

LAND USE AND CONSERVATION

Address
by
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On my way from St. Louis to Washington for these meetings, I began to realize how ridiculous it is for an outsider to assume to bring anything new on the subject of land use and soil conservation to you who are in the Department of Agriculture. The research and experimental work on which the far-flung programs to conserve and rebuild the land are based has been done by this Department and cooperating agencies; you have here the storehouse of information on which much of the literature on the subject is grounded; the Soil Conservation Service which in cooperation with the states and local communities guides the development of soil conservation districts is in this Department; the cooperative extension service working with the states radiates the message of better land use into every agricultural county from here; and the program of financial encouragement for better land use through adjustment and conservation payments, though decentralized in administration, heads up right here in this building. The only explanation of my presence here is that the program committee a long time ago asked me to come, and I did not have any better sense than to say that I would.

There are many approaches to this subject - the horror or scare presentation, the ethical appeal to the sense of responsibility of the custodians or the trustees of the land, or the cold demonstration that complete programs of soil and water management applied to the individual farms to hold the soil and make it more productive pay so well in dollars that the owners and operators simply cannot afford not to undertake them at once. I prefer to use the latter approach, with a touch of the others for background and perspective.

It has been estimated roughly that man has existed for only about a quarter of one per cent of the age of the planet earth. The last few years - perhaps 10,000 - since man began to plant seeds and harvest the crops, probably amount to only one-fifth of one per cent of the age of man. Yet in that short time comparatively great civilizations have grown, flowered, and have perished

because man destroyed the soil in which they were rooted; desert sands now blow over the marble ruins of once great cities.

It was only a little over 300 years ago that the white man's plow first pierced the soil of America - a span which compares with earth's antiquity as the tick of a clock with eternity. Yet the loss of the land, the waste and impoverishment of our soil in that span of years has been incalculable, and is still going on. Estimates of the Soil Conservation Service, frequently quoted, say that since colonization began in what is now the United States, at least 50 million acres of once good land has been ruined by soil erosion; it has been abandoned and can no longer be farmed. Another 50 million acres are swiftly coming to the stage where it is unfit for farming. One hundred million acres of once good land gone! On another one hundred million acres, more than half the topsoil is gone and on a third one hundred million acres, erosion processes are actively under way. These are not new figures but they tell the story of improper land use, of the failure of the American people to care for the land. They sound a warning; they highlight the importance of proper soil management and land use on every farm in the United States.

Let me sketch in just another bit of background, the moral or ethical aspect of soil conservation and improvement. If this nation is to hold the basis for its future greatness, each generation must preserve and enhance the soil resources for the use of generations to come. Up to now each generation has defaulted in this responsibility. The English government is now proposing that a farmer's right to hold and operate a piece of land be made conditional; that if he fails to operate the land as decreed by the State the land may be taken from him. We recoil from that suggestion here. We prefer to tackle the problem through education, demonstration, leadership, and financial inducements or subsidies. But make no mistake about it, that problem stares us in the face and we haven't licked it

fact that an individual holds a deed to a piece of land gives him the moral right to destroy it through stupid, short-sighted farming practices.

For a century, successive wars have hastened the process of waste and destruction of our land and our natural resources in spite of our feeble efforts at organized conservation. Our conservation balance sheet continues to show more losses than gains, notwithstanding the progress made in recent years in enlightenment, in acreage organized in soil conservation districts, in the application of approved practices, and in the return of life-giving minerals and organic matter to the soil.

Look at what we are doing compared with what needs to be done. The Agricultural Adjustment Agency's 1945 report presented an estimate of actual conservation needs, based on a survey conducted by A.A.A. committees working with State College and Experiment Station specialists, and the State Technical committee. Their estimate is worthy of respect, bearing in mind that nearly $4\frac{1}{2}$ million out of the total of about 6 million farms and ranches representing nearly 89 percent of the total crop land of the country participated in one way or another in the agricultural conservation program in 1943; $3\frac{1}{2}$ million representing 75 per cent in 1944; and slightly less than 3 million representing 68 per cent in 1945.

