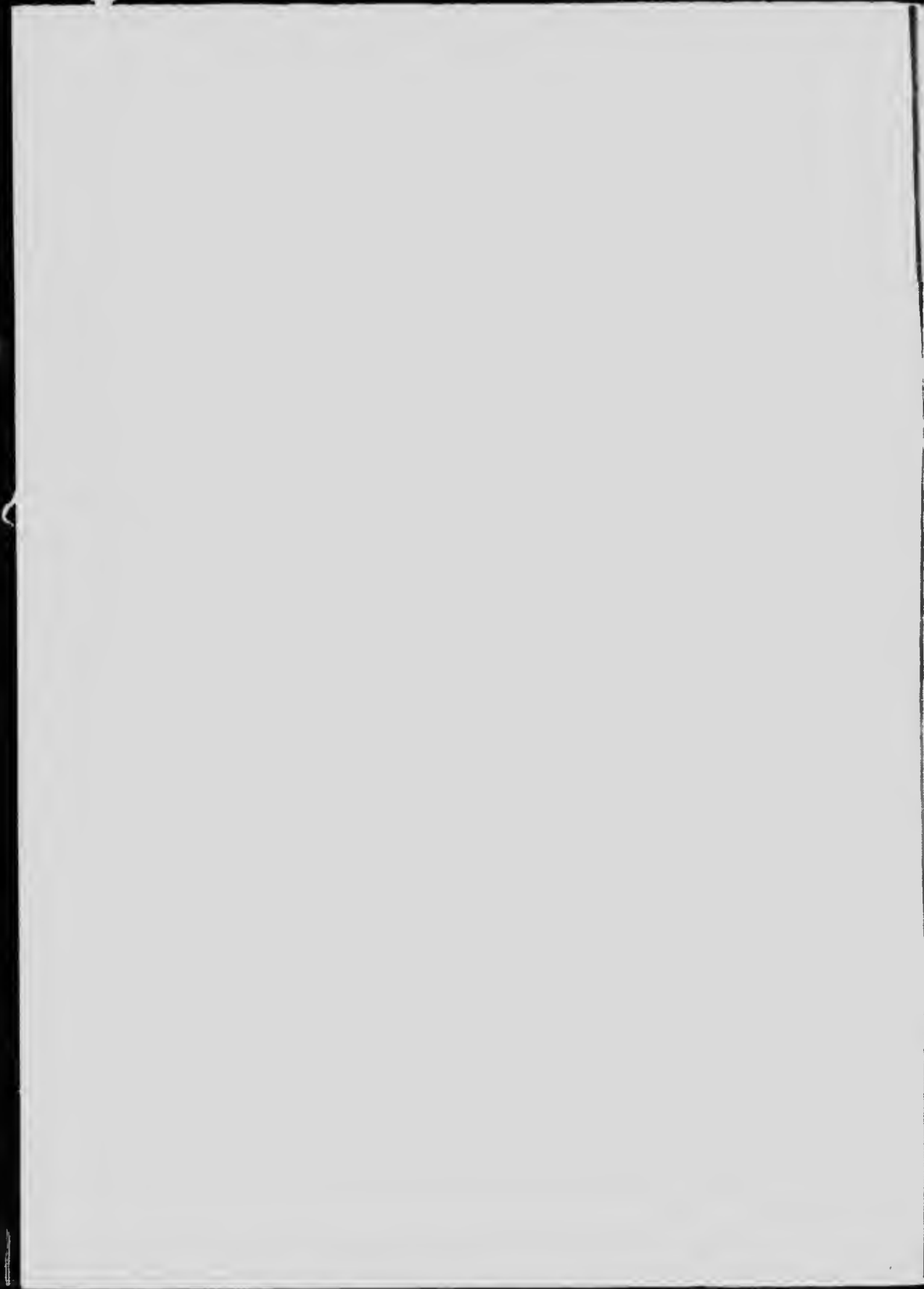
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**TRANSPORTATION OF FOOD PRODUCTS: A
PRESSING HEALTH PROBLEM**

P. H. BRYCE, M.A., M.D.

[Reprinted from **AMERICAN JOURNAL OF PUBLIC HEALTH**, Vol. 8, No. 10]



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TRANSPORTATION OF FOOD PRODUCTS: A
PRESSING HEALTH PROBLEM

P. H. BRYCE, M.A., M.D.

[Reprinted from AMERICAN JOURNAL OF PUBLIC HEALTH, Vol. 3, No. 10]

TRANSPORTATION OF FOOD PRODUCTS: A PRESSING HEALTH PROBLEM.

P. H. BRYCE, M.A., M.D.,

Chief Medical Officer, Interior Department, Canada.

Read before the General Session, American Public Health Association, Colorado Springs, September 9, 1913.

