

土と水の科学

塩類土壌化の

メカニズム

Mechanism of Soil Salinization

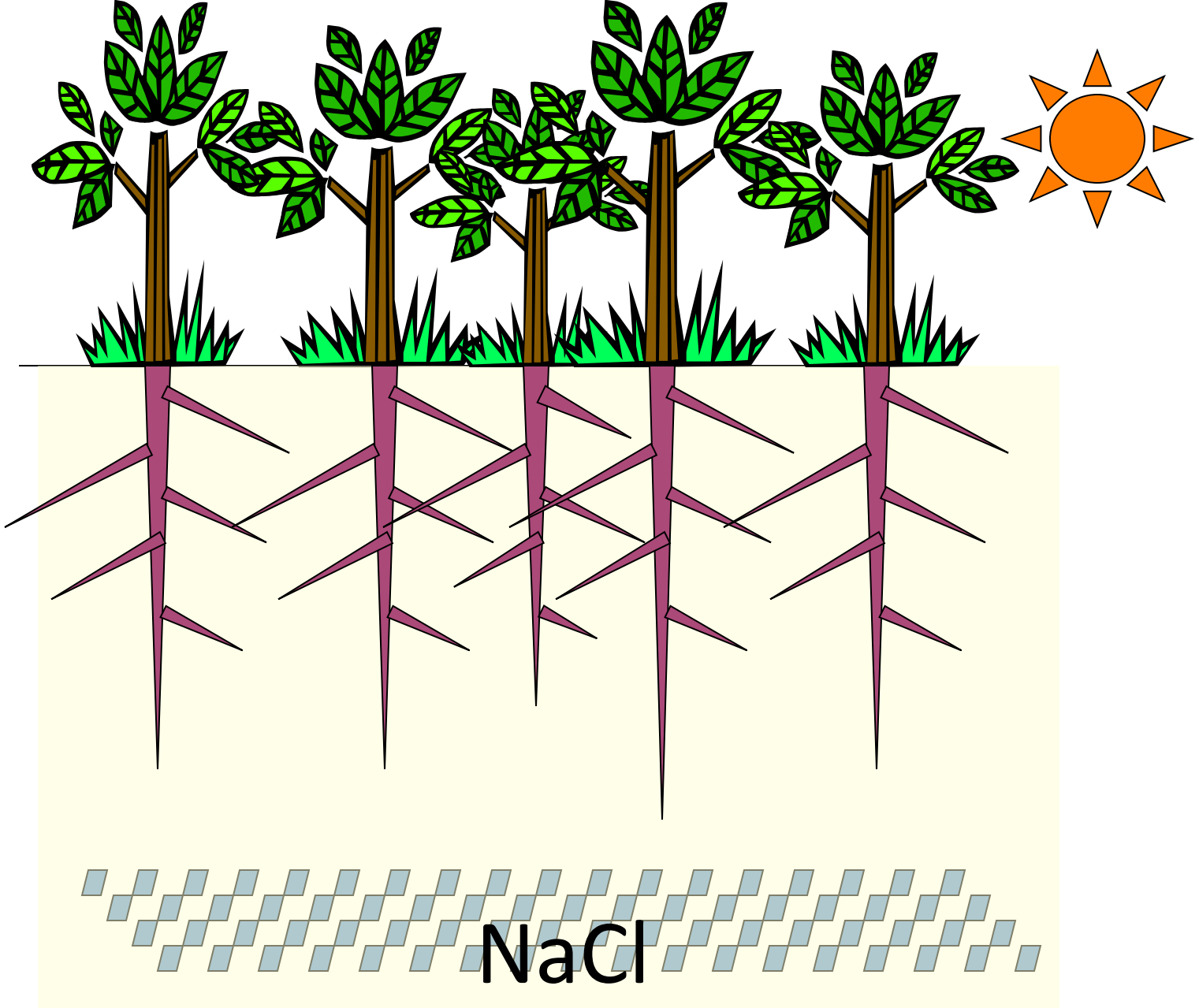
筒木 潔 (Kiyoshi Tsutsuki)

