

ECONOMIC OPPORTUNITIES IN PROPER LAND USE

Address

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ECONOMIC OPPORTUNITIES IN PROPER LAND USE

It is because the economic opportunities in proper land use are profitable opportunities that the commercial banks and the Federal Reserve System have a vital interest in the subjects you are considering at this meeting. Let me take a moment to explain why the financial institutions have a stake in the fullest and most productive use of the resources of their respective communities - provided, of course, the use is such as will safeguard and enhance those resources.

Financing the war enormously expanded the volume of bank deposits. Since January 1, 1941, total deposits for the nation as a whole more than doubled, while in the Eighth Federal Reserve District, which includes Southern Illinois, expansion was nearly threefold. Our district is one in which the per capita wealth and income have been and still are far below the national average. The more rapid growth of the money supply in our part of the country was due to our relatively high agricultural income as well as to disbursements for war plants and Army camps.

We may assume that for the nation as a whole this high level of bank deposits will be maintained, but that trading processes will pull money away from relatively low producing areas into areas of high production. The only way I know of to hold our present share of the nation's money supply is to maintain our community production or to increase it. The way to do that is through the fuller use of the natural and human resources available at home.

The Eighth Federal Reserve District, which as I said includes Southern Illinois, is predominately agricultural. Prosperity in the district depends largely on what the land produces. If our productivity

is to be increased greatly it will have to come from the soil. The full use of resources will make for more prosperous people, and communities with prosperous people usually have sound and prosperous financial institutions.

Two-fifths of the area in the Eighth District is classified as forest land. One-tenth of our factory workers are employed in processing wood in one form or another. The forty-four Southern Illinois counties that are included in our District contain about two-thirds of the forest land of this state. Obviously, here is a significant resource. It is not contributing anywhere near its potential value to individual and community income in this area. I assume that you are meeting here this week to consider what can be done about it.

My subject is broad, so I'll wander around a bit before coming back to timber. I find it impossible to separate the land whose best and most profitable use is in growing trees, from our agricultural resources as a whole. I am convinced that the same general principle applies to the management of land for crops and grass and growing timber, though the application of that principle will vary widely. The principle I am talking about is that capital can be invested safely for the purpose of enabling an operator to use his land fully in producing what it is best fitted to grow while conserving and up-building its soil. If the capital is borrowed on the right terms it can be repaid out of the increased yield from the land. If the owner has it to invest he will reap a generous return on his investment. In either case the operator will turn his land over to his successor in a condition that will insure continuing productivity.

There is capital enough for this purpose not just in the United States as a whole, but in the very communities where the need is greatest. The challenge confronting us is to develop techniques that will fit the needs and the repayment potentialities of the land and that will justify the investment.

Now I want to shift from general considerations to two specific illustrations to show what the fuller use of resources means, and how the bankers fit into the picture. Perhaps it is unfortunate that these illustrations deal with all-round farming instead of woodland management, but I am convinced that ways can be found to apply the same principle to both.

One of the directors of our Memphis Branch operates the Circle M Ranch at Senatobia in Tate County, Mississippi. He is one of the country's leading Polled Hereford breeders. Tate County in 1934 and 1935 produced about 18,000 bales of cotton annually, which accounted for the bulk of the county's agricultural income. Only 17 per cent of the income came from livestock. Last year cotton production had increased to 26,000 bales, but income from livestock amounted to 52 per cent of the total farm income in the county. This was new income produced from land that had been wasted or improperly used for row crops. It is an excellent example of the economic opportunity of proper land use.

My other illustration shows what a banker can do to stimulate proper land use. This banker, a friend of mine at Greencastle, Indiana, had a call a few years back from a farmer customer who explained that

he had more livestock than his pasture land could carry, and asked for a loan to help buy an adjoining forty acres. The banker explained that he didn't want to make the loan for the purpose of buying more land, but that he would be glad to extend credit if the farmer would sit down and work out a plan for using the land he already had to its full advantage for pasture farming. The plan and the loan were both made, and last year the farmer was carrying on his old farm more stock than he had expected to feed with the additional forty, and the operation was a much more profitable one. The farmer, with the help of the banker, bought the additional land last year; he was ready to take care of it.

Let me spend three or four minutes more on this subject of general farm use. In cooperation with the Land Grant Colleges and soil conservation technicians we have analyzed a large number of farms in our district where complete farm conservation and balanced use programs have been carried out or are well underway, and where accurate records have been maintained to show what the improvement program has cost and what the effect on yields has been. It would take too long to summarize all of them so I have combined the records on three farms typical of those we studied, one in Missouri, one in Indiana and one in Illinois. Striking an average of these three farms gives us a farm of 200 acres which, before the improvement program was undertaken, yielded total production worth \$1,665 a year at prices then prevailing. On each farm, improvement programs were completed which included changes in field layout conforming to land use capability, soil conservation structures, application of needed minerals and construction of necessary farm improvements.