According to this estimate, the farms of the United States need currently to have applied to them 60 million tons of ground limestone and 13,200,000 tons of 20 per cent superphosphate annually. What has the record been? 23,830,000 tons of limestone and 1,950,000 tons of superphosphate spread by participating farmers in 1944; 21,338,000 tons of lime and 2,400,000 tons of superphosphate spread in 1945. This marks a tremendous gain in recent years, but it is still far short of what is required for the economic and the physical health of the nation.

The committee estimated that 80,000,000 acres of crop land remain that need terracing to stop soil, water and mineral loss; new terracing was completed

on 1,700,000 acres in 1944, less than a million acres in 1945. Field strip cropping and contour planting were needed on 118,000,000 acres, according to the estimate. The reports show these practices on 24,500,000 acres in 1944, 23,350,000 acres in 1945.

There is no use of going into general figures as to need and performance in the case of other conservation practices covered by the estimates and reports. No matter what we have done, our performance has been small in comparison with what we need to do. And I am about finished with generalizations, with total national estimates and reports, and ready to get down to cases in the balance sheet of conservation farming or balanced farming or whatever you want to call it.

First let me say that when we organize conservation districts, or hold meetings or publish bulletins we are only helping build the frame for the conservation picture. The painting in of the picture itself is done by actual, concrete performance on the individual farm. I want to drive home this point: the payoff comes in the adoption for an individual farm of a complete, integrated, balanced program of soil and water and crop and livestock management. The program to be fully successful must be complete. The mechanical engineering steps of terracing, contour cultivation and grassed waterways are not enough. Minerals need to be restored, soil health brought back with organic matter, with crop and livestock systems fitted to the land. It may take 5 years, or 8 or 10 to complete such a program on a farm, but the starting point must be a plan that sets out definite steps to be taken each year. When the plan is set, then it is up to the operator to stay with the job until it is done.

Proper land use on the individual farm is simply a matter of fitting the cropping system to the natural capabilities of the soil. Then, after determining the crops best adapted to the land, working out an erosion control and soil building program which will give maximum output at minimum cost while maintaining or increasing the productivity of the soil.

Not until that kind of performance is under way on every farm in the country can we rest assured that this nation has met its overall responsibility for the care of the land. Furthermore - and it has taken a long time for me to build up to the point where I talk like a banker - every dollar of new capital that goes into carrying out such a soundly conceived farm plan will repay the investor or lender in short order through increased yields and lower production costs. The farmer or land owner or mortgage lender will have a better farm 5 or 10 or 20 years from now than he has today to operate or to secure his loan, an assurance altogether lacking in American agriculture as a whole right up to now.

Let me throw a few figures at you with which many of you are familiar. The Soil Conservation Service completed a survey early in 1946 covering nearly 10,000 farms in all parts of the United States - farms on which comprehensive programs of soil, crop and water management had been adopted. These farms showed an average increase in the per acre yield of major crops amounting to 36 per cent over the average yields obtained before the programs were undertaken.

I could give you from the records thousands of illustrations ranging from single cases to sizable surveys like the foregoing, to show that farmers who do the best job of maintaining their soils make the best incomes. It will save time if you will accept that as true, and will permit me to get on with the story of some things we have been doing out in the Eighth Federal Reserve district which will, I hope, bring the problem down to dimensions where we can grasp it.

Realizing that bankers have great direct and indirect power to promote the adoption of sound land use plans on the farms of their communities, the Federal Reserve Bank of St. Louis started out a little over a year ago to take the story out to them. In cooperation with the Land Grant College and the State bankers' association in each state, we have held a series of 27 dinner meetings in eastern Kentucky, Northern Mississippi, Arkansas, East Tennessee and Southern Illinois, to which we invited the bankers, asking them in turn to bring along leading farmers,

many of whom were directors of the banks. We also invited the Soil Conservation technicians and supervisors, the county agents, vocational agricultural teachers, and P.M.A. committeemen. The Soil Conservation Service supported the program in every way.