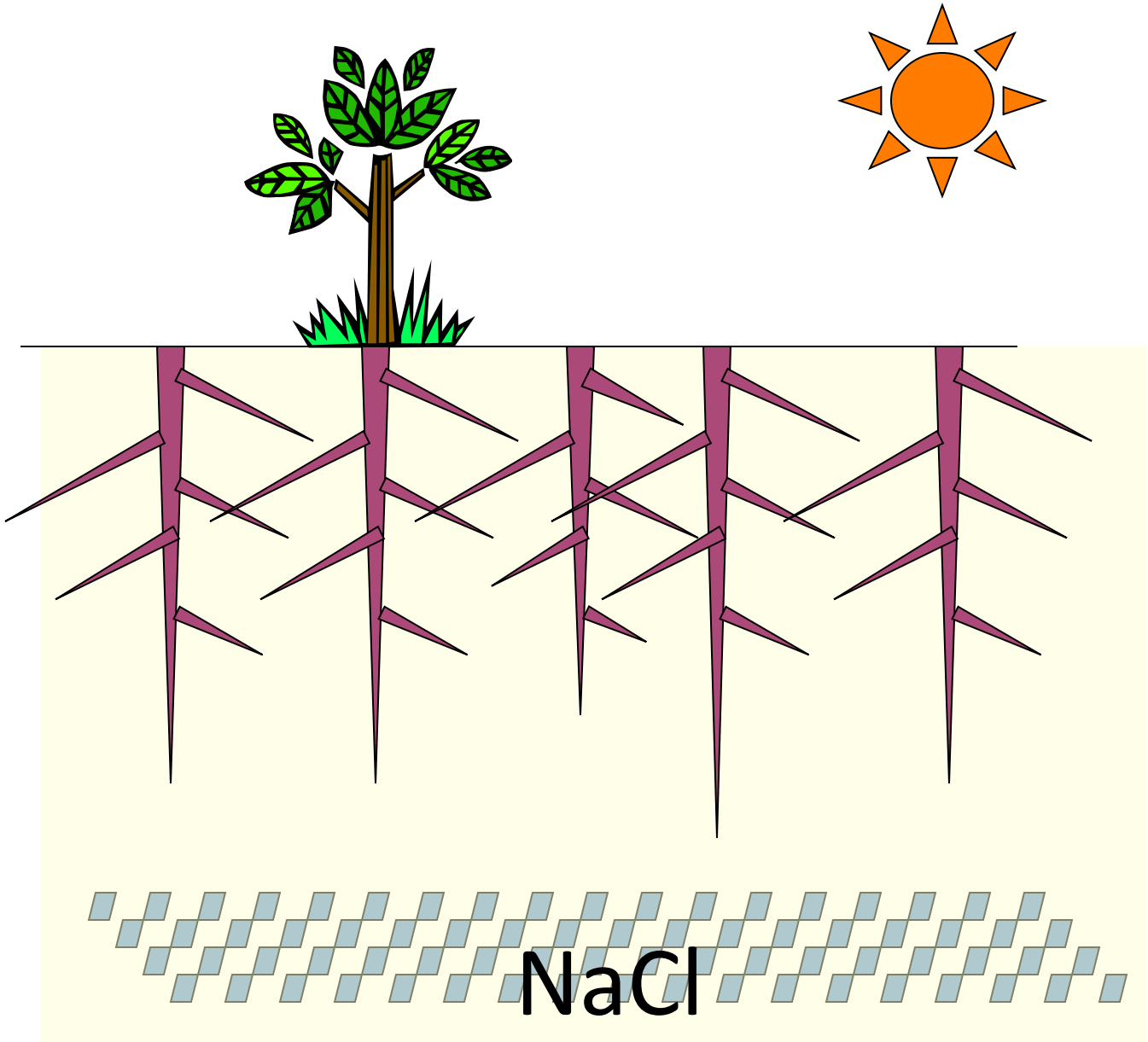


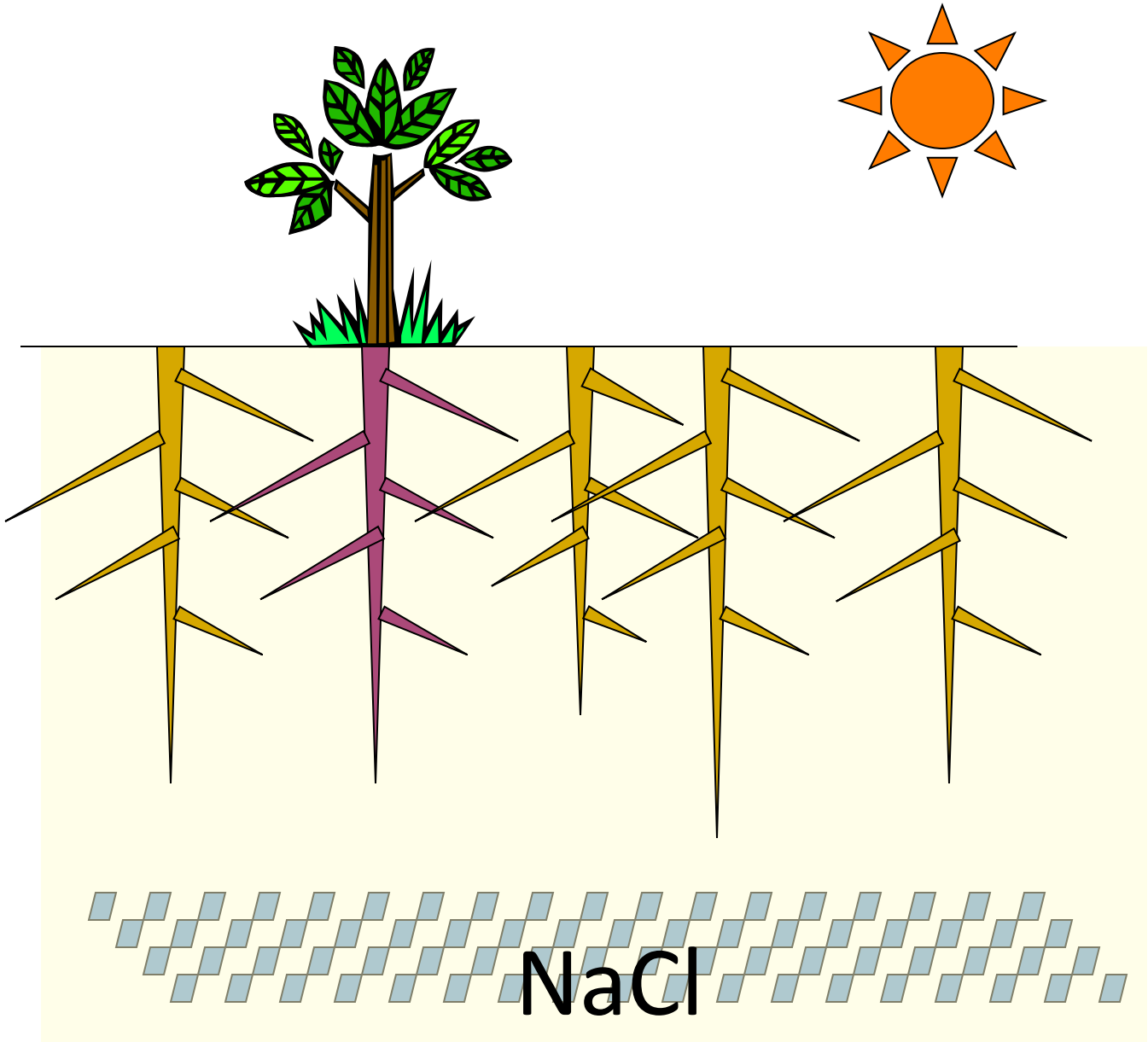
Soil salinization in Khon Kaen, Thailand

