YUKON HORTICULTURAL GUIDE

PREPARED BY THE

WHITEHORSE EXPERIMENTAL FARM

MILE 1019 ALASKA HIGHWAY, Y.T.

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The Use of Muck Soil in Whitehorse Gardens.

In the Whitehorse area where the natural top soil is very shallow and coarse it is necessary for gardeners to bring in a soil additive or conditioner to improve the local soil character. A recent trend has been to use muck soil for this purpose.

Muck soil is characteristically brown to black in color, is usually somewhat fibrous and is quite high in organic matter content. The dark color of muck soils increases in intensity as the decaying of the organic matter progresses. Muck soil has a high water-holding capacity and usually is low in mineral content of the phosphorus and potash elements.

It has been known for many years that muck soil can be used efficiently in the growing of vegetable crops. However its unique characteristic is that good management is essential to obtaining maximum returns from this soil.

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Fertilizer Requirements:

The muck soil generally used in the Whitehorse area contains a high percentage of partially decomposed organic or vegetative matter consequently some artificial means of nitrogen application is necessary not only to foster the decomposing of the organic matter but as well to support the crops grown on this soil type. Additional phosphorus and potash are also necessary for muck soil since this soil lacks these elements.

For a vegetable or flower garden an application of 15 pounds of the complete fertilizers 10:20:10 or 10:32:10 per 1000 square feet of area, spread broadcast just prior to seeding is suggested.

Garden Seedbed Preparation:

A layer of two inches of original Whitehorse

top soil should be thoroughly mixed with a 4 to 6 inch layer of muck soil. All soil lumps should be broken up, and the area carefully raked before seeding. After seeding a moderate packing or rolling is necessary to compact the soil and retard drying.

Maintenance:

The seedbed requires a good water soaking soon after seeding to ensure rapid germination and good plant growth. Subsequent watering should be frequent enough to ensure an uniform moisture supply for the plants.

The Establishment of a Lawn in the Whitehorse Area.

Seed bed preparation:

Generally the soil in the Whitehorse area is composed of a shallow layer of sandy clay over a coarser gravelly subsoil. This soil usually contains little or no organic matter. For this reason four to six inches of good top soil, with adequate organic matter, such as muck or peat must be mixed with the top two to three inches of the soil in the proposed lawn area.

Next, the area should be raked smooth and lumps of soil and stones removed. Then the soil should be rolled to level the area and to slightly compact the top.

Fertilizer:

Ammonium Phosphate - (commercial formula 16-20-0) should then be broadcast on the lawn area at the rate of 15 to 25 pounds per 1000 square feet. After the fertilizer is applied, the soil should be

lightly raked to ensure the mixing of the soil and fertilizer.

Seeding Grass Mixture:

It is very important to choose a mixture of grass species which are winter hardy in the Whitehorse area.

At the Experimental Farm, Mile 1019, it has been found that a mixture of 50 per cent Kentucky Blue Grass and 50 per cent Creeping Red Fescue by weight is quite acceptable. Grass seeding should be done on a calm day to ensure a uniform seed application. A further aid to uniform seed application is to divide the lawn area into small sections and seed half the recommended amount or rate in one direction and the remaining half while working in a direction at right angles to the first direction. The recommended rate of seeding is four to six pounds per 1000 square feet of area. A cyclone seeder - a small seed and fertilizer spreader carried by the operator - is a very useful and inexpensive aid in lawn establishment. Next the

soil should be raked lightly to cover the seeds, and rolled again to firm the soil around the seeds. Watering should follow rolling immediately. The gentle application of enough water to soak the soil to a depth of one to two inches will foster rapid and uniform seed germination.

Seeding can be done from early spring to late July or in the late fall just after freeze up when there is no possibility of seed germination until early the following spring.

Seeding during August and September is not recommended since grasses sown at this time often do not make sufficient plant growth and are not established enough to withstand severe winter killing.

Watering:

Water should be applied frequently - at least twice weekly in warm weather - to insure good plant growth.

Maintenance of the Lawn:

When the new grass stand reaches a height of three inches or more, it should be cut to a height of 1½ to 2 inches. The grass clippings from all cuttings will act as a mulch and provide organic matter for the soil when decomposed, therefore they should not be removed. However, it is sometimes desirable to remove part of the clippings if the grass is quite high before mowing, thus leaving a ragged and untidy looking lawn.

After the first cutting, the bare or thin areas should be reseeded.

The lawn may be mowed until mid or late August. Mowing later in the season often prohibits the strengthening of the roots and thereby decreases the plants' winter hardiness.

Disease Prevention:

Snow mould is a prevalent fungus infection of lawns in the Whitehorse area. The chief sympton of this disease is a dense cottony growth of mycelium which covers patches of turf. The infected grasses

die out leaving brown barren areas in the lawn. The fall application of mercuric chloride at the rate of two to four ounces per 1000 square feet before the first snow, will usually give a satisfactory control of this condition.

Maintenance after First Season:

The application each year of the commercial fertilizer, ammonium nitrate (33-0-0) at the rate of 10 pounds per 1000 square feet of lawn area, in the early spring will stimulate early plant growth and will maintain a good lawn throughout the season.

Water should be applied when necessary. The mercuric chloride treatment for snow mould should be applied late each fall. Chemical weed killers can be used to control weeds.