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## CROP VALUES PER FARM WORKER

### THE OUNCE OF PREVENTION

The average annual death rate in North Carolina is a little over 14 per 1,000 of population.

Of these deaths about 20 percent are due to such adult diseases as cancer, diabetes, heart disease, nephritis etc., which are not readily preventable in the present state of our knowledge. But about 10 percent are due to tuberculosis, a goodly percentage of which could be prevented by proper sanitation and most of which could be cured by early diagnosis and proper treatment. Over 20 percent occur among children under three years of age, early all of which are theoretically preventable and over half of which are practically preventable by established methods of hygiene and sanitation. Over 12 percent are due to soil pollution diseases, all of which are easily preventable, and about 6 percent are due to the acute infectious diseases, the great majority of which can be prevented by simple means of sanitation.

Upon the whole a thorough system of health supervision would reduce our death rate by at least one-half and would practically eliminate typhoid, hookworm, malaria, smallpox, and many other present causes of death and disability.

The accuracy of this statement is well shown by figures given in a recent bulletin of the State Board of Health. In some counties the cases of hookworm have been reduced as much as 75 percent, while the average reduction in nine counties which are cooperating with the State Board is about 50 percent.

In these same nine counties the average annual death rate from typhoid fever is formerly over 35 per 100,000 population. In 1918 their average rate was less than 8. One of these counties whose former typhoid rate was over 33 went through 1918 without a single death from this disease.

In another of these counties, the typhoid death rate dropped from 40 to 5, and an appreciation of the economic value of health is shown by the policy adopted by one of the banks. Loans are made "only to persons who are able to present evidence that they live amid sanitary surroundings. An applicant for a loan, in order to receive credit, must live in a home provided with a sanitary privy. He and his family must have been vaccinated against typhoid fever and be free from marked evidence of hookworm disease." This is not sentiment but sound banking precaution.—J. B. B.

### UNEDUCATED AMERICA

We have been wont to rejoice over the education of our citizenship in the United States. In fact we have rejoiced so much and so loudly that we have neglected to look about the truth of the matter. A variety of revelations during the war and later indicate that we are a grossly uneducated people.

The total average length of time each individual in the United States spends in our public schools is less than 6 years. In other words, on the average we as a nation do not have the education of children who finish the fifth grade.

Of every 100 children who enter the first grade of our public schools 30 drop out before they finish the sixth grade; 70 of the remaining 70 are dropped before they finish the eighth grade and only about 1 in 4 of the remainder ever finish high school. Not only that but the total high school enrollment is only about 8 percent of the total elementary school enrollment.

Approximately 1 in every 20 of our population over ten years of age can neither read nor write at all and about 1 in every 5 cannot read a newspaper or write a simple letter. Over and beyond this there are many thousands of children attending schools in which not one word of English is ever spoken.

On the basis of the physical examinations conducted in connection with the draft it would appear that about 1 in every 3 of our population has physical defects sufficiently severe to make them unfit for even cannon fodder.

Something like 4,000,000 children in our schools are taught by teachers less than 21 years old, who have little if any high school training, who have no professional training at all, and who are products of the same school which they attend.

Attendance on normal schools and other teacher-training schools has fallen off from 10 to 15 per cent since 1915 and is still falling. More than 100,000 teaching positions are now vacant or inadequately filled as a result of this scarcity of grist for these schools to grind.

If the foundation stone of democracy is a well-educated citizenship we are building our national life on the quicksands.—L. A. W.

### THE NEW ERA IN HIGHWAYS

The time has arrived when arguments as to the advantages of good roads are no longer heard. In fact, people generally are keenly desirous of better roads immediately even at great cost. The road building program in the United States for the year 1920 exceeds that of any other known engineering project. About three-fourths of a billion dollars will be available during the year for road improvement. Probably five times as much money will be spent on roads during this one year as was necessary to build the entire Panama Canal. The most difficult problem now is not how to finance roads but how to build them to stand the requirements of traffic.

#### The Engineer's Part

In the expenditure of public funds, the highway engineers and officials of this country are facing the biggest responsibility that has ever been put upon public officials. Road building is an engineering problem and there can be no guarantee of a wise expenditure of this vast fund without the freest application of scientific non-political methods. Engineers must have ample time and opportunity to investigate and plan thoroughly all the important features of roads that are to be built and kept up, so that whatever is done, is done in a thoroughly scientific manner.

One of the greatest contributions of the federal government in connection with its aid to road building has been the rigid requirements for thorough engineering and the creation of state highway departments whose aim it is to work in conjunction with the Bureau of Public Roads and the various counties in planning and laying out a permanent road system.

If funds are limited on a project, the engineer must decide where technical requirements should be retained and where ignored; but he must plan the work so that whatever is done will become a useful part of any future improvement. In most of the counties in North Carolina, funds are only sufficient to build a sand-clay or top-soil road, which may have to be changed to a hard-surface road in a few years, to meet the demands of traffic. A road of this type should be located and designed with the same degree of care as the highest type of pavement. It should be permanently established with the best possible alignment, the easiest grades that the topography will admit of, the best drainage structures, and a good safe width. In fact every road of importance should be located with the idea of permanence in mind.