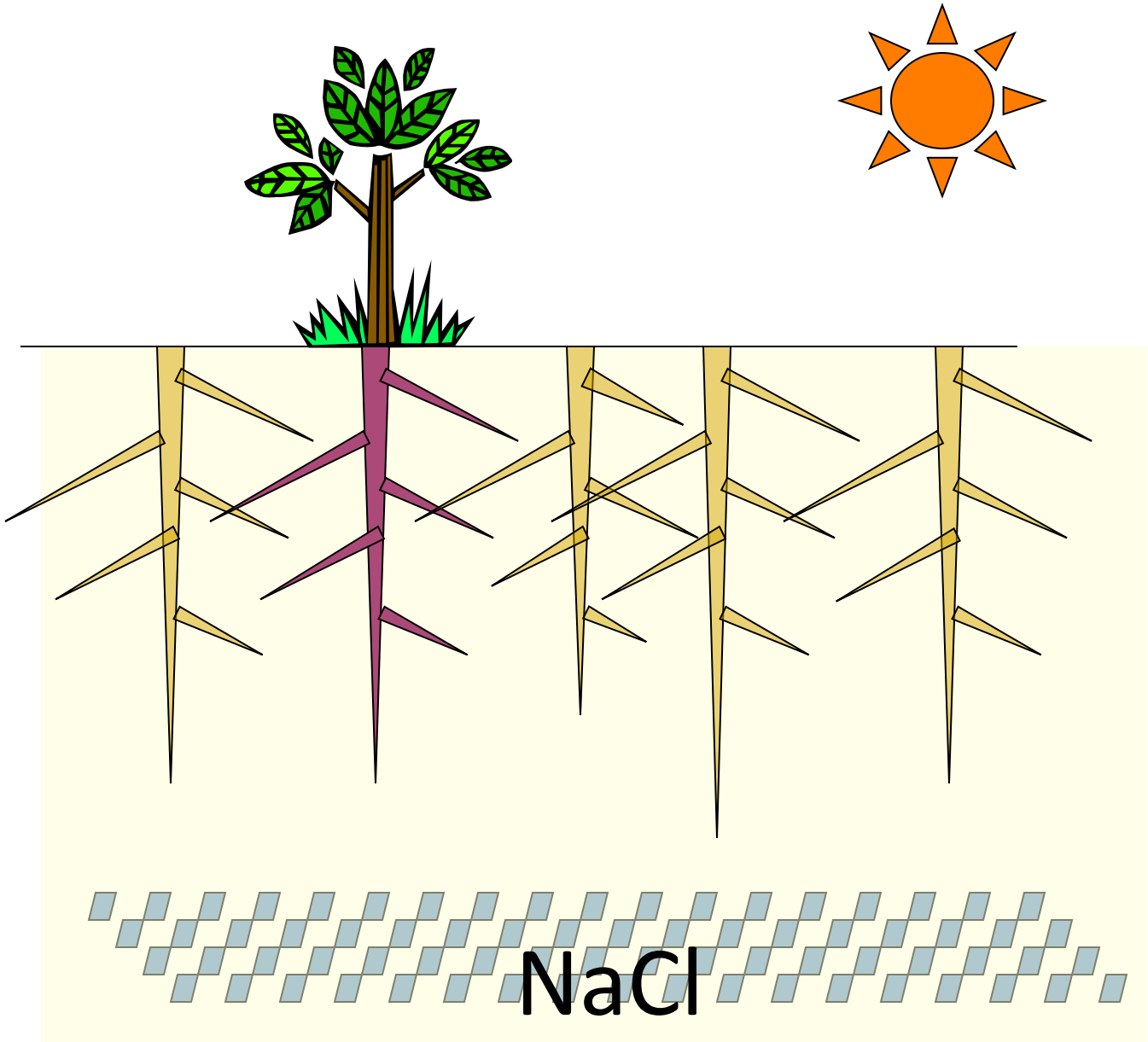


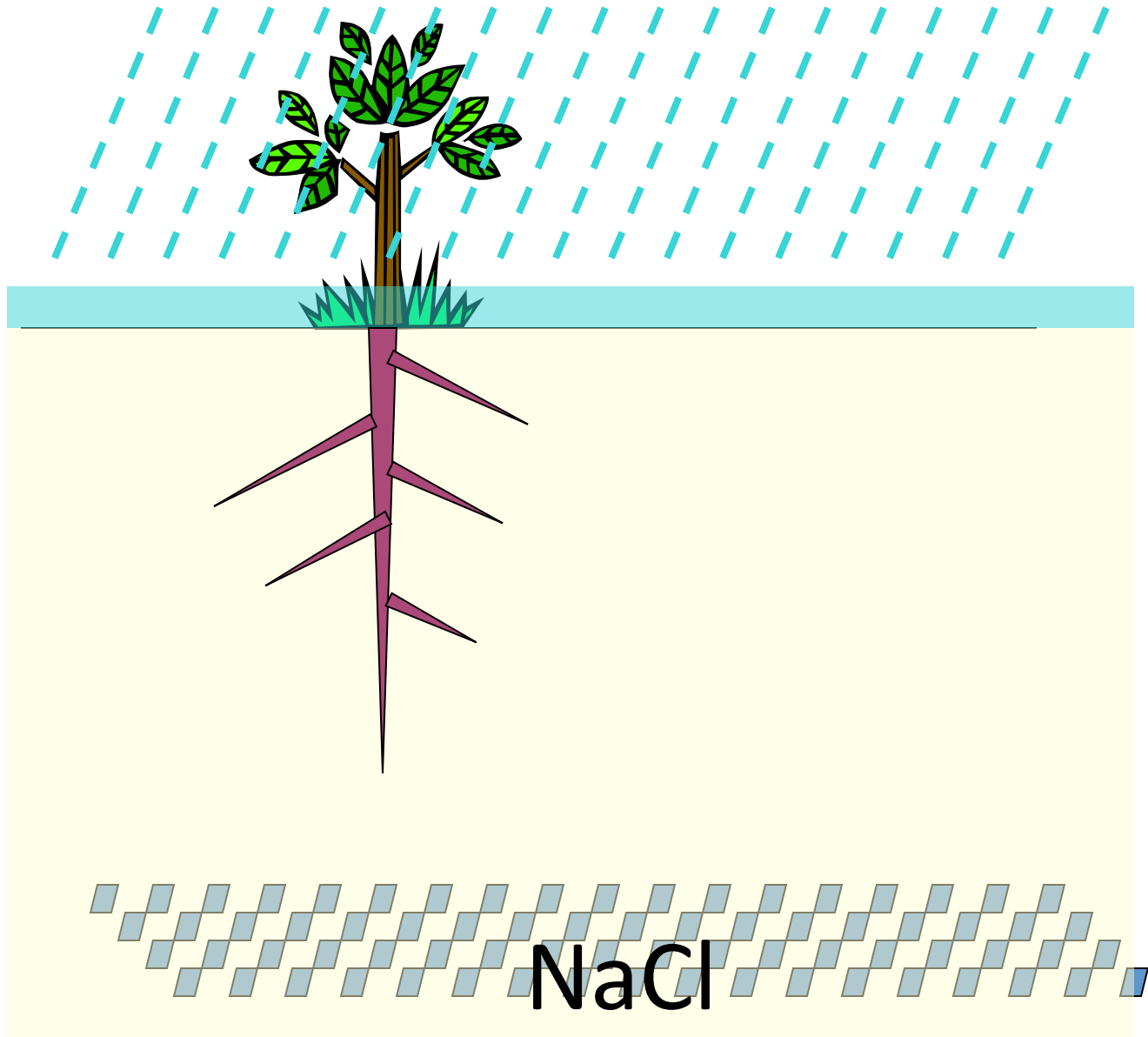
Soil with salt on the surface.

