1-1-1932

Forestry Rubs Elbows Wil:h Agriculture

I.T. Bode

Iowa State University

Follow this and additional works at: https://lib.dr.iastate.edu/amesforester

Part of the Forest Sciences Commons

Recommended Citation

Available at: https://lib.dr.iastate.edu/amesforester/vol27/iss1/15

This Article is brought to you for free and open access by the Journals at Iowa State University Digital Repository. It has been accepted for inclusion in Ames Forester by an authorized editor of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.
Forestry Rubs Elbows With Agriculture

I. T. BODE, '15
Formerly Extension Forester of Iowa

Problems of flood control, erosion prevention, and economic land use occupy today a most prominent place in agricultural thought. But in reading the many discussions and reports of consideration of these problems one is forced to wonder at the repeated exclusion of one of the most fundamental potential factors, namely, the possibilities in heavier types of vegetative cover and tree growth. Until comparatively recently, the soils expert, the agricultural engineer, the engineer and others have proceeded independently along the path of their own individual theories, leaving behind the impression in all too many cases that each considers it beneath his dignity or fears encroachment upon his field and glory to accept anything from the other or concede any benefits to be derived from the other. It is gratifying to note that more and more these old barriers in thought are being torn away and there is a growing recognition on the part of all agencies that there is no one cure-all for these problems. Protection of critical erosion areas with vegetative growth and tree crops on unprofitable agricultural land are assuming proper proportion in the weighing of practical means of solution.

The author feels that, although not perhaps in terms of money expended or millions of trees planted, Iowa has formulated and is carrying forward through her Agricultural Extension Service a sound and outstanding program. It is not a soils and crops program; it is not an agricultural engineering program; it is not a forestry program. It is a “Save Iowa Soils” program. And in the program forestry has been accepted as an integral part.

The purpose of this article, therefore, is to present a picture of that program and the relation of the parts to the whole and to emphasize particularly the forestry aspects.

The Iowa Problem and Status

Surveys and reports show an average of 15,000 acres of land for every county in Iowa, or a total of 1,500,000 acres for the state, to be in some state of erosion. In many counties at least a third of this is advanced to a point where tree growth is the only practical solution. Three county agents estimate 2,000 to 3,000 acres so poor that they have gone out of cultivation. Annual production loss on these lands is estimated to be at least $30,000,000.
A study by County Agent A. J. Secor for an advanced degree from Iowa State College shows these facts for Van Buren County.

"Of the once fertile lands that have previously been cultivated, 6,000 acres are now lying idle, and in addition, 3,700 acres are badly eroded, being of very little value for future crop production.

"So important is this phase of the forestry program that it deserves the closest attention. To any observer of agricultural conditions, the waste, eroded hillside lands are the outstanding unfavorable aspect of the county. All of this land bears its share of taxes now ranging between 50 cents and $3.30 per acre and the management of such land is indeed a most serious problem for the farmer. This forestry program offers a practical solution when used with judgment as to the selection of species and planting in such places not possible to reclaim for other crops.

"Most of these lands were at one time covered with timber, and in the period of years of cropping as mentioned in the general history of the county, the result has been the production of this waste and idle land."

The problem of proper utilization of Iowa farm land and the increasing threat of a serious idle land problem for the state have resulted in the recognition of these as among the important, if not the most important, farm problems in a large section of the state. The place of forestry in this problem has been recognized by leaders attempting to solve the problems, and forestry work has become a definite part of the program of soil conservation.

Preliminary demonstrations show the value of tree planting on eroded areas. They also show that farmers can produce their own materials for doing the work at a small cost. Farmers have used cuttings obtained locally to start willows in the past and are familiar with that method. Last year’s results with black locust seed were entirely satisfactory. This assures a supply of planting material in case commercial or state sources are unsatisfactory.

Experience of farmers with black locust is that it yields a crop of considerable value in fence posts.

This work involves at least the two or three southern tiers of counties all the way across the state, many of the counties on the eastern third, those along the Missouri River and some others.

The unfamiliarity of the agents with the exact place and way of fitting this into the agricultural problem and the old attitude of opposition on the part of the farmer to all tree growth, regardless of its usefulness, makes this phase of work one of the important fields for forestry extension.
The Iowa Program

In view of the figures showing the tremendous wastage of soil through erosion, it would seem obvious that every operator of land subject to erosion ought to make a study of his operations to make sure he is preserving the precious top soil layer. And it is a study. *There is no single cure-all for soil erosion.* The sooner the farmer absorbs this truth the sooner he is apt to use agricultural land in a saner fashion. But strangely enough such thought has been conspicuous by its absence. We ought, therefore, to stop centering thinking around the term “erosion” alone and begin talking of a program to “Save Farm Soils;” for, after all, if we adopt a proper program of saving the soil, we will bring to a minimum the tremendous wastage by erosion.