#### Neglected Features

During the last five years, automobile and motor-truck traffic has reached such a degree of intensity and recklessness that safety to life demands stronger and wider bridges.

More attention should be paid to the aesthetic features of road planning. The roads of Europe are ahead of ours in this respect. Some of our bridges are an offense to every passerby. A little extra money for appearance sake is well worth the cost certainly for structures of concrete that are supposed to stand for all time to come.

We have been slow in learning that the maintenance of roads should begin as soon as construction ceases; and that it requires the supervision of an experienced engineer just as much so as do the location and construction of roads. The chief reason why the roads of France have a greater reputation for excellence than ours lies in the close attention they have paid to maintenance. The railroads have long realized the importance of keeping the road-bed and bridges in good condition. Unless roads are properly kept up they are a liability instead of an asset.—T. F. Hickerson, Associate Professor Civil Engineering, University of North Carolina.

### THE FORGOTTEN MAN

William G. Sumner

The Forgotten Man, in the American scheme of things, is one who is delving away in patient industry, supporting his family, paying his taxes, casting his vote, supporting the church and school, reading his newspaper, and cheering for the politician of his admiration, but he is the only one for whom there is no provision in the great scramble and the big divide.

He works, he votes, generally he prays—but he always pays—yes, and above all, he pays. He does not want an office, his name never gets into the newspapers except when he gets married or dies. He keeps production going on. He contributes to the strength of parties. He is flattered before election. He is strongly patriotic. He is wanted, whenever in his little circle there is work to be done or counsel to be given. He may grumble some occasionally to his wife and family; but he does not frequent the grocery or talk politics at the tavern.

Consequently he is forgotten. He is a commonplace man. He gives no trouble. He excites no admiration. Therefore he is forgotten. All the burdens fall on him, or on her, for it is time to remember that the Forgotten Man is not seldom a woman.

### CROP VALUES PER WORKER

Eight hundred twenty-eight dollars per farm worker.

This is the gross wealth in crop values at farm prices produced by the average farm worker in North Carolina in 1919.

On this basis of comparison 19 states stood ahead of us. South Carolina is the only other Southern state that stood above us, as may be seen in the table produced elsewhere in this issue.

Our per-worker average of \$828 is more than three times the average of ten years ago—\$236 against \$236. The increase is due to our immensely greater acreage in tobacco, and the current high price levels of both cotton and tobacco—the two crops that produced two-thirds of our crop wealth last year.

In other words, the average gross crop income in North Carolina in 1919 was close to \$2500 per farm family. It was below this average, of course in the grain, hay, and forage counties, but it was above it—far above it—in our 27 cotton counties, and it was highest in the 20 counties that produced the bulk of our tobacco.

Here are fundamental facts that explain why farm tenants white and black are swarming out of the Piedmont counties—the whites into the mill villages, and the negroes into the nearby towns or out of the state into the North and West.

In these grain, hay and forage counties farm owners, for lack of labor, will be forced to go into expansive food and livestock farming with increased horse and machine power as in Kansas or Iowa, say, or they must reduce their farms to the family size demanded by primitive hand-tool farming and sell off or turn out the balance of their land to broomsedge, black-jacks and scrub pines. It is Hobson's choice.

Tenants of both races are fairly well content in the cotton and tobacco belt, as things now are, because they are handling more money than they ever saw before. They are indeed having the time of their lives in the cotton and tobacco counties. For instance, the finest motor car we saw in Scotland county last fall belonged to a negro tenant farmer. Automobiles in farm tenancy areas in North Carolina are getting to be as plentiful as blackberries.

#### Some Things to Think About

Why did 19 states of the Union produce greater gross crop values per farm worker in 1919 than North Carolina?

The answers are as various as the states. Local conditions everywhere enter into the explanations in important details. But certain factors are fairly con-

### COUNTRY HOME CONVENIENCES

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#### ELECTRICAL TERMS

Time was when the only scientific terms with which a farmer had to be familiar were confined almost entirely to agriculture. Long since, however, with the introduction of mechanical power for farm purposes, the average farmer has come to be more or less familiar with the language of the mechanical engineer. He has some conception of what is meant by steam pressure and the term horsepower has no particular terrors for him.

The development of the farm lighting set has placed in the farmer's hands a new contrivance which must be talked about in such terms as volts, amperes, ampere-hours, and watts. These terms are not hard to understand when their similarity to others, more familiar, is made clear. The meaning of these four fundamental electrical terms is as follows:

Volt is the unit of electrical pressure. It is similar to the pressure in a water system or steam boiler, which is measured in pounds per square inch. Each storage cell of a farm lighting set, when fully charged, develops an electrical pressure of about 2 volts and the whole battery of 16 cells about 32 volts.

Ampere is the unit used for measuring

the flow of electric current. The flow of a spring is often measured in gallons per hour. Similarly the electric current delivered by the generator of a farm lighting set is about 25 amperes. Each 20 watt lamp requires about five-eighths of an ampere. Hence 8 such lamps would require 8 times five-eighths of an ampere or 5 amperes, and 40 lamps would load the generator approximately to its capacity.