We had about 3,000 guests at these dinners, and the interest and attention were nearly perfect. About four out of five of the banks of the areas visited were represented, which we thought was good considering that in many cases men had to drive 50, even 100 miles from their homes to the towns where the meetings were held. The meetings all followed the same pattern. A representative of the Agricultural College, using colored slides with pictures taken in the neighborhood, showed the right way and the wrong way to handle the land, and showed clearly how well good practices had paid off right in that county or in adjacent communities where conditions were similar. The agricultural economist of our bank then followed, and presented the records of a single farm case selected as typical of that area - a farm where such a plan as I have been talking about had been adopted and carried out, and where before-and-after records were available. His charts showed from the records the year-by-year investment as the program was carried out, and the actual increase in yields per acre and per farm in crops and in pasture carrying capacity year by year as the improvements took effect. He then outlined a plan by which such a long-range improvement program could be financed by a bank or other lending agency, with amortization repayment based on applying to the loan only a part - usually 50 or 60 per cent - of the value of the increased yield that could reasonably be expected to result from the improved practices.

We were very conservative in the formula we used to convert these increased yields into dollars. Learning way over backwards, we used the 15-year average Missouri farm prices of 1925-39, which figured 75 cents for corn, 96 cents for wheat, 40 cents for oats, \$12.50 for alfalfa, 11 cents for cotton, and \$1.50 a month per animal unit for pasture. In the illustrations we presented we did not

count conservation payments in its income available to help repay the investment or retire the loan. If we had, the repayment schedule would, of course, have been greatly shortened.

Before and after these two main speakers, I emphasized the existence of an enormous money supply in bank deposits and currency which might be used destructively in bidding up land and equipment prices unduly, or constructively in carrying out complete programs of soil and water management, and in equipment electrification, homes and farm buildings which would increase the efficiency and comfort of farming. I put it up to the bankers that it was in part their responsibility to guide the flow of investment into productive channels. Generally, in the towns we visited the bankers and business men were keen to get factories, industrial payrolls, established there. I reminded them that if these farms in their communities that badly need to stop erosion and to rebuild the soil and its fertility would start this very year on complete conservation programs, the added wealth produced would far surpass in dollars and cents any payroll they could reasonably hope to acquire.

There was a lot more to it than that, but what I have told gives you the idea. Now I want to go back and look at some of these farms we used as illustration.

First, we studied individual farms which had completed soundly planned land use and farm improvement programs and on which good records are available, in an effort to determine what it costs to convert a farm in a given area from an exploitive system of farming to a balanced plan of operation. We found out what the differences were in cash returns from a balanced land use program as against the old wasteful system, and identified the amount of income that could be traced directly to expenditures for soil conservation and soil improvement practices. It has been intensely interesting. There is wide variation in the type of practices required in the shift to a balanced system of farming, in the per acre cost of making the shift, and in the rapidity with which farm improvement investments pay

for themselves. These variations are found between different areas of our district and to a great degree within relatively small communities. I think the most significant fact in our research to date is that in all the analyses of individual farms we have completed we have not found a single instance in which the investments made for soil conservation, soil building, and other farm improvement practices were not highly profitable. I can best illustrate these variations by giving you some dollar and cents figures on the individual farms.

On a 267 acre farm in northwest Missouri, for example, a ten-year program of converting to a sound and balanced land use program cost a total of \$9,714. The problem on this particular farm was primarily one of erosion control. The mineral content of the soil is reasonably high but the topography is rolling and the soil erodes badly. While some minerals are needed for maximum crop output, most of the costs of the farm improvement program here went into erosion control practices, such as terraces, grass waterways, concrete outlet structures, and new fences to line up the fields with the lay of the land. Over the ten-year period, the return from the investment was \$15,655 at the average prices I referred to. This was enough to liquidate the full cost of the program and leave the farmer an additional 50 per cent for his efforts. Based on the same average prices, the annual income from the farm was increased by \$1,944 and the maintenance cost of the program, above the ordinary operating costs, runs approximately \$300 per year. On this farm it cost \$36.38 per acre over the ten-year period to complete the program and out of that amount \$33.25 per acre represented permanent improvement to the land.

Contrast this Missouri farm with a 584 - acre farm located in the brown loam hill area in Northwest Mississippi on which a complete improvement program was carried out in a six-year period at a cost of \$7,834 and with added returns of \$12,527 for those six years that can be traced directly to the improvement investment. The cost averaged \$13.41 per acre, over half of which went into lime and mineral fertilizer. Permanent improvement to the land was \$6.37 per acre.