It will be recalled that at last year's meeting of the association a symposium on cold storage was presented, which dealt with the problem of the conservation of food products. In view of the present high cost of living, remembering that ordinary urban populations are made up of at least 80 per cent. of what may be termed day wage earners, and that from 40 per cent. to 50 per cent. of their total expenditure is upon food necessary for their subsistence, it must be plain that too much attention cannot be given to the several factors involved in the cost of food, this being the one dominating influence upon the effectiveness of the labor of the worker and of his maintenance at an average standard of health. Associated with this problem is, of course, the housing question; but after all, like all other animals, man primarily concerns himself with obtaining the ordinary means of physical subsistence.

Economists seriously discuss the question of whether or not food supplies the world over are relatively decreasing as compared with the increasing population of the earth; but so far we find that the capacity to produce foodstuffs is, owing to improved methods, about keeping pace with increasing population, any defects locally being due to lack of distribution and excessive cost. While this statement is probably true we have abundant facts before us showing that in certain products as "meats" the supplies on the North American continent have in recent years decreased relatively if not absolutely, and their export from the United States and Canada has practically ceased. To illustrate this we learn from the United States census for 1910 and that of Canada for 1911, as well as from reports from the Department of Agriculture, the following facts:

UNITED STATES.

Total cattle on farms 1907.....	71,300,000
" " " " 1912.....	77,000,000
" swine " " 1909.....	54,150,000
" " " " 1912.....	61,172,000

Transportation of Food Products

1057

CANADA.

Total cattle on farms 1911	6,699,000
“ “ “ “ 1912	6,595,000
“ swine “ “ 1911	3,332,000
“ “ “ “ 1912	3,153,000

PROVINCE OF ONTARIO.

Total cattle on farms 1911	2,503,000
“ “ “ “ 1912	2,413,000

Surely then, in view of the above figures, the conservation of the food produced, both from the standpoint of its quality and of its cost, demands the application of the most scientific methods available both in production and in transportation to prevent organic changes in these perishable products, and which alone can be brought about by the application of "cold" or the method of asepticism. The development of these two methods as seen in the great cold storage houses and in the canning industries has proved so great as to have resulted in the accumulation of capital in a few hands to such an extent as to have created a practical monopoly, controlling in the case of meat, it is said, 90 per cent. of the total animals killed in the United States; while in Canada the United Canneries are said to control 95 per cent. of the supplies purchased by the wholesale houses. Associated with this centralization of production there has come to be a development of special cut rates in the transporting of the products of these great companies by both railways and steamship companies. To such an extent has this gone, indeed, that the interference of both state and Federal governments in the United States became necessary, while similar problems are today being investigated by the Railway Commission of Canada.

The extent to which such discrimination in rates has gone on does not, however, enter into our problem beyond the point of determining first, whether the rates charged at present are excessive to the extent of seriously affecting prices, and second, whether or not the special advantages possessed by the handlers of food products in wholesale amounts and earload lots do seriously injure on the one hand the producers to the extent of causing a lessened output of products, or on the other, hurt consumers through the creation of artificial "shortages" in local supplies. There can be no problem then of more interest to anyone and yet involving more difficulties in its solution than that of the relative costs and the values which ought to attach to each of the three items of *production*, of *transportation*, and of *sale*, each one of which is an important factor in determining the cost of food.

The investigations which already have been carried on by various government commissions have brought to light many anomalies, some of which

were so obvious as to require only to be pointed out in order for a remedy to be applied; yet I find in examining freight tariffs, whether the are of railways or of steamships, that such anomalies are still abundantly present and which, to the ordinary layman, seem inexplicable. Railway rates on this continent are very similar, whether north or south of the 49th parallel, and the method of levying seems similar to that established by the transportation companies, whether railway or steamship, of Great Britain. Everywhere is witnessed the transport of raw grain or cereals at a rate approximately one half of that charged upon other articles of food, - potatoes, cheese, butter, etc. Indeed, in a case I was recently personally interested in the rate per 100 pounds for seed peas and corn was 15 cents, as compared with 35 cents per 100 on potatoes whose selling value was actually less than half that of the cereals. Another and even more remarkable difference is the disproportionate rate for a car lot as compared with a part car or of mixed freight. Equally anomalous is the enormous difference in favor of car lots in what is called "the long haul" and in the great discriminations against local freights. Similar anomalies are found in the matter of express charges on different kinds of supplies and in special tariffs made in favor of some one district which ships largely some one or more particular products. Equally remarkable is the effect of transportation methods associated with wholesale consignments, in maintaining local prices in a district for products produced there, at a price as high, or even higher, than the same products can be bought in a market many miles away. Now it may be that the opinions of members of an association of this character are of little value from an expert business man's standpoint on so complicated a matter as freight rates; but, nevertheless, it is quite within the range of our capacity and certainly becomes our duty to enquire whether or not existing methods, by affecting seriously the quantity and varieties of the various foods which, owing to the price either may not be transported at all to certain districts or if forwarded then only at such cost as to make their sale practically prohibitive, are not resulting in definite and serious injury to the public health. Take, for instance, the supply of fruits to the towns and settlements on the wide expanse of prairies of the north western states and the provinces of Canada where in practice little or no fruit is grown. California fruits, I am informed, can often be bought at less prices in London or Liverpool than in New York, and much cheaper in New York than in places much nearer the source of production. When, as I learned yesterday, a dozen pears on the Ottawa market cost 60 cents and when the vaudeville girl in New York asked the conundrum last winter, "How much do you suppose I had to pay for an apple in a Broadway shop when I asked for 10 cents worth?" and no solution coming, she replied, "They told me they never cut one apple," it is apparent that no limits based upon actual values can

