

雜草與肥料



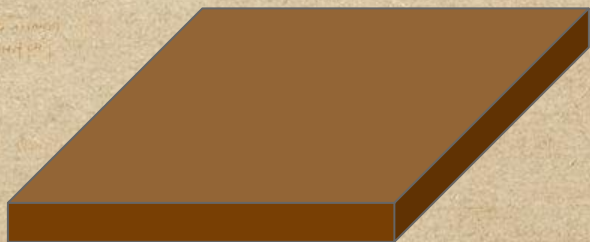
迷思

- ❌ 草會把肥吃掉
- ❌ 雜草是把土地的肥份還給大地
- ❌ 把雜草燒掉可以產生肥料
- ❌ 要雜草或綠肥翻入土中
- ❌ 要經常翻土割草, 才能維持田的品質
- ❌ 做堆肥要挖洞、蓋帆布



休耕=回復地力?

若傳統觀念為真, 那沒有營養補充, 休耕不可能回復地力



100



80



<100

20



表土最肥沃？

若傳統觀念為真，那應是沒被利用過的底土最肥沃

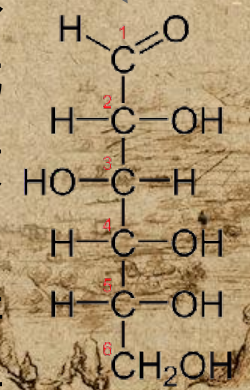


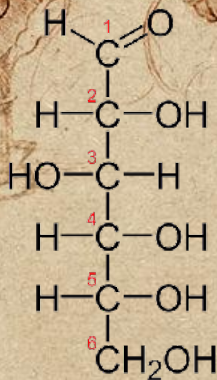
固氮



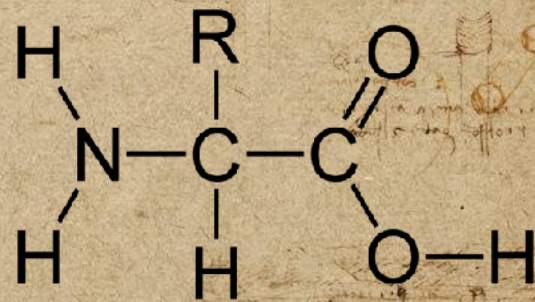
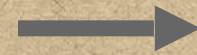
固碳

