

## EXTENT, VALUE AND USE OF WISCONSIN WOODLOTS.

By C. L. HARRINGTON.

The real importance, extent or possibilities of the farm woodlots in Wisconsin are but little appreciated by the average citizen of the State. This perhaps is the chief reason why the average farm woodlot is mismanaged. A woodlot properly located and cared for is an essential part of the well-managed farm. It is highly important that this part of the farm should receive its proper share of attention in order that the benefits arising from its presence may be realized to their fullest extent. These benefits are of material importance to every citizen and to the general prosperity of the State. In brief they are as follows:

### WOODLOTS.

1. Produce a valuable crop—fuel wood, poles, posts and timber material.
2. Beautify the landscape and hence make for more comfortable and desirable living conditions.
3. Form wind breaks.
4. Furnish shade for cattle and horses without being damaged, if properly managed.
5. Harbor bird and animal life.
6. Tend to regulate the rate at which surface water is carried off and in this respect they are of great importance on steep slopes.

Any one of these six points is sufficient to warrant the maintenance of a woodlot and in the aggregate they furnish a preponderance of evidence in its favor.

The extent of the farm woodlots in Wisconsin may be realized from the following statistics as given by the U. S. census of 1910:

Total land area in Wisconsin.....	35,363,840 acres
Improved land.....	11,907,606 acres
Unimproved land.....	9,152,460 acres
Woodland in farms.....	5,317,652 acres

From these figures it can be seen that the woodlots cover an area of almost five and one-third million acres, or about 15 per cent of the total land area of the State. Wooded lands on farms, of course, are distinct from lands that are primarily forested. Thus in Dane county, embracing

769,280 acres, and one of the most highly developed agricultural regions of the State, we find 95,976 acres in woodlots, whereas, in Iron county containing 506,880 acres, most of which is still in the wild state, we find only 4,662 acres in farm woodlots. Their extent depends entirely upon the agricultural development of a region. Using this classification the State may be divided into three main divisions as follows:

1. The southern counties such as Rock, Green, Walworth, Dane or Dodge, in which agriculture is of major importance, and where the wild lands are very limited. In counties of this type, the woodlots are small on the average, but they have a definite place in the management of each farm. An interest is usually taken in their development, and a plan for intensive encouragement is feasible and practical.

2. Counties in the central portion of the state, such as Clark, Waupaca, Chippewa or Langlade, where agricultural development is far advanced, but in which the cut over or forested lands are still of great extent. In these counties the woodlots are just beginning to receive some consideration from farm owners, but very little is done in the way of definite improvements. The woodlot is not as yet recognized as an essential part of the general farm, because of the vast amount of wood material which is still found in all parts of these counties.

3. Counties in the northern part of the state such as Iron, Forest, Vilas, Sawyer or Marinette, which contain a vast acreage of cut over or timbered lands, and in which agricultural development is still in its infancy. In these counties the woodlot is of minor importance at present, although plans for its proper development can be reasonably considered at the present time.

The value of the wood material on the five and one-third million acres of woodlots in Wisconsin would exceed fifty million dollars at the very conservative estimate of ten dollars per acre. Each year hundreds of thousands of cords of firewood and millions of feet of saw logs are hauled from these woodlots, besides great quantities of poles, posts and ties. The value of these products is difficult to approximate, but it is of great importance to the rural communities. But this does not limit the value of the farm woodlot. The birds and small animals are man's best aids in controlling the insect world, and consequently their depredations, on crops, cattle and even mankind, and these are always harbored and encouraged in woodlands. In mitigating the severities of the winds, small stands of timber are of the utmost importance. The woodlot affords those beauties to the landscape of a farming community, the lack of which makes prairie regions so desolate. As a means of preventing severe gullying on steep hillsides or on very light soils, tree growth cannot be excelled. Practically every farm in the state has some land on which a woodlot could be profitably located. In the southwestern portion of the state, where the lands are rough and hilly, the woodlots are best located on the steep slopes, the narrow ridges, or the rock strewn hillsides.