When the improvement program was completed, annual crop production had reached a value of \$3,902 calculated at exactly the same level of prices. Production after the program was two and one-third times the production before the program began. In order to bring about the 134 per cent increase in the production on this average 200 acre farm, a total of \$6,730 was invested over a ten-year period. Fifty-nine per cent of the amount went for minerals, 23 per cent for erosion control, 10 per cent for fences, 5 per cent for building repairs and 3 per cent for ponds. The bulk of the investment was made in the first 3 or 4 years.

The increased production for the ten-year period was worth \$18,255 valued at the same average prices, which can be traced directly to the \$6,730 capital input for farm and soil improvement. The farmers received \$2.71 increased income for every dollar invested in the improvements.

In Kentucky, where tobacco is an important crop, we studied five farms where similar programs had been completed and accurate records kept and we found that \$2.14 was returned for every dollar invested in farm and soil improvements even though building expenses were unusually large. Other studies made in the cotton-growing part of our district showed increased returns averaging more than \$2.50 per dollar of improvement expense.

Before I turn to a more direct look at our forest resources, let me go back to some general observations again because they will have a distinct bearing on what I am going to say about timber. We can create

some interest and some sympathy by talking about our declining resources, erosion, loss of topsoil, declining mineral resources and the like, but that doesn't get the job done. Farmers have to live and educate their families on what is produced from the soil. Bankers are the custodians of other people's money. It takes more than general appeals for the welfare of future generations to move them. To get farmers to practice full and good land use and to encourage banks to extend credit for farm improvement, it is necessary to show them in dollars and cents that proper land use and soil conservation pay; that under proper land use planning and good farm management the necessary farm improvements and soil conservation will pay for themselves; that it is possible to utilize our resources to their fullest extent without impairing their ability to produce in time to come.

A few years ago we set out in cooperation with the Land Grant Colleges and State Bankers' Associations in our district to drive home that one point - that full and proper land use will pay its way and more. Our early efforts emphasized balanced conservation agriculture and improvement of pasture and cropland. We realize that we have neglected a great part of our land resource and a substantial contributor to district industrial activity - the forest lands. About a year ago we made an appraisal of our forestry resources. We did not find out anything that groups such as yours do not already know. The basic data we used for Illinois came from the report of the Illinois Technical Forestry Association. But we did at least become aware of certain facts ourselves. More than two-fifths of our area is classified as forest land. Even in Illinois where for the state as a whole one-tenth of the land is in

forest, the Eighth District portion is one-sixth forested. In terms of employment, about one-tenth of those employed in manufacturing industries in the district were employed in pulp and lumber industries.

It is a well-known fact, however, that the two-fifths of the land in timber is contributing far less than that share of the income from the land. Again our interest in forestry can be explained in dollars and cents. This great resource which covers two-fifths of the land and employs one-tenth of our factory workers deserves more attention. It is vitally important to all of us that present timber production and employment not only be maintained, but that timber production and employment be increased.

I hope you will pardon my frequent reference to the 44 counties in Southern Illinois which are in the St. Louis district. This is justified partially at least because two-thirds of the forest in Illinois are in these 44 counties. To a considerable extent the most pressing problems of land use are found in these more heavily forested counties. Coupled with the land use problem is the problem of low income per person. In this area farm income per person is less than the national average and is only about half that for northern Illinois. Income per person in three of those counties in 1944 was less than \$300, and in twelve counties was less than \$500, compared with a national average of \$769 and with \$1,337 for the state of Illinois as a whole. One reason for the low income per person is the fact that the land in forests is yielding at present such small amounts of timber. Increasing the yield of timber then would alleviate this condition.

The figures I will use are old to you but it is important to mention them again for they are associated with low farm income. First, any improvement in Illinois forests necessarily must be done for the most part by farmers, since nine-tenths of the timber is in farm woodland. Nearly one-fourth of the forests in Illinois are classified as seedling and sapling area, and another one-fourth is poorly stocked or denuded. In other words, nearly half the forested land in Illinois is not yielding any timber currently and even worse will yield very little timber in the next decade even though all forests were placed under good management immediately.

The fact that forested land is not being placed under good management is attested to by the fact that cutting practices on 85 per cent of all forest land in Illinois including that publicly owned are such that reproduction is limited, less desirable trees are left to mature, or land is left barren. These practices mean we are making uneconomic use of the land. Land in such condition today will at best take years to produce timber. Frequent burnings destroy trees and retard growth. Often the land is left barren and severe erosion washes the thin top soil down the river. Meager income from other farm enterprises all too often must pay taxes, low as they may be, on the timbered areas of the farm.