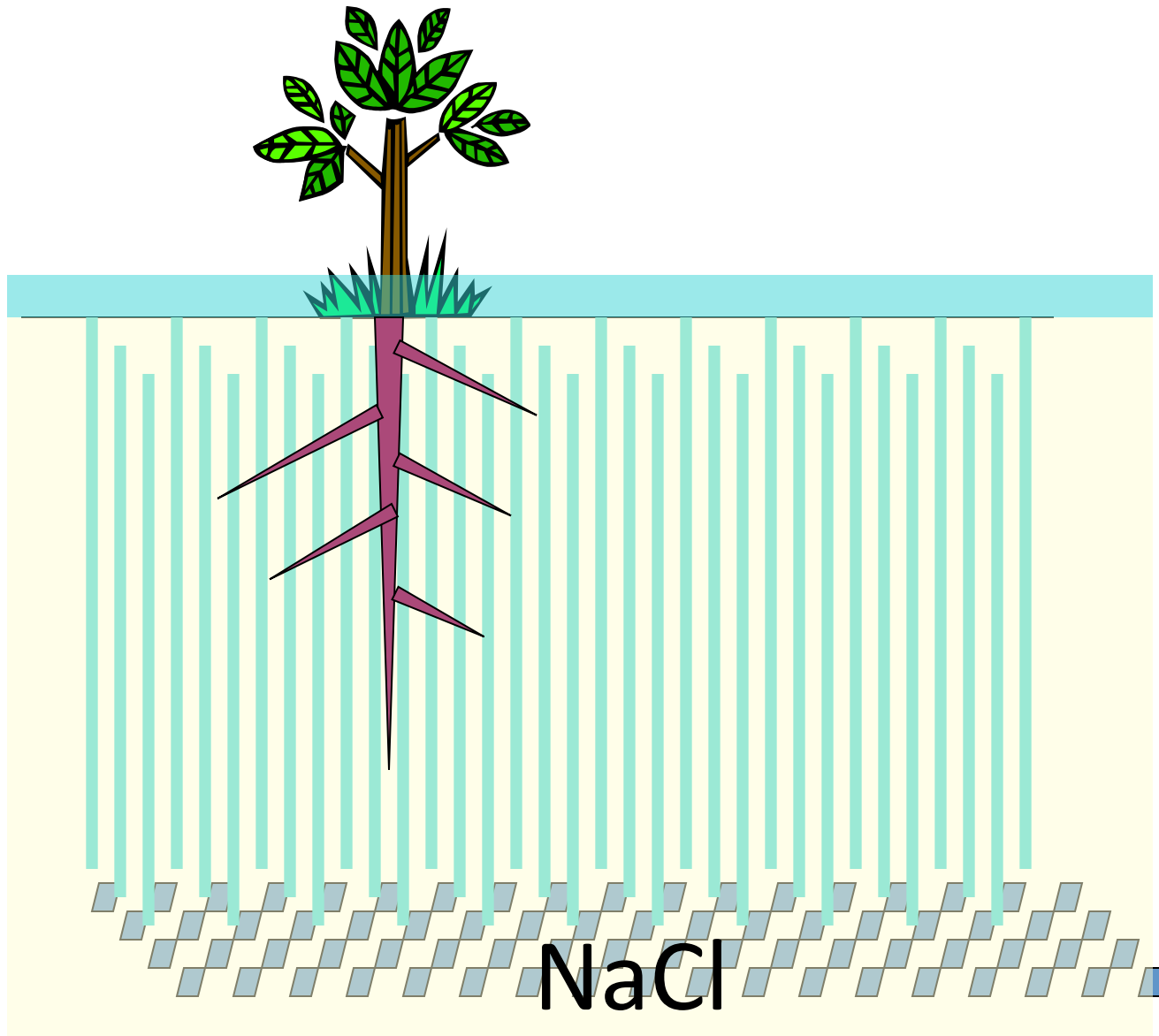


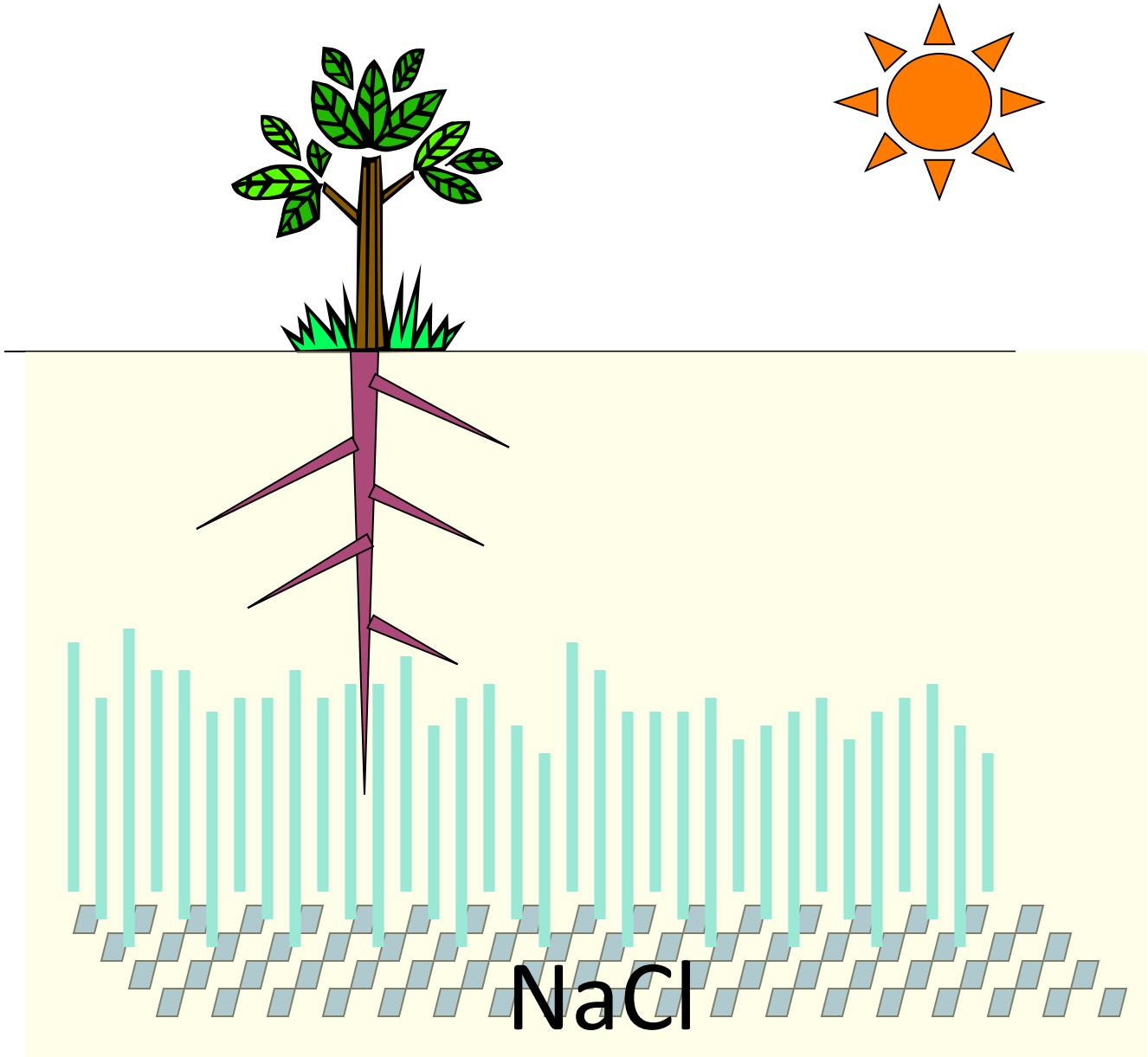


