

ROADS LIMIT AREA OF FARMING LANDS

Paul D. Sargent Shows How Cost of Hauling May Wipe Out Profits.

LOCAL DATA ESSENTIAL

Ton-Mile Expense and Crop Production Along Highway Must Fix Amount That Can Be Spent for Improvements.

BY PAUL D. SARGENT, State Highway Commissioner of Maine. (Since the disclosure on the benefits of improved roads Mr. Sargent has resigned his post as Assistant Director of the Office of Public Roads in the Department of Agriculture to accept the post mentioned above.—Automobile Editor's note.)

CHAPTER IV. It is highly desirable that the road officials in any locality should have information which will enable them to establish in some measure the money value of any proposed system of road improvement. It is becoming increasingly evident, however, that it is undesirable for a locality to base its calculations upon generalized data deduced from nationwide observations. What is needed in the individual instance is an understanding of the methods which must be employed to establish the economic conditions in the locality.

Certain facts which are essential are easily obtained. The area of the road district or other highway unit, the number of miles of roads, various classes and their distribution, the more important crops, the number of miles of railroad and the number of railroad stations are readily obtained and accurately established. So also may be the prevailing cost of teams with driver for a 10-hour day. The average load and the average haul are easily obtained but they are essential in developing facts.

When all the information has been carefully studied it will be possible to derive the ton-mile cost of hauling various classes of commodities hauled. If the areas along the roads devoted to various crops and the acreage yield in tons can be compiled, the total ton-mile value of the hauling of the annual service of the road.

Traffic Census Needed. A traffic census should be made and the total hauling charges for the community accurately estimated. From these various classes of commodities hauled, a strictly business standpoint it then becomes necessary to make a conservative estimate of the reduction in hauling costs that can be expected from a system of road improvement. The important point is that at least a part of the reduction in the total annual hauling charges to the community must be regarded as meaning the interest and maintenance charges which the community can economically afford for an investment in improved roads.

As an illustration, the example of a county in which wheat is the prevailing crop may be given. If the construction of narrow single track roads with improved surface will reduce the hauling cost 5 cents a ton-mile and the average yield is 20 bushels per acre, there results, for an average haul of five miles, an economic advantage of 25 cents per acre or \$5 per quarter section. This is per cent on \$200. It appears immediately that such a community will be safe in borrowing money to the extent of \$200 per square mile of wheat area to effect such an improvement. If roads as would reduce the hauling charges 5 cents per ton-mile on the wheat crop alone.

Three Items Factors. In determining the economic advantages of good roads to a community, there are three items which must be included, but for which no specific figures can be given. These items are the wear and tear on vehicles and harness, the interest charges on the investment in extra horses, and the wear and tear on the horses.

The argument for the reduced cost of hauling on country roads need not be carried further. In moving products of all kinds from the field to the consumer it is clear that the reduction in transportation charges is most imperative on the country road. During the last 15 years remarkable changes in highway transportation have been especially useful by the introduction of motor-driven vehicles. The motor car was first regarded as an exclusive luxury, but it has become to an increasing extent an economic necessity. It is impossible, at the present time, to place an upper limit upon the use of the motor vehicle for any purpose. It is the most potent single factor in the economic development of the road problem since McAdam. The adaptability of the automobile and motor truck is almost unlimited, and the farmers, especially those of the West and Middle West, have been quick to recognize it. In handling milk and cream the motor truck has become especially useful and has extended land areas available for profitable dairying.

While no great stress has been laid upon the total ton-mile cost of hauling, it is essential that the figures be presented which are sufficiently indicative to those who are interested in road matters. From a nationwide standpoint in this connection it is well to remember that the economic problem of today is not so much a problem of production as it is a problem of distribution. In the process of distribution it is not too much to say that the highway is the first link, but that it is operating at present with the lowest efficiency.

Farming Dependent on Roads. We must now discuss certain questions of farm economics, without, however, introducing the social conditions of country life. The business of farming is essentially dependent on the condition of country roads, for whatever is not produced on the farm must be hauled to the farm, and many crops of the farm must be hauled away to the railroad stations and local markets.

