Harry Lewis - Report on Research Advisory Committee

~~Organization~~ Production - creative indices.

Suggestion on a talk

Ernest Wildman - Prof Emeritus at Earlham.
(teaches organic)

"Soil ~~Chemistry~~ Research Program at Earlham"

$30,000 a year for soil research

Nature of soil science

15 years ago: "analyses of soils for chemical elements".
(really soil technology)

Parent Rock (granite & other igneous rocks, limestone, shale, sandstone) —weathering by:→ (a) mechanical disintegration (glaciation) (freezing, thawing, wetting, drying) (b) Chemical decomposition (hydrolysis to give swelling effect)

Soil Parent Material (finely divided) —influenced by:→ 1. climate (humidity, temp.) 2. organisms 3. slope 4. time

→ Soil (A & B horizons; C horizon (unaffected soil - glacial till)

20% of rain runs off into rivers 10% goes through soil & groundwater

When a soil is leached

A horizon - removal of soluble components; leaves behind a higher % of SiO_2; Fe_2O_3 + Al_2O_3 tend to move down to the B horizon

B - horizon where Fe + Al have migrated

C - horizon - unaffected soil of varying particle size

[Clay defined as a substance composed of particles of 2 microns or less]

(over)

Laboratory work: ① studying leaching process of soils - in glass columns. With passes over leaves, certain pure acids (oxalic, malic, citric, tannic) and then thru soil to see what happens to soil structure.

② Destroying soil structure, burying soil cores in natural soil, dug up and examined to see effect of animals & organisms on the core.

③ Study of nitrogen fixation

Wendell Stanley - Chemistry of Viruses (Biochemist)

Formerly of Rockefeller Institute
Now of U. of Cal. (Berkely)
Director of Virus Lab.
" " Biochem. Lab. (10 grad. students

Grad. students in science have no financial worries - B average insures this.

Self duplicating virus activity is produced by combining virus protein & virus nucleic acid (derived from some virus strain) of mol. wt. of about 100,000 each.

[500 parts protein - 1 part nucleic acid = tobacco virus 50,000,000 = m.w.]