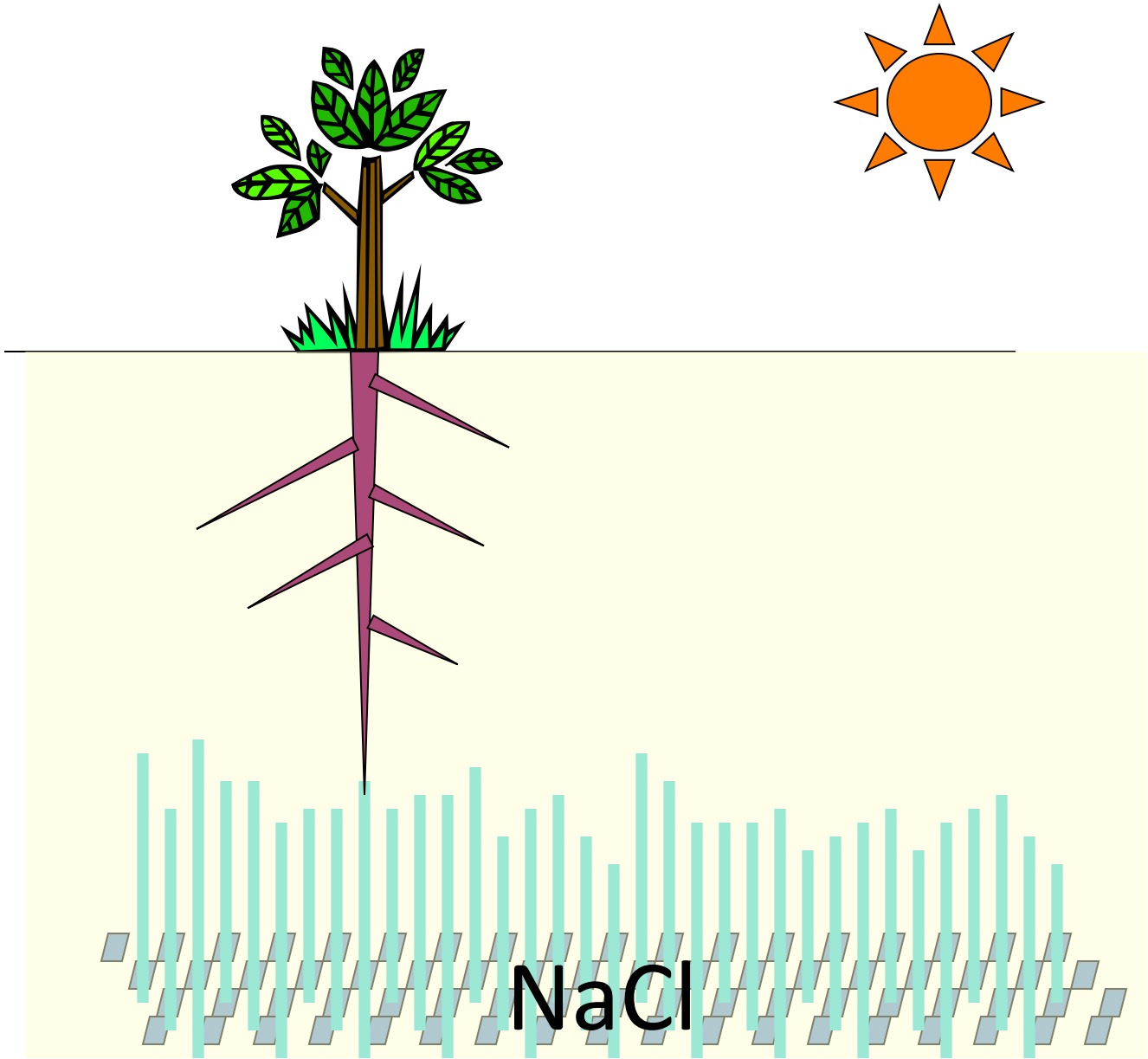


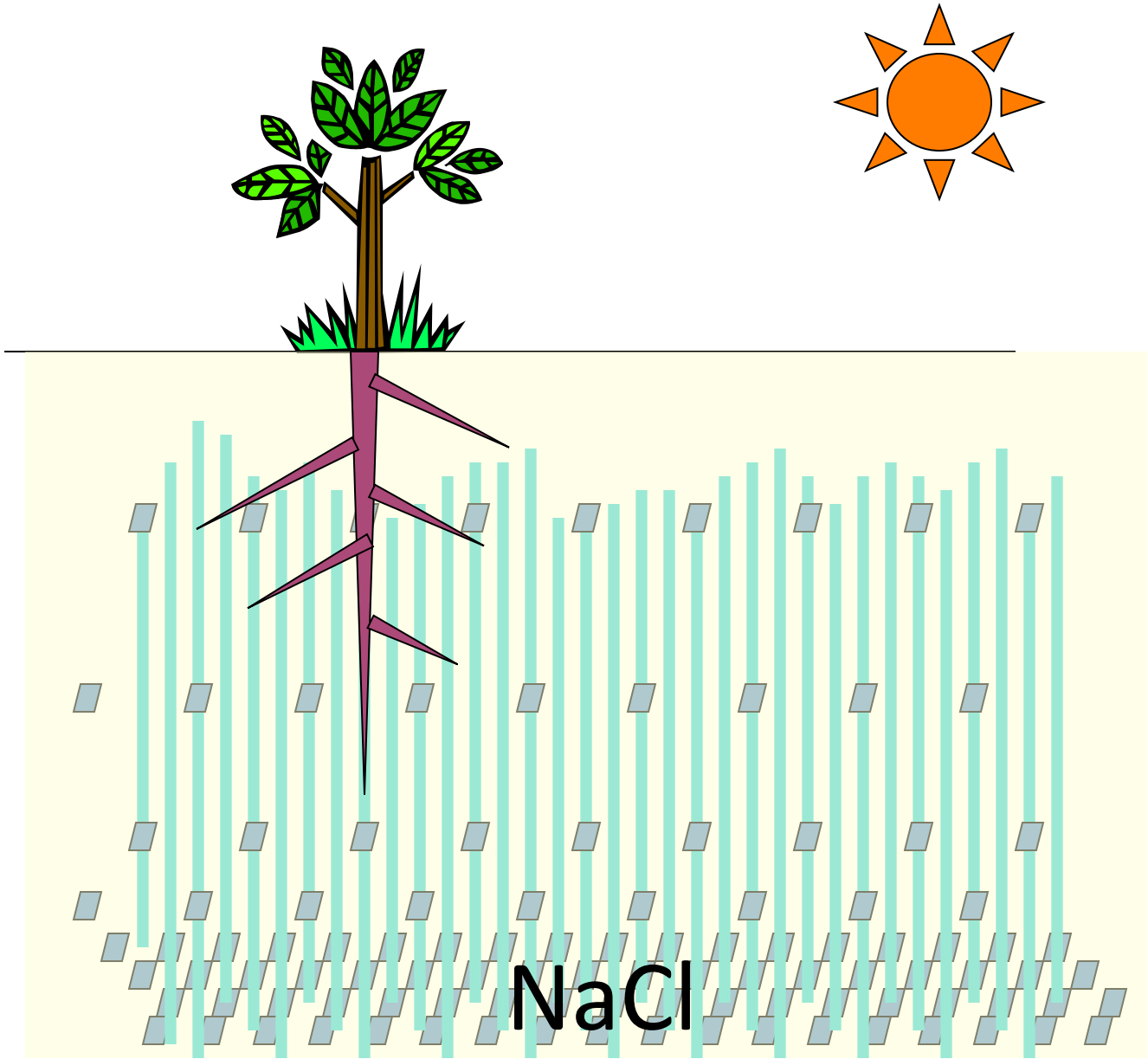