Farmers sooner or later come to realize the desirability of diversified farming. Perhaps no cause limits farming of this description as effectively as bad roads. Of course, the prime requisite for successful diversified farming is a good truck. This market may be either a city or a distant market which requires railroads. In any case, however, the speed of transportation from farm to the unloading point is essential. Diversified farming usually means a change from staple crops such as corn and wheat to more perishable products such as

fruits and garden truck; that is to say, from crops that may be held at the farm to crops which must be moved away from the farm immediately. The possibility of this change is largely dependent upon road conditions.

A farmer 10 miles from a market for Spring truck crops, such as rhubarb, peas and spinach, is at a great disadvantage if his market road is unimproved, and he may be totally unable to compete with the farmer the same distance from market in another direction on a good road.

About each market or shipping point there is a boundary line which incloses the area that can be cultivated profitably for delivery at that point. If this area is considered as bounded by a circle it is not difficult to see that its size will depend upon road conditions. The profit to the farmer is determined by the difference between the production and transportation costs and the selling prices. Production must cover the transportation costs, wipe out the difference.

As one goes farther from market centers, one passes through successive zones of production, each of which contains fewer farm products, because some products will not bear the additional cost of transportation. With a good system of improved roads radiating from market centers it must follow, if all other things are equal, that the total area of farming land will increase, as well as the successive areas or zones capable of supporting diversified crops. The whole business of farming is sufficiently dependent upon weather conditions with the added uncertainty of road conditions.

JACKSON LEVY 3 MILLS

SPECIAL ROAD TAX WILL YIELD \$111,900 FOR ALL PURPOSES.

Twenty-five Thousand Dollars Will Go Towards Interest on \$500,000 Bond Issue in County.

MEDFORD, Or., Dec. 20.—(Special.)—The County Court of Jackson County has levied 3 mills for road purposes. This levy will yield \$111,900. There will be no special tax levies in the various road districts. According to County Judge Tou Valle, \$25,000 of this amount will go toward the interest on the \$500,000 bond issue recently authorized by the special road election for the construction of the Pacific highway over the Siskiyou and through Jackson County from north to south. The Road Supervisors of the county will receive \$44,450 to expend in their various districts on road maintenance and construction and the remainder will be used by the County Court on the construction and maintenance of roads and bridges.

With the construction of the main trunk highway through the center of the county provided for by the \$500,000 bond issue, the road work in the county will be largely taken up with the construction of good roads into the hills and valleys as lateral feeders. The County Court recently purchased two split log drags and when the construction of good roads into the hills and valleys as lateral feeders. The County Court recently purchased two split log drags and when the construction of good roads into the hills and valleys as lateral feeders. The County Court recently purchased two split log drags and when the construction of good roads into the hills and valleys as lateral feeders.

2.75 MILLS LAKE ROAD LEVY

County Court Puts Total at 14.60 Mills, Said Lowest in State.

LAKEVIEW, Or., Dec. 20.—(Special.)—The County Court made the tax levy for this year 14.60 mills for all purposes. This is 6.10 mills higher than a year ago, the state tax being 3.25 mills, and the county tax 1.10 mill higher than last year, while the road and school tax are each one-fourth of a mill greater than a year ago. The total amount of assessable property is \$4,500,000, upon which the levy was made as follows:

For county schools, 3 mills; county roads, 2.75 mills; county purposes, 4.49 mills; state tax, 3.25 mills; total, 14.60 mills. The levy will raise about \$25,000 for county purposes and \$28,000 for roads, or approximately \$114,000 in all. This probably will be the lowest levy in the state.

The levy for county purposes includes many items, among them being the library fund, county high school fund, Circuit, Juvenile and Justice Courts, pensions and salaries.

WASCO ROAD LEVY IS 3 MILLS

Tax Will Raise Approximately \$50,000 for Work Throughout County.

THE DALLES, Or., Dec. 20.—(Special.)—The Wasco County Court has levied a three-mill tax for road purposes. This levy will raise approximately \$50,000. Besides this general levy three of the road districts have levied special taxes for the purpose of improving the public thoroughfares of their territories, making the total amount which will be expended on Wasco County roads next year about \$60,000.

County Judge Gunning says this money will be spent in accordance with the state road law, being distributed over the county generally and used for the construction and maintenance of roads.

HARNEY'S ROAD LEVY IS MADE

Extensive Natural Roads Make 2 1-2 Mills All Necessary.