It strikes me as a layman that combining timber and pasture is another uneconomic use of timber land. Good timber and good pasture are seldom found together, yet 54 per cent of the woods in Illinois are pastured. If there is a good stand of timber, the ground is too shady for grass, and if there is reasonably good pasture, the timber stand is

probably inadequate. A better land use would be to improve one acre for pasture which might yield as much feed as 10 to 50 acres of the average woods pasture. 1/ The unpastured woodland then could be allowed to grow undamaged by livestock. The livestock would thrive in an improved pasture, not starve eating leaves off sassafras sprouts in a poor woodlot.

Another reason for low income per person in this area, another illustration of the uneconomic use of our land resources, is found in the large acreage that is waste or idle. More than one-fifth of the land in four counties of Eighth District Illinois lay idle according to the 1944 census. In 32 out of the 44 counties, one-tenth or more of the land was idle. In the average size county this means that in each of the 32 counties more than 27,000 acres contributed nothing to farm or community income, and in four of the counties 50,000 acres did not add one penny to economic welfare. These figures are probably conservative since many acres of land in every county are classified as pasture which contribute little or nothing to farm income.

Maybe I have backed into my subject by looking first at some of the uneconomic aspects of forest land use. There is another side of the story. Timber can be made to yield an annual income and many farmers who treat trees as another crop are making money at it. Studies have been made which give an idea of what can be expected from the farm woodland under proper management. They are more difficult to make in hardwood than in softwood areas due to the greater variety of species

1/ Managing the Small Forest - Farmers Bulletin 1989, USDA - May, 1947.

and growing conditions encountered. One of your extension foresters recently gave us data for an operator in Jo Daviess county. Livestock had been kept out of the woodland since 1932, a thinning cut of 7 cords per acre was made in 1940, and now the annual growth is 266 board feet per acre. At local 1945 prices, this would have been worth \$2.74 per acre on the stump.

In another study of 89 mid-western farms from 1935-44 in the oak-hickory region, an annual net profit was made of \$3.42 per acre after paying labor, taxes, and interest on investment. 2/ This could have been done only on better than average stands under good management, but a return of \$3.42 per acre after paying interest, taxes and labor should interest a lot of owners of wooded tracts. Another study in Ohio indicated an annual net return of \$8.80 per acre over a 16 year period after paying for all labor from a Christmas tree operation. 3/ There are limits to such an enterprise, but it does furnish a possibility for liquidating costs of a reforestation program in a relatively few years, with remaining trees allowed to mature.

But stumpage-returns or returns after labor has been paid, do not tell the real story. I referred earlier to the low farm income per person prevailing in the areas which by and large also are forested. That low income to some extent at least is due to underemployment. The average farm in Southern Illinois contains about 125 acres of which 21

2/ Indiana Economic Council - A Suggested Forestry Policy, Bulletin 9, June, 1947.

3/ Tree Planting, Minkler and Chapman - Farmers Bulletin 1994, USDA.

acres are wooded. One way of increasing farm income is to increase the timber production. Another way is for the farm operator to perform the labor in the woods and possibly the skidding and hauling as well. In the study of the 89 mid-western farms mentioned previously, labor returns ranged from \$0.26 to \$1.35 per hour. Since most of this labor is done when there is little alternative opportunity for employment, any return increases farm income. Another study showed that lumber worth \$5 a thousand on the stump would be worth \$20 cut and delivered as logs to the mill. 4/ A farmer can often increase the value of stumpage by as much as four times by using his otherwise idle labor and machinery.

Profit from use of labor in timber is illustrated by an Arkansas case study - a farm in the Ozark foothills where an extensive beef operation is carried on. On that farm there are 130 acres of good bottomland hardwoods - not too much different from some of the woodland tracts in Southern Illinois. This operator needs three or four hands during the summer to clip pastures, make hay and produce a crop of silage. When hired hands became hard to get the operator took on tenants. To keep them busy during the winter he employed them in the woods. The owner was able to keep the tenants on the farm, while getting a good return from his timber and improving the stand.

The same operator has another way of adding value to the woodland product. He not only cuts and skids his own timber, but he owns a sawmill and sells rough lumber. Slabs not used for fuel by tenants are cut into firewood and sold in a nearby town, and the sawdust instead of being

4/ The Farm Woodland - J. F. Preston, SCS, USDA, July, 1947.

burned is used to cover trench silos, which gives him a higher quality silage. This is a good example of an integrated operation - larger, true, than on an average farm, but it illustrates the type of operations that could be used more to increase income and farm employment during winter months.

