and trueness are concerned, and it establishes itself in its new position with aggressiveness. Vegetatively planted areas for supplying repair sod are so easily established and maintained that a club located in the northern turf-grass belt can not afford to be without them. If a good strain of carpet-bent is selected and a little intelligent care used, a supply plot may be maintained indefinitely, since the grass will soon returf the places from which sod was removed. Some clubs already have established vegetative repair plots and have found them exceedingly useful; a considerable number have signified their intention of doing so. For the benefit of those who may not be familiar with the vegetative method of progagating bentgrass turf, attention is called to the July 20, 1921, issue of The Buldetin. The time is drawing near when the maintenance of plots of good turf for repairing putting-greens will be just as much a regular feature of golf courses as is the making of compost piles.


Harvesting bent seed in Germany. Note that the grass is growing in open woodland and that the crop is gathered by very simple methods

## Rate of Seeding Fine Grasses

C. V. Piper and R. A. oakley

The rate of seeding any broadcasted crop may be determined in two different ways. The first method and the one commonly used by agronomists is to sow like plots to different amounts of seed. For example, a series of ten one-tenth acre plots may be sown respectively with $2,4,6$, $8,10,12,14,16,18$, and 20 pounds of seed. By observations on these plots and by comparing the yields, the best rate of seeding is determined. This method is frankly empirical and the conclusion is reached regardless of any theory. Indeed the best rate of seeding is found to be different in different places and on unlike soils.

The second method of determining the rate of seeding is purely theoretical. If it be found that a perfect stand of alfalfa averages 15 plants to the square foot, an acre will contain $6,384,000$ plants. As one pound of