BURNS, Or., Dec. 20.—(Special.)—The County Court of Harney County, Oregon, recently adjourned, made a levy of 2 1/2 mills for road purposes, which will yield \$20,000. The upkeep and repair of the roads throughout the county for the coming year.

The sum is small considering the mileage covered in this county by the roads, but nature was kind to the taxpayers in giving them so many miles of natural roads, and as no extensive operations are called for in the way of roadbuilding in the county at this time the above levy will be sufficient in all respects.

BARGAIN FOR YOU TOLD

Fred W. Vogler Gives Warning to Prospective Buyers.

MANY SIDES TO PURCHASE

Dealer Advises Against Purchase at Low Price Even of New Car, Made by Manufacturer Now Out of Business—Reasons Cited.

There are bargains and bargains in every walk of life. Just tell a woman, for instance, that there is a reduction sale or a bargain sale at any store and she'll get up early, be down town outside the store an hour before time, possibly having taken a taxi to get there, spend the whole day buying things she doesn't need and be a nervous wreck at the end of the day. All this simply because she has learned that there's a bargain.

Now that's the way some people buy their automobiles, according to Fred Vogler, president of the Northwest Auto Company. He did not put it quite that way, but in substance that was what he said.

"There are three or four sides," he said, "to the purchase of second-hand automobiles which I have in mind, and remember there are, too, three or four classes of purchasers. I suppose the most frequent buyer of a second-hand car for pleasure purposes is the man who can well afford a new car but prefers to have an old one to learn on, one that will last about the same when he has got through with it as it did before. He certainly figures on getting a good deal of use out of it, and he is willing to pay a substantial sum for it, say half to two-thirds of what he gave for it. Now the cars which fetch the most from dealers when they are turned in are those of well established makes of which it is easy to get additional parts and whose name is a guarantee at least of sound construction."

Good Cars Are Sold. "Some few people may have an idea that a dealer will sell a man any old thing in the way of a second-hand car just to get rid of it. A moment's consideration will convince him that a such could not be the case. Every man to whom we sell a second-hand car we consider as a very live prospect for a new car in a year at least. We should not want to incur the man's enmity by selling him something which would not stand up. As a matter of fact all the cars we take in are thoroughly overhauled and quite a sum spent on new parts, and the car has to be a solid investment before we let it go out."

"With the tendency today towards only the soundest of methods in the automobile business it has naturally come about that certain manufacturers have gone out of business simply because one or other of their methods was wrong. In nine cases out of ten it has been due to the fact that the car is mechanically imperfect or else contains parts which do not belong to the average man. When these firms went into the hands of the receiver the new cars on hand were naturally ordered sold at what they would fetch for cash.

Special Parts Needed. "Suppose Smith has a friend Brown who bought one of those cars last year, and that Smith does not care to buy a car identical to the same for just half the price; his first thought is, 'That's an awful bargain, better than any second-hand proposition, and naturally it will seem so to him at first sight. But suppose anything goes wrong with that car. He will find that the parts have to be made specially at great cost and also will find that when he goes to order them, the dealer will tell him that the machine is no use to the dealer; it will cost him too much to repair, and he could find no sale for it.

"The man who buys one of these new cars made out of business will have nothing but a hard row to hoe. There will be no one to give him service, there will be no one to take his car to the factory to be exchanged, no factory to get parts from and he will find the car a white elephant."

AUTOISTS TO FIGHT TAX

MEDFORD MOTORISTS WILL REFUSE TO PAY STATE LICENSE.

Southern Oregon Automobile Association Organized and A. C. Allen Is Elected as President.

MEDFORD, Or., Dec. 20.—(Special.)—At a meeting of local auto owners at the public library, the Southern Oregon Automobile Association was formed, with A. C. Allen president, Dr. Korinek, vice-president, and H. C. Garnett treasurer. Frank Amy was delegated to secure members. The immediate object of the association will be to secure the repeal of the state auto tax, which autoists claim is unconstitutional, as it is a double tax, being included in the personal property tax.

The membership fees of \$1 will be devoted exclusively to a fight against the tax, legal action being given up. Although this tax repeal is the immediate object of the organization, the association will be a permanent one and will work for better roads, better laws and better conditions for the autoist. A book describing the best auto drives in Southern Oregon will be issued, and club auto trips are a possibility.