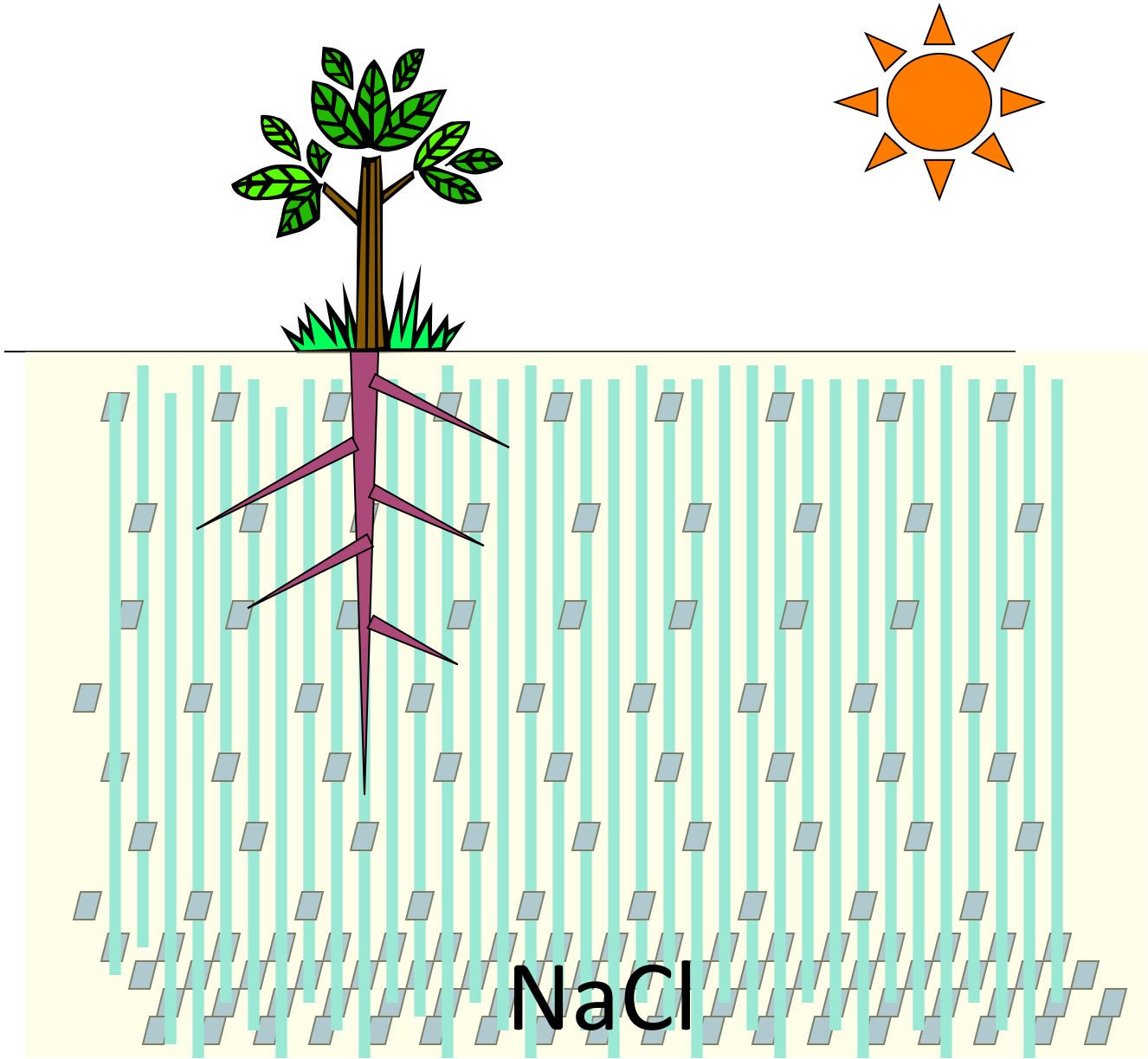


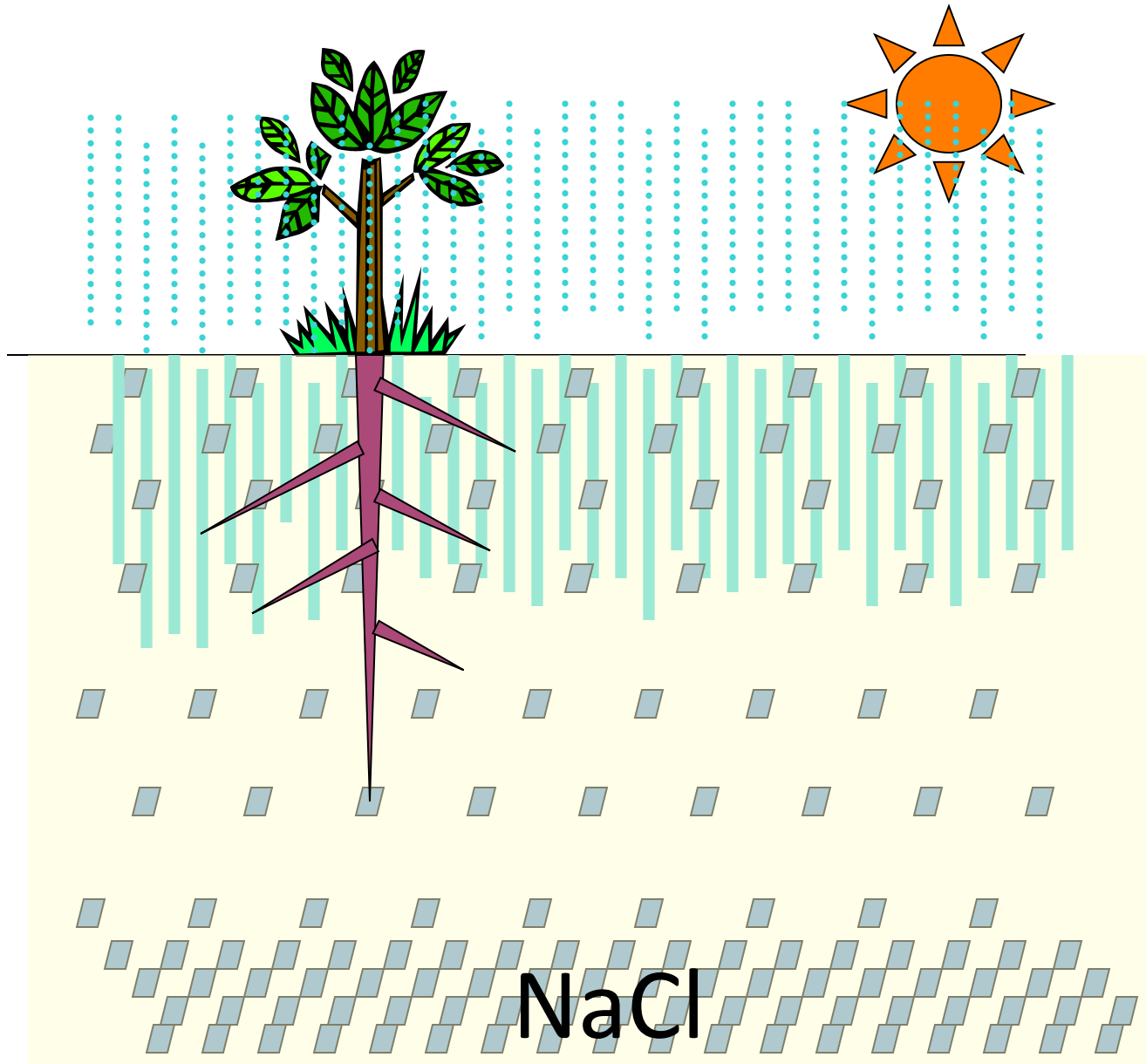


