

AGRI-FACTS

Practical Information for Alberta's Agriculture Industry

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Purchasing Topsoil

New homeowners and gardeners often require additional topsoil for landscaping their yard or improving gardens and flower beds. Several precautions should be taken when purchasing topsoil to ensure that you are obtaining a product that has desirable physical and chemical properties.

Often the only way to ensure the suitability of topsoil is to make an on-site inspection of the field where the topsoil is being loaded.

When inspecting soil in the field you should consider each of the following soil characteristics:

Texture

This refers to the percentage of sand, silt and clay in a soil. A medium-textured soil (loam), containing approximately equal parts of sand, silt and clay, is the most desirable for landscaping and gardening purposes. Of lesser quality would be the heavy-textured soils which contain too much clay making the soil hard and difficult to work into a fine seedbed. Also of lower quality are the light-textured soils which contain too much sand making the soil loose and low in moisture holding capacity (droughty).

A rough estimate of soil texture can be made by wetting a small handful of soil with water and rubbing it between the thumb and forefinger. The different particle size fractions can be identified by feel as follows:

- gritty – this is the individual sand particles which do not break down on wetting
- soapy or silky – this indicates the presence of intermediate-size silt particles
- sticky – this is the fine clay particles which adhere to one another

A loam would be identified by hand texturing as having each of the above features, whereas a heavy clay soil would be very sticky with no grittiness.

Structure

“Friable” and “mellow” are words describing desirable soil structure or physical condition. Soil clods (lumps) should break down easily into granular or crumb-like aggregates when squeezed in the hand. Large, compacted lumps of soil could indicate that the soil was stripped too deep and heavy subsoil material was mixed with the topsoil.

Organic matter

Soil color is an indication of the kind and amount of organic matter in soil. Black soils have high organic matter content, whereas a light grey color indicates low organic matter content. Organic materials such as peat, manure or compost can be added to the existing topsoil to increase its porosity and generally improve the physical condition of the soil. Use of these organic amendments may replace the need for trucking-in additional topsoil.

Salts

Excess amounts of salts in soil are not wanted. White crystals on the surface of dried soil particles could indicate the presence of free salts in soil which can be harmful to plants when present in high concentrations. Excess amounts of salts in a recently delivered load of topsoil will not be visible to you until the soil has had time to dry and then it will be too late to reject the soil. For this reason it is a good idea to check for salt crusting in the field before you arrange the purchase of topsoil.

Weeds

Although not a soil characteristic as such, the presence of weed seeds and rhizomes in topsoil is an undesirable feature. When topsoil is stripped from land near urban centres it often comes from weedy fields that have been abandoned or poorly managed for a few years. The topsoil may become weed-contaminated when it is stripped.

Several precautions should be taken when purchasing topsoil

Although annual grasses and broadleaf weeds are not usually a concern, quackgrass will be a major problem if the topsoil is used for a new lawn.

If possible make an on-site inspection of the field before you purchase topsoil. If that is not possible, check the topsoil stock pile for quackgrass rhizomes (underground stems).

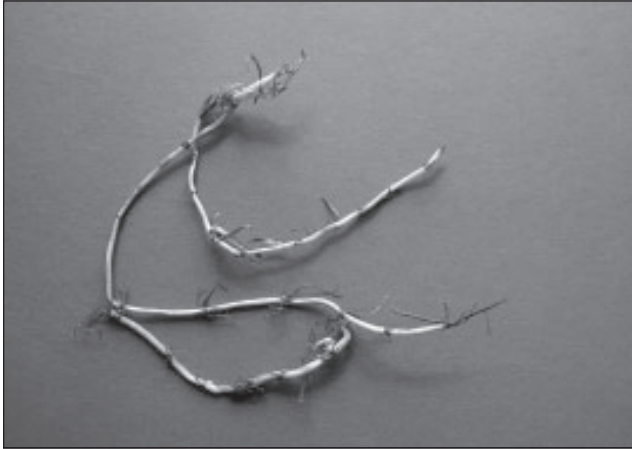


Figure 1. Quackgrass rhizomes

From the above description of soil characteristics it is apparent that the best topsoil for landscaping and gardening is a weed and salt-free black loam. Often, however, a trade-off has to be made between the more desirable and less desirable characteristics of available supplies of topsoil in order to obtain the soil that will best meet your individual needs. There are numerous reputable dealers in all areas supplying suitable topsoil and you would be well advised to deal with those firms that have proven customer satisfaction.