碳元素
： 糖類

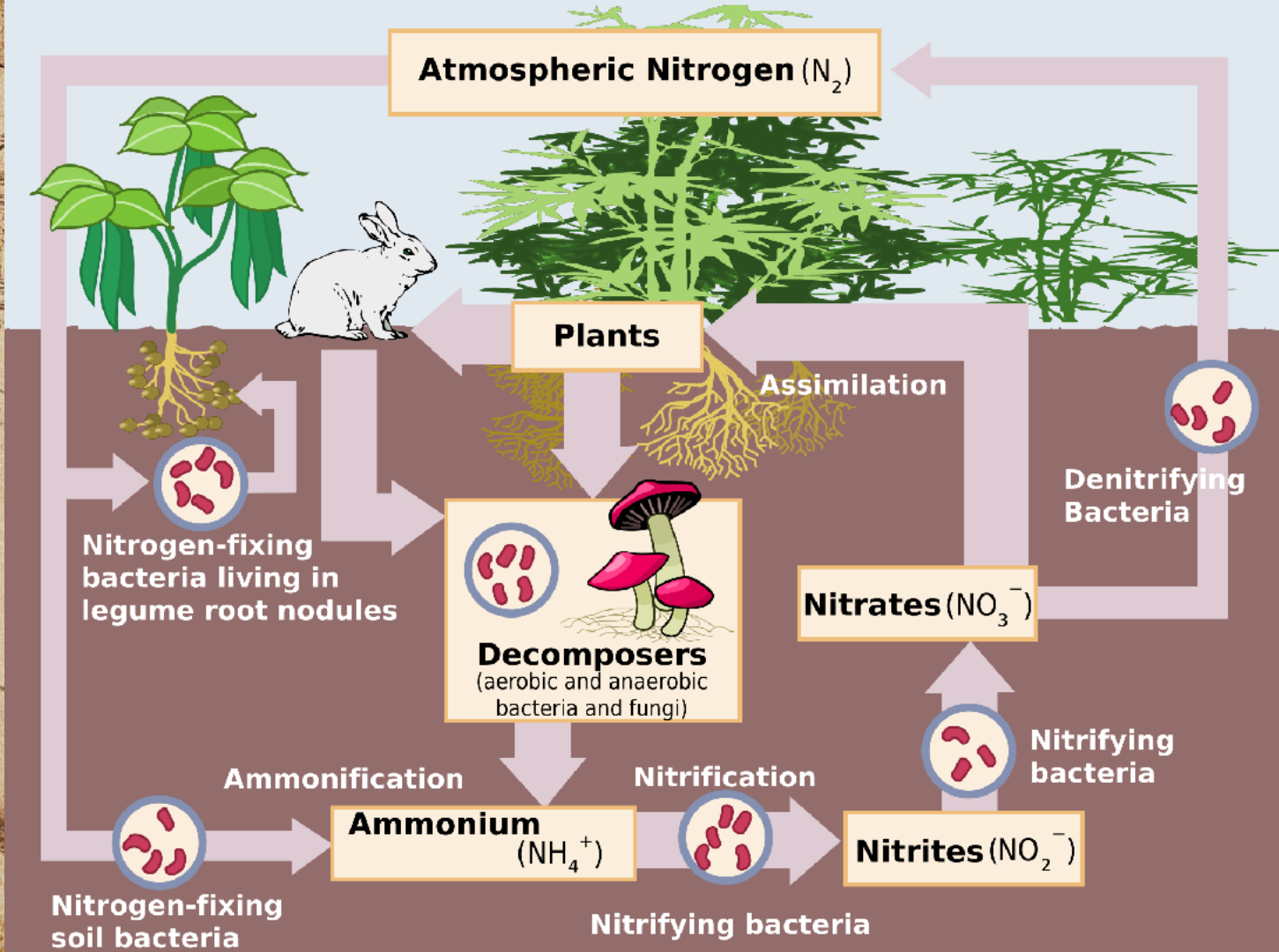


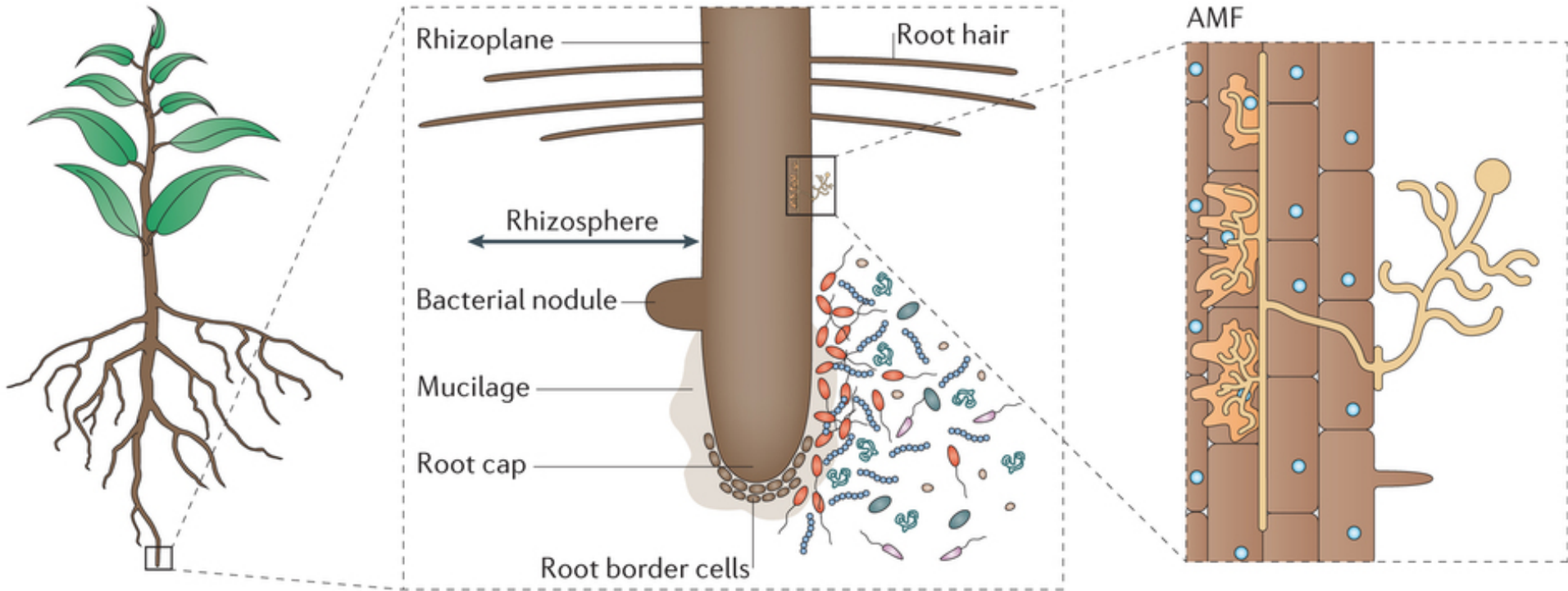


碳元素: 醣類

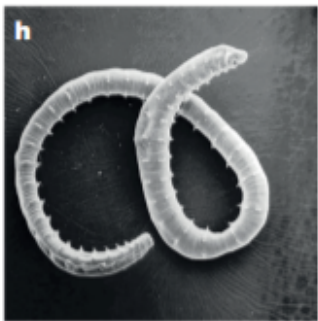