The general topography of these two areas is somewhat similar. The erosion process, however, has gone much further in the Mississippi area and a large proportion of the 584-acre farm was so badly damaged that it was fenced off to go back into timber production. In that area nature is kind and will almost single-handedly take care of reforestation if given a chance. Little cost was involved on that score. The improvement expenditures then were primarily on the lower hillsides where pasture was developed and in the valleys where some row cropping can be practiced. On the Missouri farm, on the other hand, the entire farm with the exception of a wooded pasture is capable of row crop production if a proper soil management program is developed to protect the soil from the ravages of erosion.

Another farm located in the Black Belt that extends into Central Mississippi offers an additional contrast from the viewpoint of cost and returns from farm improvement. In a ten-year program on a 145 acre farm in the Black Belt, a total of \$8,832 is required to install a sound land use and balanced system of farming. This averages a total cash outlay of \$60.91 per acre, a high percentage of which goes into the mineral program. Out of the \$60.91 per acre, only \$17.12 represents permanent improvement to the land. Despite this unusually high investment, however, in the ten-year period \$12,430 in new income could be traced to the \$8,832 investment. Calculated on the same average price basis, the income from the farm was increased by \$1,711 with an annual maintenance cost of \$600.

To carry this analysis a little further, let us review some figures from ten farms scattered throughout the Eighth Federal Reserve district on which we have analyzed the records of farm improvement programs on a before-after- and through-the-middle basis. These ten farms include a total of 2,255 acres of land with an average normal appraised value of \$47.64 per acre at the time the improvement programs were started. The time involved in the improvement programs has ranged from 6 to 10 years and for the ten farms has averaged eight years. The average improvement cost per acre has been \$29.28 which is approximately 61½ per

cent of the original normal appraised value. However, the average per acre returns during the period in which improvement programs were being completed increased \$65.47 which is a \$2.20 return for every \$1.00 invested in soil improvement. Of the total of \$29.28 invested per acre, \$17.58 represented permanent improvement to the land and raised the normal appraised value on the average from \$47.64 to \$65.22 per acre.

The average farm of those analyzed would be a 225 $\frac{1}{2}$ acre farm with a normal appraised value of \$10,744 at the time the improvement program was started. An addition of new capital in the amount of \$6,603 would be required to complete the improvement program in an eight-year period. This investment of new capital would result in increased income in the eight-year period of \$14,568, or \$2.20 return for each \$1.00 invested. The yearly income from the farm following the completion of the improvement program would be increased by \$2,391 with an annual maintenance cost of \$568 which would leave a net increase in income of \$1,823 per year. The normal value of the farm would have increased to \$14,708.

That, I think, pretty well gives the story for the individual farm, and while I have long been convinced of the moral responsibility we have towards sound land use, these studies and a pile of other evidence prove to me that, moral or ethics aside, from a cold business standpoint, the man who controls a farm cannot afford not to start now on a complete and integrated program of conservation farming.

One more word about capital. A conservation program, generally adopted, would require a lot of it. There was a time when the lack of capital would have been definitely a limiting factor. In isolated instances that may even be true today. It has been interesting to me, however, to project the cost of a complete improvement program on every acre of land in a given community and then lay the figure of total costs alongside bank deposit totals for the same community. In

most agricultural areas the local supply of capital is more than sufficient to

meet the cost of farm improvements if they were to start now and proceed much more rapidly than we can ever hope will be the case. You will find in almost every instance that bank deposits, and in many cases even the amount of uninvested cash on hand in banks, will exceed the amount of new capital that would be required to complete a sound land use program on every acre of farmed land in the community.

Now it is true, of course, that while the total supply of capital within a community may be sufficient, there will be individual instances where the farmer lacks sufficient liquid reserves to meet the need in his particular case. He may have to resort to borrowing to carry out a sound soil improvement program. I am convinced that a well-planned soil improvement program carried out under the right kind of supervision is a sufficiently profitable venture to justify the ready extension of credit for its completion. Farm improvement plans can be developed and financed on a basis that will enable the farmer to repay the borrowed money from income earned directly by the improvement investments. It requires a little different type of loan than the conventional real estate loan or the crop production loan with which we have long been familiar. Lending money for farm improvement programs requires a careful analysis of the individual farm and a flexible extension of credit wherein money can be advanced in varying amounts on farm real estate mortgage security over a period of years. The repayment program needs to be geared to the income pattern of the farm, varied in amount repaid from year to year as income from the improvement investments develops.

