

TURF RESEARCH IN CANADA

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Over ninety per cent of all turf research currently being carried on in Canada is being conducted by the Division of Forage Plants at the Central Experimental Farm in Ottawa. Turf research was started by this Division in 1924 with the setting up of a project entitled "turf grass experiments" the objects of which were to determine the relative value of species and strains of grasses and mixtures of these for the production of turf on putting and bowling greens, lawns, fairways, parks, cemeteries, play grounds, athletic fields, airports, roadsides and other turfed areas; to determine the best cultural practices such as soil preparation, rate, date and methods of planting, fertilizing liming, top-dressing, rolling, watering and other operations necessary for the production of satisfactory turf for the above mentioned purposes; and to determine the best methods of controlling weeds, diseases, insects and other pests and disorders in turf.

All research work at Ottawa is set up on a project basis. Main projects and sub-projects directly bearing on turf research are as follows:

I. Under Project Title, "Plant Introduction and Testing New Species".

- a) Preliminary testing of new introductions of turf species.
- b) The collection and preliminary testing of vegetatively propagated turf species.

II. Under Turf Grass Experiments.

- a) Active sub-projects.
 - 1) Turf nursery.
 - 2) Comparative tests of species and strains of bent grasses for the production of turf on putting and bowling greens and high quality lawns.
 - 3) Comparative tests of species and strains of grasses for the production of turf on lawns, fairways, parks, cemeteries, play grounds, athletic fields, airports, roadsides and similar turfed areas.
 - 4) Studies on the control of turf weeds.
 - 5) Studies on the control of snow-mould.
- b) Contemplated sub-projects up on which some preliminary work has been done.
 - 1) Studies on the influence of different nitrogenous fertilizers on the growth and quality of turf.
 - 2) Studies on the effect of bituminous materials on soil stabilization and on the establishment of turf.
 - 3) Studies on the influence of fungicides on the germination and establishment of turf grasses.
 - 4) Studies on the influence of aeration and related maintenance operations on the quality and usefulness of turf.

III. Under Grass Breeding Projects.

The primary purpose of the grass breeding projects conducted by the Division of Forage Plants is the development of superior strains for agricultural purposes. Nevertheless the breeding material of turf forming species is screened for lines which might be useful in the production of turf. As a result of this work with creeping red fescue a progeny test of what appeared to be superior lines was laid out last year.

IV. Future Developments.

Future plans include the continuance of active projects now being carried and the further development of the sub-projects mentioned in II: b): 1 to 4, in so far as limitations of land, labour and finances will permit. Because of the high maintenance costs associated with turf research work it is planned that as much research as possible will be conducted on local golf clubs and other turfed areas. It is also hoped that it will be possible to promote turf research work in other regions of Canada. Recent attempts along this line have resulted in increased interest at a number of Stations in the Experimental Farms Service. Turf research projects are now being set up at some of these Stations.

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BUILDING A COMPOST PILE

Although compost is not used as much for a top-dressing for greens, as it was in former years, a compost pile is still a valuable thing to have on the golf course. With the great amount of raw material available on the course, it is relatively a simple matter to construct one. At one course in the Chicago area last year there was produced over 50 yards of well decomposed humus.

A compost pile must be started on the bare ground. Bacteria from the soil are absolutely necessary for decomposition of the raw material. It is best started with a two-inch layer of rich compost, well-fertilized topsoil or manure.

On top of this comes grass clippings, fallen leaves, discarded plants, weeds or any other green material. When the layer is five or six inches deep when tramped and watered down, sprinkle it with a commercial fertilizer—a quarter pound per square yard is sufficient—and about three ounces of agricultural lime, followed by a thoro watering if the material is dry. Then cover the whole with a thin layer of top soil, not more than a half inch in depth—this is very important.

Keep building in this sequence until the pile stands four or five feet high. It's sides should slope to the center slightly, and there should be always a rain-catching hollow at the top.

After a few weeks, when the inside of the pile should be about half decomposed, the pile should be turned so that the outside goes inside and has a chance to be processed.

When the pile has been broken up by weather and bacteria action so that it is almost black and none of the original form of the materials are left, it is humus and ready for use.

It is great stuff for the flower garden and shrub-beds.



Superintendents in this part of the country find that it is necessary to spray the rough areas on their courses once every year for weed control. Many of the men skipped a year and found that in order to keep the rough clean it had to be done every year. Fairways and other areas which receive more attention require much less actual spraying. Fairways which have been sprayed with sodium arsenite or arsenic acid more or less regularly, show an almost total absence of chick-weed. In fact it is almost impossible to find any on courses so treated.