

# Harry Lewis - Report on Research Advisory Committee

~~Synopsis~~

Production - creative indices.

Ernest Wildman

Ernest Wildman - Prof Emeritus at Earlham.

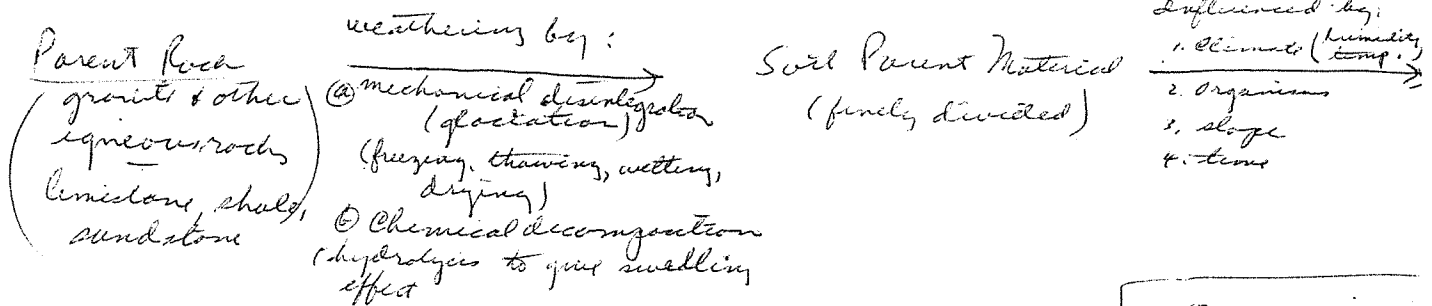
(teaches organic)

"Soil Chemistry Research Program at Earlham"

\$ 30,000 a year for soil research

## Nature of soil science

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



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

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 increased

C - horizon - unaffected soil of varying particle size

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

(over)

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

Laboratory work: Studying leaching process of soils - in glass columns. Water passes over leaves, certain free acids (oxalic, malic, citric, tartaric) 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. (Berkeley)

Director of Virus Lab.

" " Biochem. Lab. (70 grad. students)

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

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

[500 parts protein - 12 parts nucleic acid = tobacco virus]  
50,000,000 = m.w.