This ordinarily will mean a farm mortgage loan on which several disbursements will be made each year for a number of years and on which repayments may be very small during the early year or two of the program but will increase as the income from the farm improvement investments develops. The outstanding balance of the loan may actually increase during the first few years of the improvement program. In the farms we have studied, we have yet to find a case where money

arose, and be repaid entirely by the increased income from the improvements with plenty of margin to spare. Soil improvements, given only a little time, pay their own way, and more, without dipping into the income that would have been produced on the farm without the soil building program. I know of no other type of farm mortgage credit that is so obviously self-liquidating as a loan for soil improvement.

Multiply the single farm by hundreds for the community, tens of thousands for the state, and millions for the nation, and what do we get? Vastly increased returns, reduced costs of production, and larger profits even at the lower price levels we shall one day see. In the aggregate, a land that is at long last adjusting itself to eternal fruitfulness.

Every man must look out on the world from where he stands, so I have told you this little story about the Eighth district, though it is not different from many that others may tell. The Federal Reserve Bank of Cleveland held soil meetings of this sort in Ohio before we did. The American Bankers Association has adopted under the direction of its president C. W. Bailey of Tennessee, a great conservationist as well as a great country banker, an aggressive conservation and land use program. In my part of the country the State bankers associations of Illinois, Missouri and Kentucky have made conservation farming their country bank program this year. Other business groups are aware of the issues and are ready to help. And in a nation where less than a fifth of the population actually lives and works on the farms, intelligent and informed support by non-farm groups is essential if we are to develop and keep a constructive agricultural policy.

During the period of World War II, we have seen miracles of production by American agriculture. Food and fiber grown on our farms sustained our armed forces and that of our Allies and helped keep civilian lives going in friendly lands abroad. With only 15 per cent of the Nation's labor force in their ranks,

the farmers of the United States brought food production 30 per cent above the

prewar level and held it there. The food production on the farms of the United States last year averted mass starvation that threatened many millions of the earth's population.

During the early years of this vast increase in farm output, I think many observers regarded it simply as a phenomenon of war, the result of long hours and hard work on the part of farm people to produce more to meet the war emergency. I think, however, that Sherman Johnson's recent publication "Changes in Farming in War and Peace" tells the real story behind the increasing output of American agriculture; that the increase has resulted primarily from bringing into focus during the war emergency the technical "know how" of farming that had been developed but not fully utilized during the inter-war years. There has been much speculation about where the postwar level of farm production will ultimately settle. Many have felt that after the war had ended, it would settle back to normal with a total output from American farms somewhere around the prewar level. I think, however, that as more new farm machinery becomes available, as more commercial fertilizer and lime are produced and made available to farmers, as more and improved erosion control practices are applied, and as more of the technical "know how" is taken out to the farms through the channels of the Extension Service, the Soil Conservation Service, the Production Marketing Administration, and some of the other educational agencies in the field of agriculture, we may look forward to a continued high level of production above the prewar levels.

This all means that the years ahead will see some tremendous shifts and developments in American agriculture. Systems of farming will be more closely geared to sound land use capabilities. Increased amounts of mineral fertilizer and lime will be used. Many miles of terraces, drainage ditches, and other water control devices will be constructed. Fences will be reset to match the lay of the land. Much new farm machinery will be purchased and many acres of abandoned land in some areas will be brought back into production of good pasture, small grain

crops, and timber. Great numbers of new farm buildings will be constructed and many others completely renovated. All these developments will require capital and in the aggregate, they spell the need for a tremendous volume of new capital on American farms.