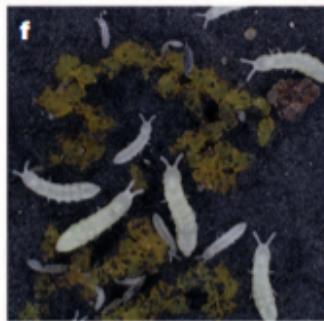
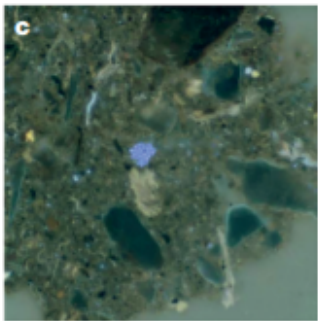
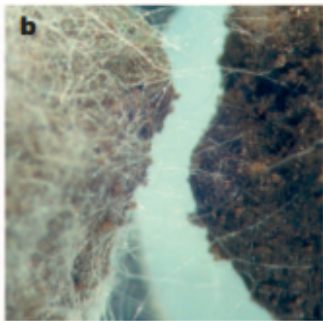
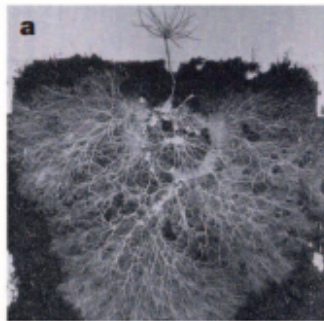