Ampere-hour is the unit used to express the capacity of a storage battery for delivering an electric current. A storage battery stores up capacity to deliver electric current just as a tank stores up water to be used as needed after the pump has stopped pumping.

Watt is the electrical unit of power. It is just the same kind of thing as horsepower. In fact 746 watts equal one horsepower. Electrical men prefer this unit of power because the number of watts delivered by an electrical generator is the product of the number of volts times the number of amperes. Also the number of watts of power required to operate an electric motor or to light a lamp is the product of the number of volts times the number of amperes supplied to the motor.—P. H. D.

stant in their effects. Omitting high-bred seeds and improved tillage we center attention upon: (1) The per acre values of the standard farm crops produced, and (2) the number of acres cultivated by the average farm worker.

The states in which fruits and vegetables, tobacco, sweet potatoes, cotton, and peanuts—one or more or all of these—are considerable crops, stand a good chance to rank high in the production of per-worker crop values. All these crops are tremendous producers of per-acre values.

But gross per-worker yields rapidly diminish according to the average acreage the farm worker cultivates.

For instance, the average farm worker in Nebraska in 1919 produced gross values some \$500 more than in North Carolina—\$1,341 against \$828. In North Carolina the farm worker cultivates only 14 acres upon the average, in Nebraska the average is 120 acres.

Our farm system is intensive; theirs is extensive. One farm worker with abundant horse and machine power cultivates nearly nine times as many acres in Nebraska as in North Carolina. In this way the gross per-worker yields of Nebraska farmers are easily larger than ours although their standard crops, the grains, hay and forage, do not begin to compare with cotton and tobacco, peanuts and sweet potatoes in per-acre values. Our per-acre values are higher than theirs; their per-worker values are higher than ours.

But what is even more significant, their labor cost is reduced to a minimum. Consequently their net profits in average years tend to be greater, and their accumulated wealth more abundant.

As farm labor becomes scarce and expensive in the South we shall be forced to study this matter of labor costs and

gradually to move out of small-scale farming with hand tools mainly, into medium or large scale farming with abundant horse and machine power—at least in our grain, hay and forage areas. The way out does not lie in less land better cultivated with expensive human labor, but in more land better cultivated with abundant horse and machine power.

For a half century our cultivated acreage per farm worker has been steadily decreasing in North Carolina and the South year by year. For years we have been steadily moving into intensive farming, and strange to say this movement has been in an area of cheap labor and abundant land.

#### Dynamite Logic

But now that farm labor has become scarce and high we shall have to readjust our farm systems. Labor scarcity is a fundamental condition that compels radical changes in our farm areas.

However, as long as cotton and tobacco bring top-notch prices we are not likely to look ahead wisely and to arrange changes accordingly. Apparently we are looking into the future with blinkers on. We are awaiting the logic of dire necessity, it seems.

And dire necessity awaits us at the next turn of the road. It is the boll weevil. The chances are that this pest will cover our cotton areas by 1922. Then we'll change our farm system, or we'll go into bankruptcy in our farm regions.

Cotton and tobacco farming on a bread-and-meat basis is the way of escape, and happy is the farmer who finds it well ahead of the day of calamity.

The logic of dynamite lies in dire necessity, and compelling logic rarely ever lies anywhere else.

### CROP VALUES PER FARM WORKER

Based on the Reports of the U. S. Department of Agriculture covering the year 1919

MISS HENRIETTA R. SMEDES

University of North Carolina

Average for the United States, \$783.15

Rank	State	Per Worker	Rank	State	Per Worker
1	Nevada	\$2,291.33	25	Indiana	\$781.30
2	California	1,616.50	26	New York	772.37
3	Arizona	1,442.26	27	Montana	759.18
4	Nebraska	1,341.93	28	Pennsylvania	714.60
5	Iowa	1,335.41	29	Ohio	700.79
6	Wyoming	1,249.71	30	Massachusetts	686.41
7	Kansas	1,169.97	31	Utah	673.28
8	Colorado	1,136.53	32	Missouri	665.58
9	South Dakota	1,127.34	33	Michigan	662.86
10	Illinois	1,106.35	34	Vermont	639.58
11	New Jersey	1,063.67	35	Louisiana	627.39
12	Minnesota	1,056.76	36	Georgia	619.43
13	Idaho	1,003.77	37	Kentucky	588.72
14	North Dakota	950.81	38	Virginia	582.99
15	Washington	935.53	39	Rhode Island	577.33
16	South Carolina	913.20	40	Arkansas	572.79
17	Oregon	891.41	41	Mississippi	558.41
18	Maryland	884.95	42	Maine	551.11
19	Connecticut	839.65	43	Florida	546.98
20	North Carolina	828.08	44	West Virginia	506.90
21	Delaware	798.15	45	New Hampshire	497.04
22	Texas	797.16	46	New Mexico	467.39
23	Wisconsin	793.11	47	Alabama	459.28
24	Oklahoma	791.77	48	Tennessee	456.30