At a meeting in the near future by-laws for the association will be given and details of the anti-tax campaign decided upon.

POLK SCHOOL REPORT IN

Percentage of Attendance for November Is 97.1.

ASHLEIGH, Or., Dec. 20.—(Special.)—Showing a percentage of attendance of 97.1 and with 3072 pupils on the register in 79 schools during the month, County Superintendent Seymour filed his monthly report today for November. The number of visits by parents was increased to 130, and 108 members of School Boards paid visits. The whole number of days attendance was 48,845.5 days, and the number of days absence totaled 1461.5.

The report gives the following data: "Number of schools reporting, correctly and on time, 88; not reporting on time, 2; pupils registered new during month, 154; days taught during month, 174; pupils neither absent nor tardy, 1874; average daily attendance, 2694 pupils."

The Buick Six advertisement featuring a Buick Six car and a Night Lettergram from the Postal Telegraph-Cable Company. The ad includes the address 35PO F 80 BLUE, Fresno, Calif., Dec., 19, 1913, and the name Howard Automobile Company, Portland, Oregon. It also mentions Buick 'Six' with F. E. Gross, Claude McGee, Mr. Pierce and Mrs. Doyle, and the Waterman Bros. Company, Inc.

SOLID TIRE HAS LIMIT

WARNING SOUNDED AGAINST OVERLOADING TRUCK.

R. G. Harris Says First Indication is Appearance of Bulge in Rubber, Called "Traction Wave."

Many motor truck owners have the idea that there is no limit to the ability of a solid tire to bear loads and so pile their cars high with "cargo" without any regard for their tires. Solid tires, however, are as sensitive to overloading as pneumatic, and R. G. Harris, head of the motor tire department of the Firestone Tire & Rubber Company, sounds a warning of that tire abuse when he says that the immediate result of overloading a solid tire is the appearance of a bulge, called a "traction wave," in the rubber just in front of the point of contact between tire and street. This wave with the enormous weight back of it, works through to the very base of the tire.

"We tires are made of pure rubber. The gum must be compounded with chemicals to give the desired wear-resisting qualities. The traction wave lessens the cohesive power of the compound and if not guarded against eventually will tear the tire away from the steel rim. Not only does the wave ruin the tire, but it also affects the road, which is being gouged up hill, involving a constant loss of power.

"Several methods of preventing the separation of the tire from the channel contact between tire and street. One is a hard rubber base vulcanized into the channel. The channel has a saw-tooth base, and the hard rubber filling these saw teeth, and vulcanized into them, becomes an integral part of the channel base. To this hard rubber in turn is vulcanized the tread.

"A second method involves the use of a metal sub-base to which is dovetailed and vulcanized a hard rubber base. To this hard base the tread is united. No channel is used in this type, but abrasion is prevented by an intermediate band projecting out on each side.

"The side wire tire is the third preventive of tread separation. It has two endless retaining wires with flat sides are sprung over the edge of the rim and engage the ends of the cross wires, which are attached to the upper side of the tread. Whether or not tread separation is prevented, however, overloading remains injurious to the tire. The compound is crushed, sooner or later is broken down entirely."

"Milk" Joke Gets "Goat" of Auto Dealer.

Bob Lefevre Finds That Upon Opportunity, Bert Roberts Can More Than Even Score.

BOB LEFEVRE, formerly Winton man at Spokane, was in town last week to see Bert Roberts, who has the Winton factory branch under his wing here. The former is always pulling some good ones, but he got stung by the quiet Roberts right on top of a warning he himself had issued about getting stung.

Roberts cleverly led the conversation round (it was quite a work of art the way he did it) by mentioning that R. D. Inman had taken his new truck here. The former is always pulling some good ones, but he got stung by the quiet Roberts right on top of a warning he himself had issued about getting stung.

"What on earth is he living on?" queried Bob, getting interested. "Oh, he had ammunition cached away, and he's been living all the time on milk," said Roberts, waiting for the "hit."

"Milk? Why, how the deuce did he get milk there for that length of time?" said Lefevre. And then Bert's face showed just the trace of a smile for half a second. "They do say that he got the Sheriff's goat" and with that Bob had to admit the laugh was on him.