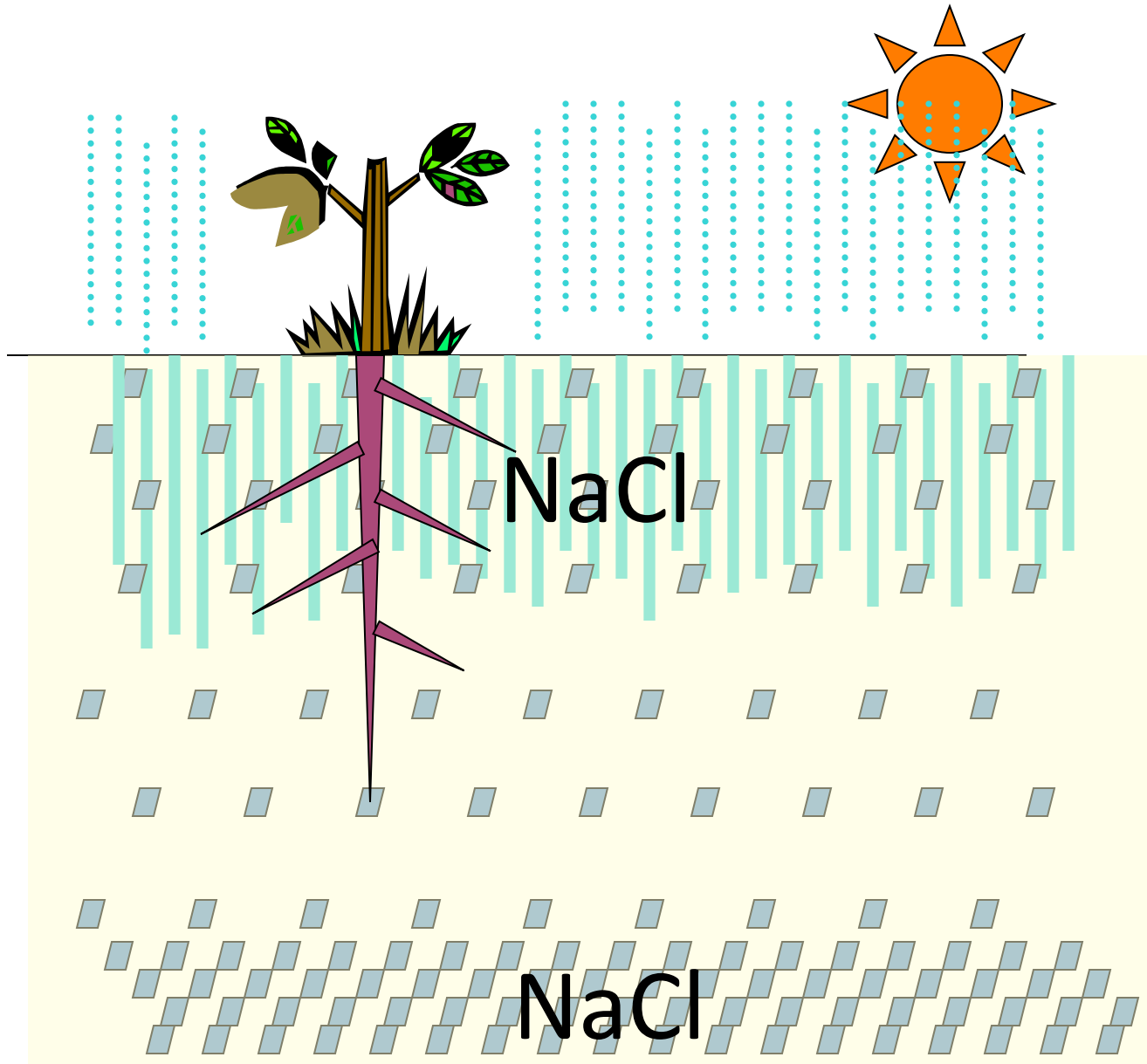


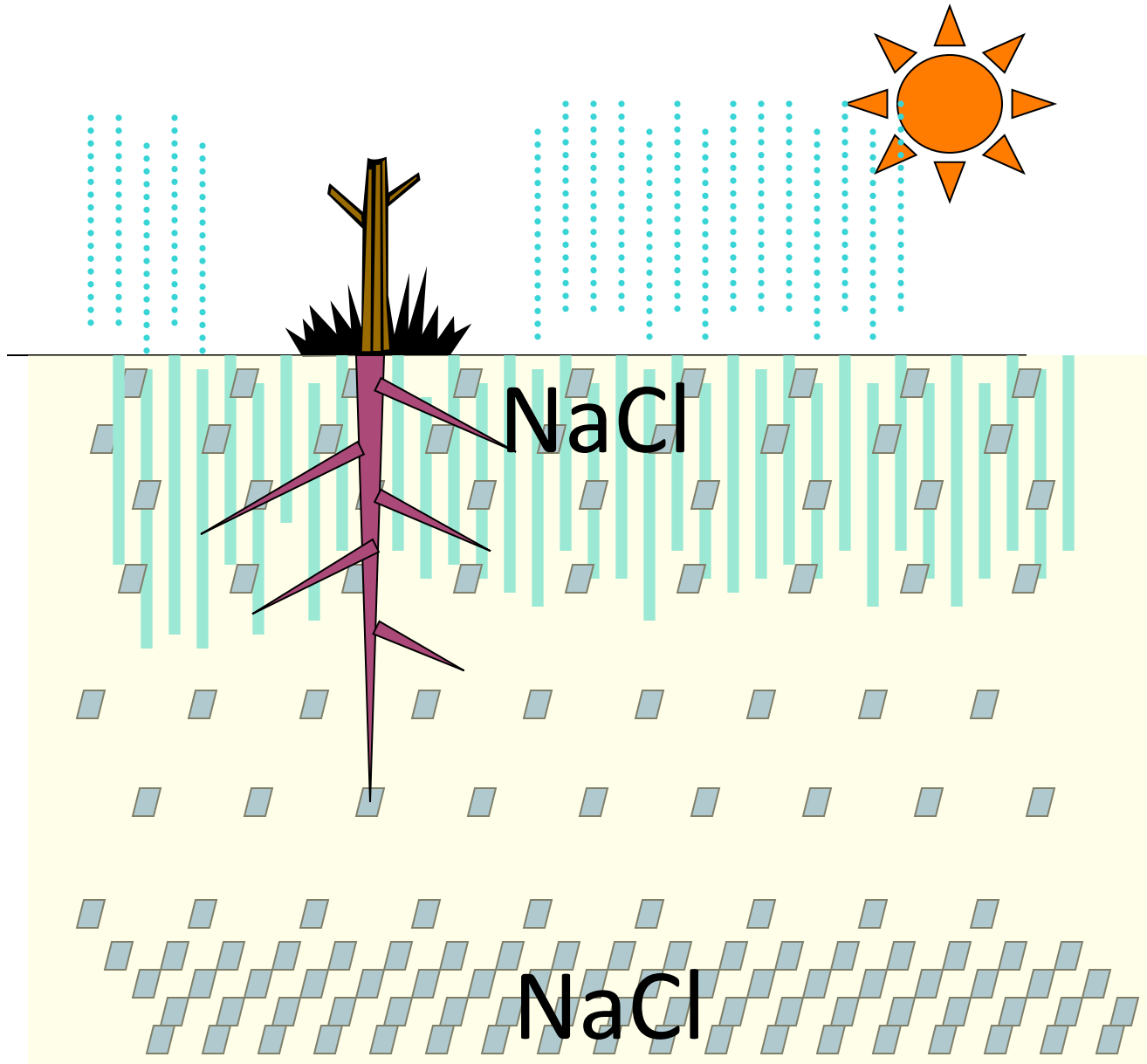