In the central and eastern counties the woodlots should be so located as to give protection from the prevailing winds, or on a lean, stony or eroded portion of the farm. In all parts of the state there are lands unsuited for cultivation, and on such sites quick growing tree species should be planted. It requires very little effort after a woodlot is once started,

according to the proper methods, to keep it in good condition. It is always better to have a valuable crop growing slowly on a poor piece of land than to have the site remain completely idle.

The oak woodlots of the southern and particularly the southwestern counties are the best to be found in the State. In many instances the woodlot is located on a piece of land which could be used to better advantage if tilled, or, on the other hand, lean, rocky, or very rough sites are cultivated or pastured, which, if used for tree growth would yield better returns, while the more suitable lands could be cultivated.

The growing stock in the central and northern counties has been so depleted in many instances, that but little reproduction can be expected, and generally the new stand of trees in such circumstances is composed chiefly of inferior species. The condition of the average woodlot is sure



EFFECTS OF GRAZING IN THE WOODLOT  
REPRODUCTION ENTIRELY LACKING

to be bad, if the owner cuts his timber with no thought to the future, and is generally indifferent to the advantages gained by the best methods of woodlot development.

Consider the possibilities that lie in the way of better woodlot management. The well managed stand of forest trees should produce from three-fourths to one cord of wood material per acre per year. This crop is grown on lands that are unsuited or inferior for tillage or pasture purposes. It is a clear gain from lands that would otherwise remain idle. If we assume that under the present conditions of management, the average woodlot is producing  $\frac{1}{8}$  of a cord of wood material per acre per year, the  $5\frac{1}{2}$  million acres yield over 650,000 cords. Figured for fuel purposes, perhaps the lowest economic use to which this material could be put, its value would exceed a half millions dollars. With proper methods of management, this yield could be doubled and even tripled in a few years, and eventually the yield would equal nearly one cord of wood material per acre per year. To Wisconsin, a State possessing no coal and with fuel costs constantly

increasing, this product is of especial importance and, if coupled with the other advantages which spring from this source, it undoubtedly warrants better methods of management in the average farm woodlot.

Just what constitutes better silvical systems as applied to woodlot management cannot be discussed here, because of the great diversity of conditions that are met with in the state. Every woodlot has its own problems. The pine stands of the sandy regions of the state require different treatment than the oak woodlots of the southern counties.

With a view towards determining the best systems of management that can be applied in Wisconsin, the woodlots of the following counties, and all factors that might influence their development, have been studied.

Adams	Fond du Lac	Ozaukee	Trempealeau
Ashland	Green	Polk	Vernon
Barron	Jefferson	Portage	Walworth
Bayfield	La Crosse	Richland	Washburn
Calumet	Langlade	Rock	Washington
Crawford	Lincoln	Rusk	Waukesha
Columbia	Manitowoc	Sauk	Waupaca
Dane	Marathon	Shawano	Winnebago
Dodge	Marinette	Sheboygan	
Douglas	Oconto	Taylor	

It is planned to issue reports from the data compiled during these studies for those regions of the State in which woodlot conditions are of a similar character.

To further encourage woodlot development, the following plan has been adopted by the Conservation Commission.

On request to the commission by the owner of a tract of land, who also agrees to bear the expenses of travel and maintenance of the examiner, a thorough examination of the property is made by an expert forester. The results of this examination are set forth in a practical working plan report. This plan embraces a practical system for the cutting and marketing of small tracts of timber such as farm woodlots, or in case of bare areas or one in need of planting, the report includes a practical planting plan, or where a combination of conditions exists, a combination of both cutting and planting plan is considered. The ideas and desires of the owner of the property examined are always taken into consideration in the preparation of the report. In order to reduce the cost of such examinations to the individual, the requests to the Commission from one part of the State are gathered together, and at a definite time an examiner is sent to complete all examinations in that region. In this way the work is made more systematic for the Commission, and less expensive to the property owner.

In conjunction with this plan of land examination the commission is growing forest trees on a large scale, which will be sold to land owners in the state at the approximate cost of raising them. It is hoped that through the circulation of the instructive pamphlets on woodlot conditions and management, coupled with lectures and personal contact with the owners of woodlots, that a greater interest will be aroused in their favor and that the yield of the woodlots of the state will be materially increased.