TEN WAYS TO CONSTRUCT TURF AREAS

Where compaction is a problem, where heavy use under all kinds of weather is considered, texture rather than granulation is the key to satisfactory moisture availability and movement. Based on limited research underway, plus much that is being reported from prior research and long-term experience, Ten Ways to Construct are summarized on the attached mimeograph.

The last ways — 8, 9 and 10 — are nowhere now in turf except in experimental plots. Variations of seven have been placed into athletic fields, golf greens, and occur naturally in areas where almost pure sand is used for construction. Two years research, a Master's thesis and greenhouse observations underway at Purdue University look most encouraging for systems 8, 9 and 10.

Look it over! What do you think? Come see! Turf Field Days will be July 29 and September 30. Next Midwest Turf Conference is March 3-5, 1969.

SUMMARY OF TEN WAYS TO CONSTRUCT HIGH USE TURF AREAS EXPOSED TO COMPACTION

SOIL PREDOMINATES — due to fines present

1. ANY SUBSOIL — mud in — shape to grade — and leave as soon as paid!
2. TOPSOIL ONTO TOPSOIL — avoid any subsoil — no wet work — carefully conserve what's good — can save funds — can do for sandier soil — low budget installation.
3. SUBSOIL UNDER TOPSOIL — plus deep tile DRAINAGE — pea gravel backfill — more desirable where major fill is required.
4. Above plus SAND (60%?) and PEAT (20%?) mixed into top 2 - 3 - 6 - 10 inches in hopes of better water movement.
5. VERTICAL POROUS STRIPS — to remove excess surface water promptly.
   — **narrow trenches** — above tile — into pea gravel, in low spots, between tiles, across tiles
   — **slits** — surface and downward — ½" wide by 10" deep
   — **grooves** — 8" apart, 3" deep
   — all are filled with sand or calcined aggregates
   Use as CORRECTIVE where better drainage is needed.
6. INTIMATE TOP MIX — mixed off-site — U.S.G.A. spec.
   Follow laboratory spec. based on sample submitted. 10" - 14" settle top mix over 2" washed sand over 4" pea gravel over tile drainage.
   Gives low tension at gravel "dump action of excess water"

POROUS TEXTURES PREDOMINATE (no soil)

7. THIN ROOTZONE — mix on or off site
   Top 3 - 6" — maximum surface storage of (peat, calcined aggregates and sand)
   Over sand 3 - 4" for lateral INTERNAL drainage
   Above slitted plastic drain lines (frequent) in narrow trenches in any subgrade
8. IMPERMEABLE LAYER — plastic sheet — giving ZERO TENSION
   For drains use slitted plastic pipe laid on plastic sheet. Depth of sheet and drains based on texture — porosity characteristics of stable materials used (SAND, CALCINED AGGREGATES).
9. RESERVOIR POOLS — use double plastic sheet — laid FLAT, LEVEL with upturned edges to form shallow pools (0 - 3" deep) at base of porous rootzones. Drainage and depth determined as above.
10. Above, plus SUBSURFACE FLOAT irrigation, adjustable level, for wetness, constantly on. Use porous rootzones as wick to keep surface uniformly moist. Could add SOIL SENSING — adjust sensing for dryness.

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