**碳元素與氮元素:
胺基酸、蛋白質**





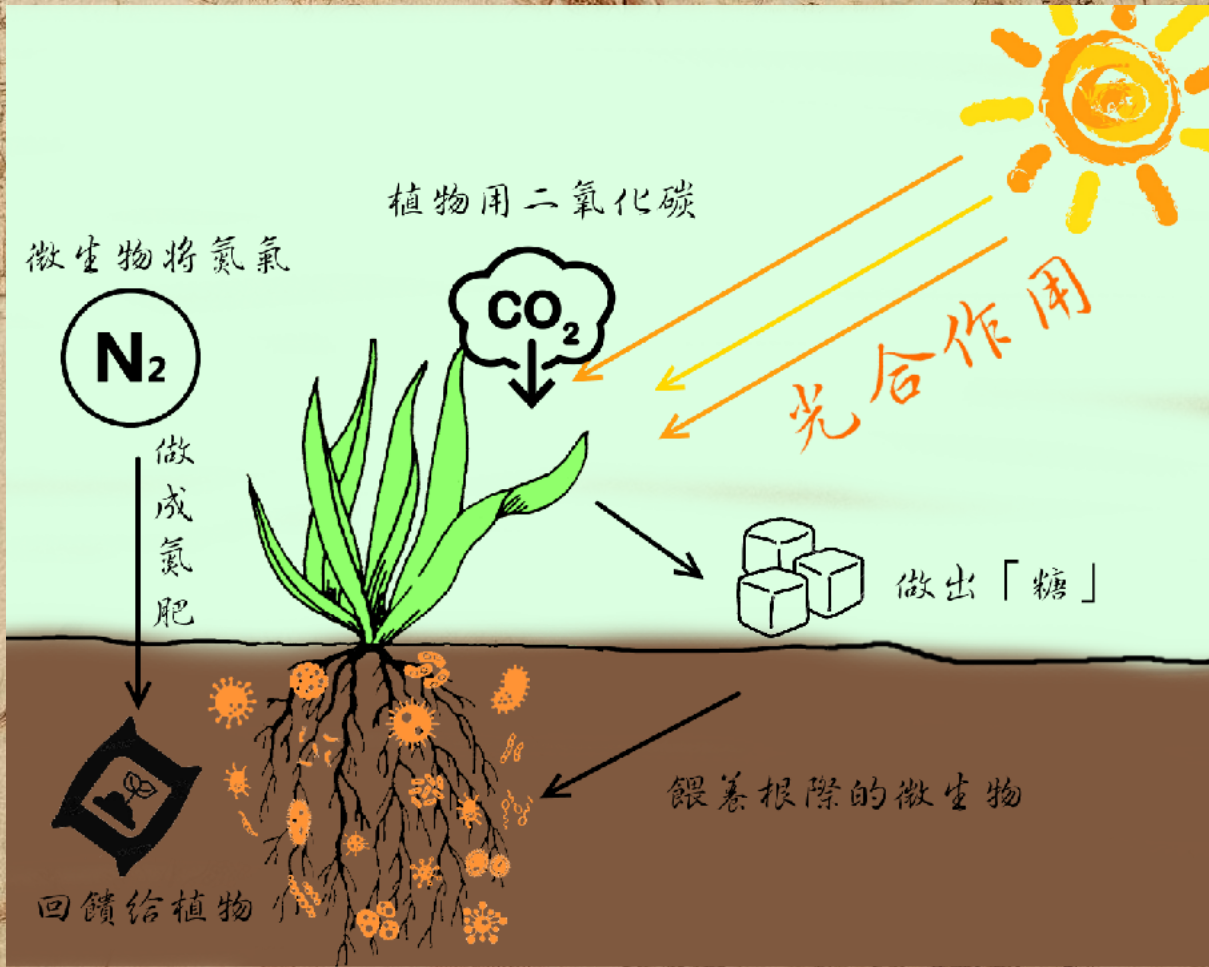




Soil
土壤

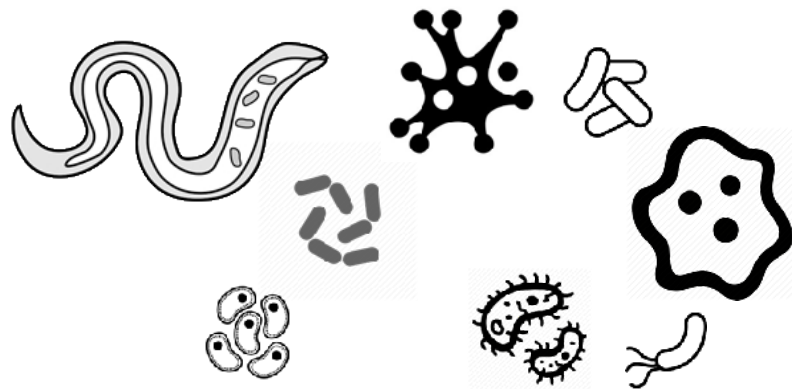
Dirt
泥土



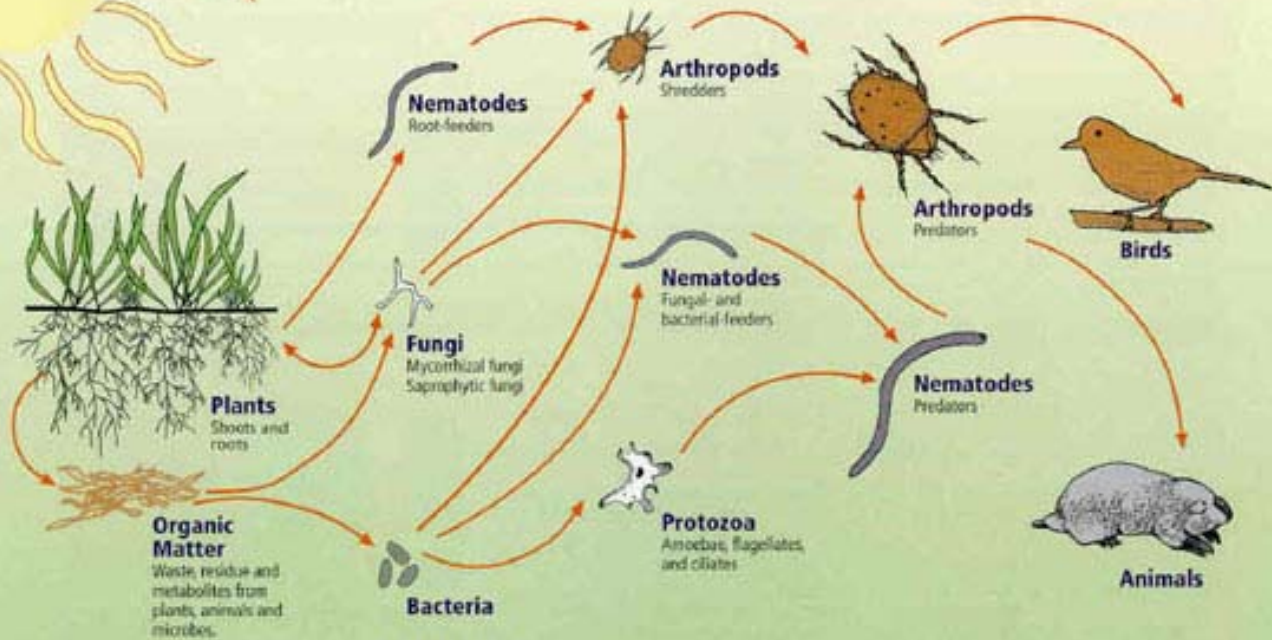


真實的土地:

營養存在於生命之中



The Soil Food Web



First trophic level:
Photosynthesizers

Second trophic level:
Decomposers
Mutualists
Pathogens, parasites
Root-feeders

Third trophic level:
Shredders
Predators
Grazers

Fourth trophic level:
Higher level predators

Fifth and higher trophic levels:
Higher level predators