We are dealing here with a subject as broad and as deep as human life itself. It is impossible for me even to touch on all its facets in one compressed treatment. Scarcely a word has been said on the highly important subject of timber. In my part of the country men no longer say reforestation and tree cropping is not a field for private investment. Individuals and corporations are demonstrating that high yield and safety both can be found in intelligently managed pine and hard wood timber lands. Nothing has been said about the fundamental importance of this program of land and water management to wild life, fish and game. And up to now, I've talked a lot with scarcely a look at what needs to be done, and how to go about it, to get the individual farm operator on the farms that need it, to plan now, and then to carry out next year and the next and the next, complete and balanced soil improvement plans.

We have made a great deal of progress. The rate is not fast enough. On balance, we are still losing ground. I believe the American public is soil conservation conscious; that business, and civic, and financial interests and organizations will support an intelligent program to get conservation plans made and performance started on farms where it is most needed. I think we all see that the goal is worthwhile. I wish I had a blueprint to leave with you that would chart the way to its attainment.

Leadership, it seems to me, will have to come from agriculture - the Department, the State Colleges, and the farm and cooperative organizations. I wish we might have closer teamwork there. We have states in the middle west where county agents and district soil conservationists are at each other's throats,

A good many men in both branches of service who are out in the field where they work directly with the farmer, tell me that they have no difficulty in getting along there; that the trouble is higher up at the state level or even higher still. This situation is by no means uniform. I know of two states side by side in the mid-west in which directly opposite conditions prevail. In one there is complete harmony from the head office down to the last employee in the field. County agent and district conservationist ride to meetings together, sit side by side, cooperate in demonstrations, apparently recognizing that there is plenty of credit and plenty of work for both services, a great deal more than even has been attempted. In the other state the Extension service fights against the creation of soil districts - even the word "conservation" is a red flag - and the conservation workers fight back.

I don't profess to know what ought to be done. I don't even know what is wrong, or who is to blame, because I only see some of the symptoms. But I am sure that the cause in which both services are so interested suffers as a result. I have more faith in men than in charts, but if the defect is structural it ought to be corrected; if it grows out of personal attitudes, they ought to be corrected. The task ahead is too important to have this handicap.

I have tried to bring out in this talk the importance of a carefully worked out conservation plan for the individual farm, with a definite time schedule to follow. While there are plenty of cases where this has been done, I have the impression that it is not receiving the attention it warrants. The agricultural conservation payments should be used as a powerful leverage to bring about concerted farm planning. Perhaps that is the way they have been administered, but I do not get that impression in the field, where you see a farm pond here, a strip of terracing there, a grassed waterway somewhere else, but not tied together as far as eye can see in an orderly, integrated whole.

We need to develop, and soon, a well-considered, open-and-above-board policy for the orderly development and the economical use of our great mineral fertilizer resources. If they are applied in an orderly, balanced program, we should be putting on the land infinitely larger quantities of lime, phosphate, potash, and of the lesser known minerals of which smaller quantities are needed, but which are tremendously important to plant, animal, and human health. I am inclined to believe that the Department of Agriculture has the responsibility for leadership in developing such a program, and that, if it is to be effective, it will clash with many of the entrenched practices and traditions of the fertilizer industry. But that nearly always happens in a period of swift change and development such as the one just ahead of us.

I think, too, that we are on the threshold of important discoveries bearing on the relationship between soil health and human health and happiness, on balance in soils and balance in people. There is no time to develop that here, but again, the Department of Agriculture, with its enormous equipment for research, and its great power to direct research, has a primary responsibility.

Some of my old friends are likely to arise and remind me that I have been talking of policies that will increase the production of our farm plant at a time when we must look soberly toward a falling off of war-time demands for many products of the farm. I am not forgetting nor minimizing the great and difficult adjustments agriculture will need to make when the war-born vacuums have been filled. The foreign demand which we have tried to meet, will not continue very long. Restoration of war-damaged farms has A-1 priority. Abroad, too, farm imports will be sought from countries which will accept payment in the form of manufactured goods. We can look forward to the time when we will not need billion bushel wheat crops for human food, and when our cotton crop will have to find its level along with synthetic fibers and foreign growths. On the other hand, milk, meat and other dairy and livestock products, tobacco, poultry, fresh vegetables

and fruit will have a sustained and expanding market here at home if employment and wages and non-agricultural production keep high.