Now, in considering this presentation, it should be obvious to any man making his living from the soil that, first of all, good land ought to be kept good. He will not have the means to adopt subsequent phases of the program unless he has good land upon which to grow the crops that bring him his returns. Hence, he should employ the best system of farming and the best mechanical or other devices of which he can learn to preserve that good land. This is exactly what has not been done in all too many cases. Improper cropping and a wrong balance of crops and livestock are the very things which have permitted soils to deteriorate and wash away into the rivers.

This dovetails at once into the second phase, the proper use of land. The farm operator, for the most part, has thought almost entirely in terms of the major crops produced in his region as a whole. No one can blame him for that, of course. In doing

![Fig. 1. (Fig. 1 and 2 taken from same bridge) Looking downstream—entirely open to pasture causing large soil loss.](image-url)
this so intensively, however, he has been all too prone to try to make the particular piece of land upon which he finds himself fit the type of farming he wants to carry on rather than to fit his farming operations to the kind of land on which he is operating. The result has been soil depletion; and, slipping out from under his very nose, has gone the priceless fertility of that top few inches of the earth’s crust. It has gone to silt up streams and to lose itself on flood plains and in river channels where it can be of little value to anyone. It has left behind gullies and clay hills and useless soil. Production of agricultural crops, strictly speaking, has so occupied consideration that relationships of any supporting type of production from the soil have been all but forgotten. The forest especially has been considered anything but a part of agriculture. Improved farm lands mean lands

Fig. 2. Looking upstream—area protected by planting trees. Note that the area is farmed or pastured up to the protected belt.

free from trees, whether one speaks with the farmer, the banker, the farm loan agent or even the economist.

Soil saving instead of soil wasting will never come about until land and land use is classified more sanely and operations encouraged accordingly.

With reference to the third phase of the program, there are thousands of acres of land now farmed at a loss as part of permanent farms which can be made to produce good crops through proper systems of farming. This does not refer to those marginal lands which should be taken out of production. To illustrate: Keeping up the humus content of the soil is one of the best insurances against washing and erosion. But this cannot be accomplished in the same way on all areas. It may mean three-year rotations, with only one year of open cultivated soil and plenty
of leguminous crops to supply the humus, instead of four- or five-year rotations with two or three years of corn. It is folly to go to the expense of terracing fields, stopping ditches with soil saving dams, and controlling large gullies and steep hillsides, unless such work is backed by adopting systems of farming which will maintain the open soil in proper condition.

Finally, it is poor business to spend time and money saving good land if large gullies are eating their way back into tillable acres, or if steep hillsides are cutting up and breaking away, forming mazes of new gullies and ditches. Such acres may never be farmed again, but they grow alarmingly in area year by year. To stop them is a requisite to preservation of good land. It is just as poor business to remove protective forest cover from steep hillsides which can never become anything but a menace to good agricultural areas. The control of these critical areas as protection to good land is absolutely sound as a farm practice, even in the most intensive agricultural sections, and even if they may never yield much return in themselves. Forest cover is the best and most practical control agency for such areas. If forest cover will fix the soil on such areas, holding the banks of gullies and covering over and holding hillsides which have been lost to farming, then it is good business for the farmer, first, to plant trees on such areas, and, second, to refrain from removing forest cover (Continued on page 85)
Forestry Rubs Elbows With Agriculture

(Continued from page 16)

from areas which are bound to become bare and gullied if cleared.

All too often trees on land are considered worthless or a nuisance or not yielding returns simply because no one has ever stopped to figure just what their yield or good has been. Occasionally a farmer can give you an actual record of what the productive capacity of his tree acres is, but, for the most part, he is sure timber is a nuisance because his father or grandfather told him so. The pioneer toil of land clearing convinced the older generation; tradition has passed the idea on to the present. Because of the very attitude which has grown up about the farm woodlot, it has been so unmindfully used that today it has deteriorated to where it has practically no commercial or even home value. The result in general is that land takes the classification of "improved farm land" when the trees are cleared off; it makes little difference what happens to it thereafter. It may wash down the creeks and rivers and cover up some one else's farm below, but it is still "improved farm land" when the trees are gone. Such an attitude is a mistake.

Now, no intelligent forester preaches or believes that trees and forests are the cure-all for floods, erosion or soil conservation. On the other hand, no program working toward a proper balance in utilization of land areas and erosion control can ignore any of the factors involved and still accomplish the end. The power of forests as water-storage reservoirs and soil-holding mediums is far too great to forget in soil conservation programs.

