

# Rhode Island Bent Seed Situation

LYMAN CARRIER

When the blockade of Germany in the fall of 1914 put an end to shipments of mixed bent seed to this country I was assigned the task of trying to help revive the Rhode Island bent seed industry in New England. Each summer since then until the present I have spent from two or three weeks to as many months on this problem. It may be of interest to the readers of this BULLETIN to learn what has been attempted and the difficulties in the way of securing an adequate supply of home-grown bent seed.

There is a considerable amount of Rhode Island bent grass growing in New England. If it were all harvested it would probably supply the present demand for this seed. A New York seed firm sent an order early in the war to a New Zealand jobber for a shipment of Colonial redtop seed, which is the same grass as Rhode Island bent. The New Zealand jobber wrote back, "There must be some mistake in placing this order, for our botanist informs us that this grass is found in abundance all along the North Atlantic Coast of your country." He received a cable message to fill the order immediately.

The questions naturally arise, If this grass is in New England in sufficient quantity why is the seed not harvested and on the market? Why are we dependent on foreign countries for our seed? The chief reason why the seed is not harvested in New England is the human element involved. Visitors to southern Germany report that the mixed bent seed which comes from there is gathered mainly in small quantities by women and children. These small amounts were sold to local dealers for a pittance and are gradually collected into the seed exporting centers where they aggregate thousands of pounds. If we turn to New England it is readily apparent that the conditions there are entirely different from those in Germany. There are few women and less children in New England in the rural districts where Rhode Island bent grows. Any one with sense enough to strip grass seed has had steady employment during the past few years in the cities at good wages.

The past history of the Rhode Island bent seed harvesting in New England throws much light on the lack of initiative and interest in the subject on the part of the New England farmers. Something like thirty or more years ago considerable Rhode Island bent seed was saved. A few farms were equipped with threshing outfits. This business was killed partly by the German competition but more by the unscrupulous practice of selling redtop seed as Rhode Island bent seed.

Prof. Hillman has quite effectively stopped this latter fraud, and since 1915 there has been little seed sent over from Germany. How soon the Germans will be able to supply the demand in this country is problematical. It is apparent that much of the sod over there which produced bent seed was plowed up during the war, and, unless they are more enterprising than our farmers in seeding it, several years will pass before the land will be back again in bent grass.

Our efforts have been directed toward working out methods of harvesting, taking into consideration the status of farming in New England. Stripping machines like those used in harvesting bluegrass were first tried but not successfully. The stems of bent are not tough enough to withstand

stripping, and so much straw is gathered that it requires threshing to separate the seed. The only practicable means of gathering the seed appears to be to cut the grass when the seed is ripe, which is about the first of August, cure and stack it as for hay, and then thresh it with an ordinary grain threshing machine.

After a great deal of energy was wasted trying to induce the New England farmers to gather bent seed, a lumberman who owned several abandoned farms was finally persuaded to undertake harvesting this seed in 1920. He was well supplied with teams, mowers, and other hay-making machinery, but the threshing outfit was more difficult to provide. Grain growing in New England passed out of existence simultaneously with the opening up of the Great Plains region, and all threshing machinery up there is in the last stages of decay. We finally found a machine which looked as if it might be made to operate and we proceeded to arrange for harvesting bent seed. Then we found our troubles had only nicely begun. It was necessary to use screens in the threshing machine with one-eighth inch mesh in order to save all the seed, and this gave us an enormous amount of trash and chaff which had to be screened out. It would not have been a difficult undertaking if a power cleaning machine had been available, but no such machine could be found in New England and it was impossible to get one shipped from the factory on account of the freight embargo and express company regulations of 1920. The seed was put through a hand cleaning mill with screens as fine as 28 meshes to the inch. Screening several tons of chaff and seed through a hand mill is a slow, laborious job. Moreover, it takes more brain-power than is possessed by the average New England farm laborer to clean the seed without wasting a large part of it in the screenings.