You can see generally what I think is ahead of us. I expect to see prices of farm products work lower as the war and early post-war demand falls off. I expect this tendency to develop and continue in spite of any laws now on the books or enacted later, though we can all be glad that we have legislation aimed to support farm prices for a limited period while farmers get their house in order. Farm prices may show a tendency to break before other prices do, because wages and controlled or managed prices are "sticky". That is why I hope that volume will rise and prices fall in non-agricultural lines as soon as possible. Too much lag would be dangerous.

The increasing productivity per worker in farming which marks this country's agriculture has resulted because farmers, year by year, have commanded more and more capital per worker in the form of machines and land. As one pair of hands gets more and better tools to work with, their owner manages more land and works it better; his unit costs go down, and the farm yields higher returns and a better living per worker. This trend is going to continue; it is inevitable. It means better homes and a better life for those who remain on the farms. It also raises the question whether the growth of decentralized industry throughout rural America will be rapid enough to absorb the workers who are released from the farms as mechanization proceeds.

I do not think this development necessarily will be troublesome. Again it is a question of the right human behavior. Think what it would mean if all our population at home became educated to want and demand a full, healthful, rich diet. You know we can keep 10 to 13 times as many people alive on an acre in cereals, as can be fed on the livestock products from the acre, but we are not likely to do that in this country. The trend is the other way. We could use our farm resources fully, with more workers than are now employed in agriculture, if all our people

could buy and consume the dairy-and-livestock diet necessary to maximum national health.

Recently I have spent a great deal of time driving over Missouri, Southern Illinois, Western Kentucky and Tennessee, and other parts of the Eighth Federal Reserve district. I saw the enormous waste and destruction caused by row-cropping the hills and slopes. Hundreds of thousands of hills and slopes in this country ought to be in permanent pasture or legume and small grain rotation instead of growing sorry crops of cotton and corn. Overcropping and overgrazing, failure to keep proper cover on the farm and ranch lands of the Great Plains have exacted their toll in repeated disasters, when in years of extreme drought nature's protest was written in layers of dust right here in Washington, and on the kitchen tables of consumers all over the country.

I could talk to you all night about the amazing opportunities all around us to build safer and more profitable farms on the ruins of the old ones simply by using the land right. Soil conservation and the kind of farming that goes with it are not only right morally - they pay big dividends in dollars and cents. We can use a lot of the capital and the labor we have in every community to put complete soil-and-water-use programs in effect on individual farms. We have the capital, the tools, the "know-how", the minerals, and the seeds and plants with which to work a farming revolution here. The only thing that stands in the way is human inertia - human behavior again.

Now in conclusion: Along with some of you, I've gone the full cycle from the last war to this watching the evolution of farm policy aimed to provide remedies for farm problems as they unfolded. I am not afraid of the new or the untried, or of government action. But I know there is no magic. There is no substitute for efficient production, which can be secured by the intelligent use of plenty of capital per man in the form of land, tools, buildings, lime and fertilizers, and livestock. Nothing can take the place of good management of

our soil and water resources.

It will be better to seek high returns per worker through large-volume, low-cost production, than to try to get the same high return by means of high prices for scarce, limited production. But the rest of the economy must play the game under the same set of rules. The recent coal strike against the government gave grim warning that some of the rules of today must be revised and speedily if we are to avoid national paralysis and disaster.

There is a way to lick these problems here at home, and that is to have genuine teamwork of labor and industry and agriculture rooted firm in the understanding that the common good must have priority over the special interest of any one group. We give lip service to that principle, but we let it end there. We are either going to practice that kind of teamwork, or we are going to have trouble - plenty of it. If each major group insists on going down its own road, with no real meeting of minds on national policy, we will court national disaster. The same principle applies to the international situation, as well, but now I'm talking about the domestic scene.

We must have genuine recognition of the principle that we can't prosper by "gouging" each other - we just can't gouge our way to prosperity. We may think we have progressed far from "the public be damned" attitude of the early Vanderbil but each day gives evidence that we have not. Genuine teamwork based on the realization that we have to produce something before we can divide it up, could yield us a gigantic national product to share. It may take a scare, or worse than a scare, to make us realize it.

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