氮逸散!

10碳:1氮



發臭

氮太多

腐熟



碳消耗

碳氮比

30:1~20:1

碳太多

腐熟速度慢

豆渣

5:1

雞糞肥:

7:1

廚餘:

17:1



樹葉

70:1

稻草/乾草

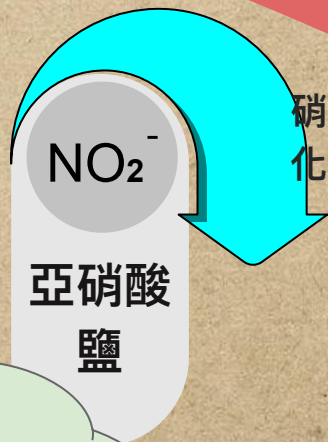
90:1

鋸屑

500:1

碎木片

700:1



代替呼吸作用
取得能量

在沒有氧氣時發生

化肥

增加含氮物

糞肥

目的：增加土壤氮含量

增加土壤
有機質

植物生長良好

土壤營養循環繁盛

碳不足，碳氮比
過低，氮逸散

~~土壤生命有東西吃~~

增加土壤碳含量



植物生長

植物生長良好

增加土壤
有機質

土壤營養循環繁盛

外部搬入

土壤生命有東西吃

增加土壤碳含量

固碳產物(能量)送達

根際或菌根菌比例:

- 先鋒雜草(咸豐草、藿香薊): 20%
- 禾本科雜草: 60%
- 大部分作物: 75%
- 樹(含灌木喬木):80%

增加土壤有機質, 活植物比植物屍體重要

