

Thatch management on sand-based fields is usually accomplished with a topdressing that is the same as the rootzone. To manage thatch on a sand field, the topdressing frequency and amount must match the turf growth so that there is no excess accumulation of thatch. On soil-based fields, thatch management is accomplished through core aeration. The greatest tool is core cultivation in conjunction with soil replacement – removing cores and replacing them with a proper sandy loam soil.

As you can see, sand and soil fields are very different beasts, requiring different management practices which are summarized in Table 2. Hopefully, the information here will help you better understand what is happening below the turf and help you better manage the fields you have whether they are sand, soil or a combination of both. ♦

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Table 2: Comparison of Management Practices

Soil-based Fields

Mgmt. Practice: Compaction Control

- traffic control (practice field vs. regular field)
- keep traffic off when wet
- soil cultivation by hollow tine aeration, solid tine, slicing, spiking, drilling and high pressure water
- hollow tine cultivation followed by soil replacement
- frequency 2x per year
- more frequent on high traffic areas
- shallow cultivation and deep cultivation needed

Mgmt. Practice: Thatch Control

- less prone to thatch because of high microbial population
- can hollow tine cultivation and topdressing frequency 2x per year

Mgmt. Practice: Irrigation Control

- good water holding capacity
- poor water infiltration rates - may have to cycle irrigation to get a sufficient amount
- not prone to localized dry spots
- requires less frequent irrigation but can have very shallow roots
- should monitor soil moisture visually (soil probe)

Mgmt. Practice: Fertility Management

- high cation exchange capacity
- requires less nitrogen (2.0 kg/100 m²)
- less frequent applications necessary (3-4 times per year)
- phosphorus and potash not easily leached
- water soluble fertilizer and quick release fertilizers can be used
- nitrogen less prone to leaching
- micro-nutrients rarely needed
- high nitrogen on compacted soils could lead to very poor rooting
- fertilizers that require microbial break down are generally recommended

Sand-based Fields

- infrequent core aeration needed
- can be played on when wet without risk of compaction
- if the sand rootzone meets the USGA specs, it may not be needed at all
- may be required in the top 0-2 cm but rarely deeper

- more prone to thatch build-up because of low soil microbial population
- light topdressing only for thatch control recommended every 2-3 weeks

- poor water holding capacity
- good water infiltration rates - irrigation cycling not necessary
- prone to localized dry spots
- requires more frequent irrigation but can have very deep roots
- should monitor soil moisture visually (soil probe)

- low cation exchange capacity
- requires more nitrogen (4.0 kg/100 m²), especially at establishment
- more frequent applications necessary (6-8 times per year)
- phosphorous and potash easily leached
- water soluble fertilizer and quick release fertilizers not recommended
- nitrogen prone to leaching
- micro-nutrients often needed
- fertilizers that require microbial break down not generally recommended

Weather Facts
Climate vs. Weather

CANADIANS HAVE an obsession with the weather. Today every country has a government department which forecasts weather and warns the populace of approaching storms, floods or drought. Whenever man has accomplished accurate weather forecasting, it has been achieved only because he has understood all the elements of weather.

A clear differentiation should be made between weather and climate. Weather refers to successive changes in atmospheric conditions such as wind, rain or frost in a given locality. Rainy weather is rainy only as long as it keeps raining. Climate is the average weather conditions of a region over a month, season, or year. The average is found by keeping daily records for many years. It has been proven that where records have been kept for about 50 years, the average for any season or month will accurately represent the kind of weather to be expected there during a corresponding season or month. The unit of measurement of climate, however, is what happens daily with the weather.

The elements responsible for our weather are: 1) the sun and its rays, or solar radiation; 2) the air covering the earth, or the atmosphere; 3) water vapour in the air, or humidity; 4) dust in the air; and 5) the shape, surface, and rotation of the earth.

Other less significant factors or influences are the heat given out from the centre of the earth, the moon's gravitation, and on a local level, forest fires and factory smoke or emissions. ♦

— Summarized by M. Bladon
Reference: Gaer, Joseph. *Fair and Warmer*. Harcourt, Brace and Company, New York.