Now I would like to play around with Fact 3 and 4, as given in your pamphlet "FACTS". I want to convert the figures in it to dollars and cents. If I have juggled my figures correctly, the present annual growth of timber valued at say \$8 per thousand would be \$1.27 per acre per year. In the average Southern Illinois county with about 46,000 acres of timber, this growth would be worth \$58,000. But using the figures in Fact 3 for potential growth, 370 board feet per acre would be worth \$2.97 per acre per year. In our average county this increased growth would be worth on the stump \$78,000 more than the present growth each year. But let us assume the farmer cuts and skids the timber and for his labor and equipment increases the value three times. The increased value of the timber growth plus returns for labor and equipment then would be well over a quarter of a million dollars in each county.

What county would not like to have a factory with an additional quarter of a million dollar payroll over and above what they now have? Yet here is opportunity knocking right at the door! Not only would the county enjoy the benefits of increased income from the land but it might have the factory too, since the additional timber would serve as a basis for additional employment in basic lumber industries. The additional income would flow through the trade channels with resulting higher level of economic activity in the community.

There is one other point. I said a moment ago that in Southern Illinois there are 32 counties with an average of 27,000 idle acres. Assume now that this land if re-forested eventually could produce 370 board feet of timber per acre. That assumption is conservative because in "Fact 4", reforested areas were expected to grow 500 board feet per acre per year. But using the more conservative figure and at the \$8 valuation, these 27,000 acres per county which at present are producing nothing, would yield \$80,000 per year. Assume again that farm owners would harvest the timber, an increased farm income of another quarter million dollars could be had in each of these 32 counties. That would mean all told well over a half-million dollars a year new income from present and potential timber land.

The economic opportunities of good land use under such circumstances mean a great deal to the farmers involved but it means even more in terms of economic activity for the community. In the Eighth Federal Reserve District states, we have combined potential timber growth estimates by various states and find that a conservative rate of increase would produce 10 billion board feet of saw timber more per year than at present. Using the same average valuation, the timber on the stump would be worth an additional \$80 million more than the present growth. If the value at the mill is increased threefold, the additional farm income for increased growth, cutting, and hauling would be \$240 million. In addition, there would be increased employment in processing industries. The important point to remember is that most of this increase would come from land already in woods or idle, leaving about the same acreage to grow crops and grass as we have now. Much of the labor to harvest the

timber could come from under-employed farmers and industrial workers.

This transformation is not coming all at once. It isn't coming at all unless all of us - research agencies, technical foresters, extension workers, farmers, bankers, industrialists, teachers, editors, labor - do a better job than we have done in the past. Let me speak quite plainly about that. There is a shortage of specific information as to what can be produced under various conditions or with various kinds of timber stands over a period of years. There is a shortage of definite information as to the cost of getting a stand reforested and into production. To a farmer or banker this definite information is essential if he is to plan a financial program.

Furthermore, speaking from my ignorance as a layman and in order to start something, I venture the suggestion that researchers in timber growth and management have fallen down on their jobs compared with what their colleagues in agronomy have done for field crops, or in animal husbandry for our meat and dairy animals.

Let me illustrate. Think what a howl the farmers in Illinois would raise if they were told that the only seed oats available is one variety of doubtful ancestry with uncertain growth characteristics. But isn't that about where we are with trees? I find little evidence of work in tree breeding that compares with the research in field crops or farm animals. Think what a tremendous impact hybrid seed corn has had in increasing the yield of corn over the past decade, and its almost universal usage in the Corn Belt today! There are some good signs. Recent tentative reports tell of a hybrid pine developed on the west coast that

may cut down the time to maturity by 30 to 40 years. 5/

Only in the last few years has information become available as to what timber can produce as an annual crop, and many of these figures are inadequate. We can be convinced that it pays, yet the investor or lender of money needs to know how much it pays and when. Illinois with 10 per cent of the land forested in 1946 spent one per cent of State Experiment Station funds for forest research. Even then Illinois with the smallest forest acreage of the seven states in the St. Louis district spent more for forest research than did three other states where timber is relatively more important.

Some of these problems are being studied at state universities, the Regional Forest Experiment Stations such as the one at Columbus, Ohio, and at substations such as the one at Carbondale. I have a great deal of confidence that the combined efforts of various research institutions will in relatively short time come up with the answers to many of the problems discussed here today.

No one can read "A Plan for Forestry in Illinois" prepared by this association without a feeling of assurance, also, that the economic aspects of forestry have not been overlooked. The detailed analysis that has been made and the plan for improvement of Illinois forests are evidence of your forward thinking.

We may not know all the answers, but we do have the technical assistance and the know-how to do a much better job in our woodlands than we are doing now. The most difficult part of the job is to convince

5/ Tree Breeding at the Institute of Forest Genetics - U. S. Forest Service - Miscellaneous Publications 659.

woods owners that good management pays. When he sees clearly the economic opportunity that is his if he farms the way he should, if he uses land to the full according to its capability, and if he manages each acre so that it produces what it is best fitted to grow - then we will see expanding and balanced production, we will see healthy growing timber, and more important, we will see healthy prosperous farm people living on land that is secure.

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