Both these men have just had letters from Roy C. Bothwell, of the well-known firm of Bothwell & McConaughy, complete with equipment. Get into a trip. He drove his old Winton all the way back last month and made such a good showing in spite of bad weather and road that Bothwell decided he did not in the least want to change makes. All he wanted was a new model, which he bought when he got back.

MOTORCYCLE NOTES

A motorcycle was the first vehicle to cross the new \$75,000 viaduct at Waikuanan, Ill.

Sheriff Martin Verhagen, of Appleton, Wis., notices a motorcycle when serving notices throughout the country.

George Olson, of Minneapolis, Minn., has just returned from a week's motorcycle hunting trip. Olson had 10 partridges, 15 rabbits and one 250-pound deer strapped to his motorcycle when he arrived home.

In the Witwatersrand district of South Africa there were 2600 motorcycles registered up to June 30.

A mid-winter endurance run is being planned by motorcyclists of Ohio.

The City of Wheeling, W. Va., has decided to use motorcycles in its police department.

Chief of Police Henry W. Dunn, of Omaha, Neb., has asked for additional motorcycle officers in his department.

Henry R. Baldwin, a historian, uses a motorcycle in searching for graves of Revolutionary soldiers throughout Ohio and Pennsylvania.

The Winnipeg, Canada, Motorcycle Club has planned a series of social events to keep the riders together during the winter months.

A 550-mile motorcycle trip through Iowa, Nebraska and South Dakota has just been completed by L. W. Hoffman, of Canton, S. D.

Mrs. Alice Deschamps, a well known French sportswoman, celebrated her 35th birthday by taking part in a lawn tennis, a golf and a croquet match at Le Touquet.

CHILDREN IN ROAD RACE

SUNDAY SCHOOL USES NOVEL PLAN TO EXCITE INTEREST.

Points Won in Bible Classes Used to Indicate Miles Traveled Over Lincoln Highway Route.

DETROIT, Mich., Dec. 20.—(Special.)—Two hundred children who attend the Sunday school of the Fort-street settlement at Seventeenth and Fort streets are traveling weekly over the Lincoln Highway, according to a new plan. The trip is under the direction of Edward McLean, superintendent of the Sunday school, and has aroused widespread interest.

When the Lincoln Highway route was announced some time ago Mr. McLean took a large wall map of the country and traced in red the road from New York to San Francisco. This map was placed on the wall of the settlement assembly-room. He then devised a plan to interest the children in the highway and at the same time promote better attendance and greater attention to the Sunday school lessons.

There are 18 classes or teams in the school, each one with a teacher, known as the chauffeur. Various makes of automobiles have been apportioned to each class and they go forward from town to town through New Jersey all the way to San Francisco because of attendance, ability to read and remember the weekly text, etc. Five points are allowed for attendance, one point for reading the text, etc. Every point counts a mile and some of the classes are in Ohio, while others have not been able to get beyond Philadelphia. It will probably take several months before all have safely reached San Francisco and can start back home. The attendance in the Sunday school has grown and more attention is paid to the exercises. In fact considerable diplomacy must be exercised by the teachers to prevent undue rivalry.

Mrs. Alice Deschamps, a well known French sportswoman, celebrated her 35th birthday by taking part in a lawn tennis, a golf and a croquet match at Le Touquet.

Large vertical advertisement for Oakland Light Six cars. The text reads 'Your Conscience Will Tell You to Buy the Oakland Light Six'. It features a small illustration of a car and a watch for the German Silver Radiator. At the bottom, it says 'The Car With a Conscience Now Commands Your Worthy Investigation Gerlinger Motor Car Company King and Washington St.'

Advertisement for Ford cars. It features the Ford logo and the text 'Ford THE UNIVERSAL CAR'. Below the logo, it says 'It's the prince of cars—and ear of Princes. Two Grand Dukes and nineteen Princes drive Fords in Russia. And the sturdy car is as popular with both classes and masses the world over. Its unequalled merit has won it world-wide recognition.' It also includes a testimonial from Bob Lefevre and a section titled 'You Should Not Decide' that says 'Your own delivery problem is already solved by some particular firm with White Trucks—and we have their explanation in writing waiting for you here—call or write for it.' The White Car Company is listed as E. W. Hill, Mer. Broadway and Oak, Over 4000 White Trucks Now in Use, King and Washington St.