"Ill fares the land to hastening ills a prey,  
Where wealth accumulates and men decay."

This grass grows in small lots over quite a stretch of territory around Narragansett Bay. Much of it is cut for hay, and we found the most practicable arrangement was to select the fields in July from which the seed was to be gathered. At that time of the year it is not difficult to distinguish Rhode Island bent from redtop, another grass common in New England. In most cases the owner would agree to defer cutting the grass until after the seed was ripe and grant us the privilege of threshing it on payment of about the rental value of the land, the farmer figuring that the straw would pay him for the labor of cutting and stacking the grass.

#### *Yields*

This grass makes a light growth in New England. It should be noted that it is a volunteer crop, mainly on old meadow or pasture fields. No Rhode Island bent of consequence has been seeded as a farm crop in many years. One-fourth to one-half ton of hay to the acre is all the crop will average. From this should be threshed ten to fifteen pounds of seed—that is, the seed after it has been cleaned to 40 or 50 per cent purity. Small experimental areas where the grass was cut with a scythe and the grass carefully gathered and cured on a tight floor have given larger yields of seed than those stated above, which leads one to think that with improved machinery it might be possible to get more seed out of the crop than we did last year. Still, the Whitney farm, on Prudence Island, which has something like 700 acres of Rhode Island bent and which was one of the last

to be given up for harvesting the seed, never produced more than 3,500 pounds in a season.

#### *What is Needed*

Any one who wishes to go into the Rhode Island bent seed gathering business has a wide, open field free from competition. But before attempting to harvest the seed, a first-class modern threshing outfit and a power cleaner should be provided. An experienced thresherman, preferably from the redtop area of southern Illinois, should be put in charge of the outfit. The rest of the labor needed can be supplied in New England, such as it is. It will not be necessary to buy an engine to run the threshing machine, as a Ford with one of the numerous "Helping Henry" devices for converting the "Lizzie" into a stationary engine, makes an ideal source of power, as it is highly essential to be able to regulate the speed of the cylinder of the threshing machine according to the condition of the grass.

Whether any one goes on with this work depends a great deal on the price which can be obtained for the seed. If there was any certainty of receiving \$1.00 or better a pound for the seed in New England, a great deal, I feel sure, would be harvested. Otherwise, I doubt if any further effort will be made in harvesting it. While this price may appear exorbitant compared with 45 cents a pound before 1914, yet much of that 45-cent seed was Illinois grown redtop which could have been bought as redtop for less than 20 cents a pound. The rest was harvested in southern Germany under conditions which do not prevail in this country. We really haven't had any Rhode Island bent on the market before for many years; so no comparison can be made.

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## One Thing Leads to Another

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The treatments to eradicate earthworms developed by golfers appear to offer a practical application connected with poultry raising. Recent investigations have demonstrated that earthworms are hosts to the eggs of the worms which cause gapes in chickens. The gapeworm is a parasite about one-half inch in length and hatches from eggs in the digestive tract of a small chick, afterwards reaching the windpipe, where it attaches itself to the inner lining. As it grows, especially if there are several gapeworms present, the chick has difficulty in breathing. The characteristic gaping is an effort to get air into the lungs. The rest of the life-cycle of the gapeworm is as follows. The worm grows from blood sucked from the chicken and becomes filled with eggs, the body bursting when mature. These eggs, if the chick has not died from suffocation in the meantime, are coughed out on the ground. The evidence does not indicate that chicks are directly infected with these eggs. But earthworms, in masticating the soil, pick them up; and when the earthworms are a little late in returning to their burrows after a night's carousel, or when they come to the surface for a breath of fresh air during rainy weather, they may be devoured by the chicks.

The only preventive remedy for gapeworms hitherto has been to keep the chicks off gape-infested land. It is generally considered that it takes three years to free a chicken run from gape infestation. By using some of the earthworm poisons it ought to be possible to clear the soil from this pest in a much shorter period of time.