be set to charges that are sometimes made for food supplies. Of course, we are aware of some of the causes of these anomalies as when the great companies which control these products place them most conveniently in the great markets of the world in large quantities, where such can leave the problem of their subsequent distribution to commission men who have extended facilities for handling them. This, however, in no wise lessens the necessity for our considering these facts in their bearing upon the public health and of seeking some remedy for conditions so inimical thereto as the absence of fruits from the dietary of large populations living through the long winters of our northern climates, or the prohibitive prices in other centers except at times when there is a local glut in the market. Another part of our problem is the cost of local transportation and distribution after supplies have reached urban centers. To illustrate, last winter I bought 400 pounds of turkey which cost 65 cents for freight carriage by stage over some twenty miles, 35 cents for railway freight and 75 cents for suburban delivery some three miles. Or again, we can illustrate this difficulty by referring to the methods of the collection and distribution of milk supplies. I noticed in the last *Chicago Weekly Health Bulletin* that 85 per cent. of 1,811 cans of milk tested for temperature had given a temperature over 60° F., and an average over all of 64.6°. I further learn that all the great American cities are struggling with the problem of whether it is possible to require a temperature of 60° F. as a maximum and of whether 500,000 or 1,000,000 bacteria per cc. are permissible. Now, if in any food the most scientific methods possible are demanded it is in that of one so sensitive to organic changes as milk is, and yet, in the matter of transportation we find it at every stage still being handled too often in the crudest and most expensive manner. It is over twenty years since, in a series of experiments carried on under my direction, I found it readily possible to have milk at the farm dairy cooled and bottled and kept for days with not more than 2,000 bacteria per cc., and without any increase whatever after four days in its acid reaction when kept in the ordinary ice house. Further, this dairy was able with perfect success to deliver its milk in the city five miles away once daily without fear of its becoming sour.

Now, if it is so readily possible to obtain such results with this essential food in the country, it ought not after twenty years' development of methods to be difficult to have it transported rapidly and properly on trains and to be delivered at low temperatures in our cities, then to be again delivered under municipal regulations directly from one house after another on the same street, instead of its being hawked about by half a dozen milkmen going over the same street one after the other. If in such a suggestion we are told that we are interfering through state or municipal regulation with ordinary trade we may properly reply that we are doing nothing different from that by isolating persons for contagious diseases.

and by closing boarding-houses or hotels in the interest of the public without any regard whatever for the doctor's trade. It is equally clear that for the large cities the installation of milk trains with special insulated ears ought to make the cost of transportation cheaper than the old crude methods too generally in use.

But if we are again told that we are attempting to interfere with the economic principles of supply and demand or absolute liberty of labor, we may very well answer by enquiring whether or not the employment of great aggregations of capital to dominate the purchasing, manufacture and distribution of the food of the people has not violated much more than anything we may recommend this very principle of free labor. We know, too, that there are social and ethical elements which today enter very largely into this as other health problems and which are quite contrary to the operation of this abstract principle. Thus the most useful vocations, as farming, tend to become abandoned while the attraction toward occupations of the younger generation growing up is often followed wholly without any regard to the social utility of such. In fact we find the *laissez faire* principle of nineteenth century economists violated in practice at every turn and that society is now turning to enquire if, in its evolution, some more scientific methods are not demanded in the higher interest of humanity in a society of ever increasing complexity.

On the day of writing the above I found this item of news from the Canadian Trade Commissioner in England: "During the past few years charges have increased regularly each season for the carriage of goods between Canada and the Mother Country. Of late, however, the rise has been more rapid. For instance, flour from Canadian ports has advanced from 9.75 cents per 100 pounds in 1911, to 17.67 cents last year and grain from 6.97 to 13.92 cents. There have been similar increases on crockery and cotton goods. It is understood here that the British and Canadian governments are about to investigate the matter."