Hence, there must be an awakening on the part of the land owner to what has resulted from the indiscriminate clearing of land. This is illustrated by the writer's experience with one farmer who was spending money to reforest about ten acres of clay banks and gullies on one side of a creek and was clearing all of the timber off the opposite hillsides, without ever pausing to reflect that there was no reason under heaven for these latter maintaining themselves in grass after clearing any more than did those which he was reforesting.

This does not go to say that there should be no more land cleared of timber in the agricultural belt. There are doubtless still many acres of land in trees which will give way to pasture and cultivated land, and it is doubtful if the day will ever come in the best agricultural sections when a farmer will get greater returns from tree crops than from farm and pasture land which will maintain itself as such. On the other hand, there are millions of acres of eroding land, abandoned farm land and silted bottomland which ought to be convincing evidence to agriculture,
from the land owner and farm operator to the loan agent and banker, that it is good business to study proper land classification and then to make use of all those methods of land management which are demonstrated to be beneficial.

It is not at all improbable that the day may come, along with the ever increasing intensity in agricultural development, when much of the area which is critical from the standpoint of protection to other farming areas against erosion and wasting of soil fertility will become state or publicly owned land and will be held in forest growth for the sole purpose of such protection.

The longer we put off recognizing these things as farm problems the sooner comes the day when governments are burdened with idle land problems.

In carrying forward forestry in the above program the organization of the Forestry Extension work is something as follows:

For erosion planting, the specialist holds a preliminary meeting in the county with the agent and a local committee, consisting chiefly of those proposing to do the planting. At this meeting plans are discussed, and the method of obtaining trees determined. Following the meeting the specialist visits prospective demonstration areas, especially selected, to make final individual plans. In the spring one or two plantings are conducted as a demonstration of methods in each of the counties where the agent is not familiar with the work, with a specialist present. The rest of the plantings are established under local supervision. In groups of counties employing a soils specialist, the extension forester spends most of his time with this man to get him lined up. This soils specialist then takes charge of the work in those counties. Arrangements for series of winter meetings are made by local committees or leaders. Two or three result demonstrations per year in any one county are started. Because of the larger areas involved, the entire planting on any one demonstration area is seldom accomplished in one year. This requires persistent follow-up and a county agent cannot handle a large number in one year.

A series of winter meetings is planned, one to five meetings in each county, in those counties where demonstration work has been done. If possible, these meetings are coordinated with soils and agricultural engineering work. They are used as set-up meetings for additional demonstration work.

All work on erosion tree planting is closely coordinated with the general "Save Iowa Soils" campaign. Soils and Crops, Agricultural Engineering and Forestry are working together on this project.

Some Results

The information at hand shows 75 demonstrations under way
in 29 counties. Forty pounds of seeds used by farmers in raising their own stock in 1930 and 88 pounds in 1931.

Experience shows that under average conditions, one pound of seed results in 1,500 to 2,000 trees suitable for planting. This would mean that trees very likely produced were 60,000 to 80,000 in 1930 and 132,000 to 176,000 in 1931.

In addition there were furnished for this work from the Forestry Experiment Station nursery approximately 53,600 trees.

There were 16 meetings and conferences held to assist leaders; 2 leaders' training schools; 11 tours and other general meetings and 68 farms visited to give advice on erosion planting.

WASHINGTON A LOVER OF TREES

As a lumberman, a woodsman, and a surveyor, Washington knew the value of trees. He would be surprised could he now see what tremendous depletion of our forest resources has taken place in 200 years. As a statesman, with the future of his country ever in mind, he would be a most earnest advocate of the restoration of our forests wherever economically possible. He would realize that the nation must become forest minded.

Washington must have loved trees, for his diary contains repeated references to their value and care; and he chose a spot for his home where their beauty is unexcelled. Along the shaded path that leads to his final resting place, two columns of trim, straight larches stand like sentinels, his constant companions, along with those thousands of Americans who come to pay him reverence during the daylight hours. He must have loved the regal beauty of a tree. In the symbolism of a tree can Washington be remembered preeminently. Deep-rooted in the ground, a tree is like a man, coming up out of the earth, but lifting its branches to heaven. And as it grows in usefulness, so it grows in beauty. It may outlast the ages, it offers its shade to all alike, and its disinterested ministries succor a thirsty countryside and provide for its physical and aesthetic necessities. So a tree be-speaks the spirit of Washington. He was democratic in his services, regal in his leadership, commanding in his principles, while he extended a brotherly hand to a new and independent people struggling for fuller freedom.

—Charles Lathrop Pack.