We are seeing agricultural commissioners being sent from the United States and Canada to investigate European agriculture with a view to obtaining information, which can be turned to practical use in the solution of problems on this continent and all are reporting that there is needed, (a) Reconstruction of soil fertility, (b) Coöperation in methods of producing and selling, and (c) Getting as in England, the food products cheaply to markets. Throughout England, with good roads, the motor truck is helping to solve the latter problem; but, with the exception of farming near great cities, it is apparent that the railway must remain the great medium for food transport on this continent. I recently asked a shrewd expert in our Federal Department of Agriculture how he would establish the proper ratio of values between *production, transportation and price*? He cynically remarked:

- (1) Obtain the information as to how many middlemen have autos.
- (2) Remember that the cost of transportation depends directly upon how well the railways have a man isolated so that they can raise the rate to the highest point possible, short of strangulation of the shipper.
- (3) Don't forget, that the cost of production will depend on how many men are left over for farm labor after the protected manufacturers have all the men they want.

If then in practice we find the solution such as described we ask whether anything can meanwhile be done to minimize the evil effects of existing conditions. I am sure that some primary step is demanded, whereby not only will more food products be grown but also whereby more will be consumed on the farms. With the illustrations given of stationary or decreasing food supplies in Canada on the one side and of an urban population increase of 38 per cent. in the last census decade, or from 30,000,000 to 42,000,000 in the United States and of 62.5 per cent. or from 1,258,645 to 2,021,799 in the same period in Canada, it is idle to say that we can be content with present conditions when every abnormal price affects the health and happiness of millions of the people.

I expect to hear from every side the remark; Why if it is simply a question of a few millions of our population deurbanizing themselves and going back to the farm, why don't they do it? Land is cheap enough! Superficially the remark seems quite proper and logical; but I have practically never found one of these persons, who cry out frantically about the cost of living and who, nevertheless, make such remarks, willing himself to lead the way toward this solution of the problem. There can be no doubt but that such deurbanization must come and that it will come by a movement from above downward rather than from below upward, speaking in a social sense; but any such movement to be extended and permanent must have an underlying economic and social basis. Primarily it must be made to pay this future deurbanizing agriculturist and it is at this very point that the transportation problem enters. Could there be from the social standpoint any serious difficulty for the hundreds of communities who deurbanize themselves by going daily ten or fifty miles from New York to their homes, entering upon a scheme, preferably coöperative, whereby capital with business organization could combine to produce, prepare for markets and sell agricultural products to almost any imaginable extent? Surely the resources of such financial and scientific coöperation ought to be equal to finding means whereby the cost of transportation would be so adjusted that each person from the producer to the consumer would be adequately recompensed for his share in the process. Only a fortnight ago Earl Grey, late governor-general of Canada, making the opening address at Glasgow before the International Coöperative Congress, pointed to their achievements from the first Rochdale store in the early sixties to the present time

when probably one third of the food sold in Britain is sold through these coöperative stores as coöperation between the producer and consumer—it being in the case of the stores the consumer becoming, in fact, the producer—as being the most effective way of limiting the aggregations of capital which come to form trusts.

It is remarkable how advanced many European countries are in the development of such principles and quite as remarkable how individualism has, up to the present, held supreme sway on this continent except in the easy coöperation through centralizing of capital by millionaires in cities, it may be, thousands of miles apart, for ends I shall not say predatory but which are essentially selfish. Up to the present it has been through the command of liquid assets that the capitalist has always been in the position to dominate any situation by utilizing the facilities ever at his command. Rapid communication, as the telegraph, telephone, the train, the steamer have all been his ready servants and producers of every kind his commission agents, the railways his too frequent allies and the public his too constant victims. I do not think, however, remembering the conditions, crude, raw and undeveloped which till recent years have prevailed on this continent, in the absence of some theory of political economy different from that of the *laissez faire* school, that results other than those which the people, especially of the United States, seem to have set themselves to correct and modify, could have been possible. Accumulated capital even in the matter of lessening the cost of production may be and is often of enormous public benefit. What is demanded everywhere is the going hand in hand of ethical enlightenment and scientific development if we are to approximate the solution of the people's food problem. It is the problem of the proper distribution of values—the same as is involved in the housing problem where the cost of land determines the value of every other item in the schedule. It is the question of distribution of labor, not by the blind process of increasing the cost through limiting the amount produced, but by diverting human energies to productive industries crying out for labor and assistance. But most of all it is the evolution of the "Social Conscience" which means nothing more than an increasing general intelligence—¹ an approximation throughout society in the world today to a realization of a system of social economics so far never surpassed even in the dreams of our great transcendentalists, summed up in the Scriptural formula "Bear ye one another's burdens," and in "All things whatsoever ye would that men should do unto you, even so do ye also unto them, for this is the law and the prophets."