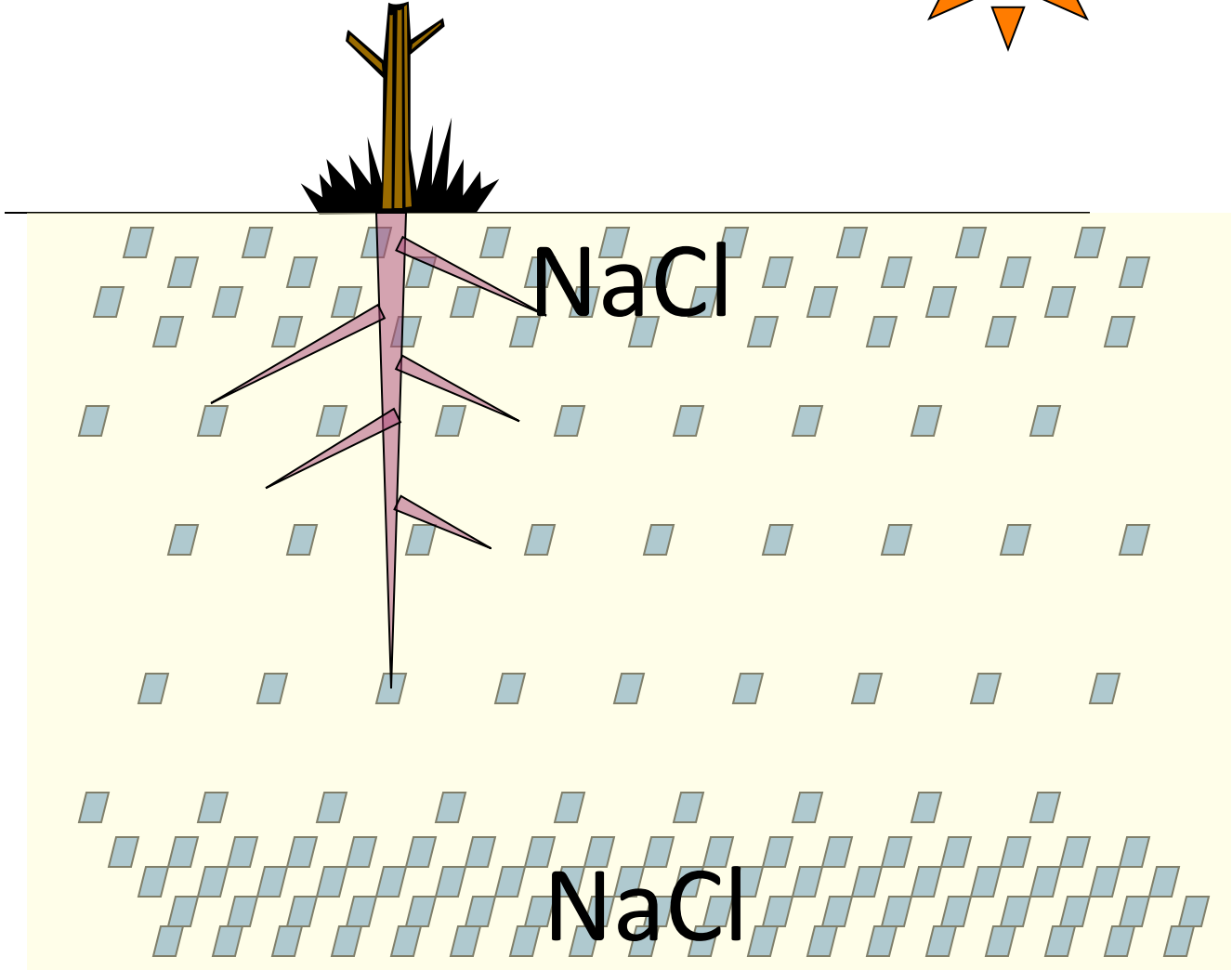
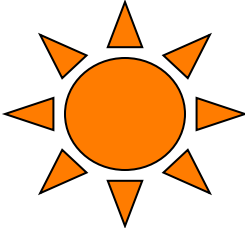






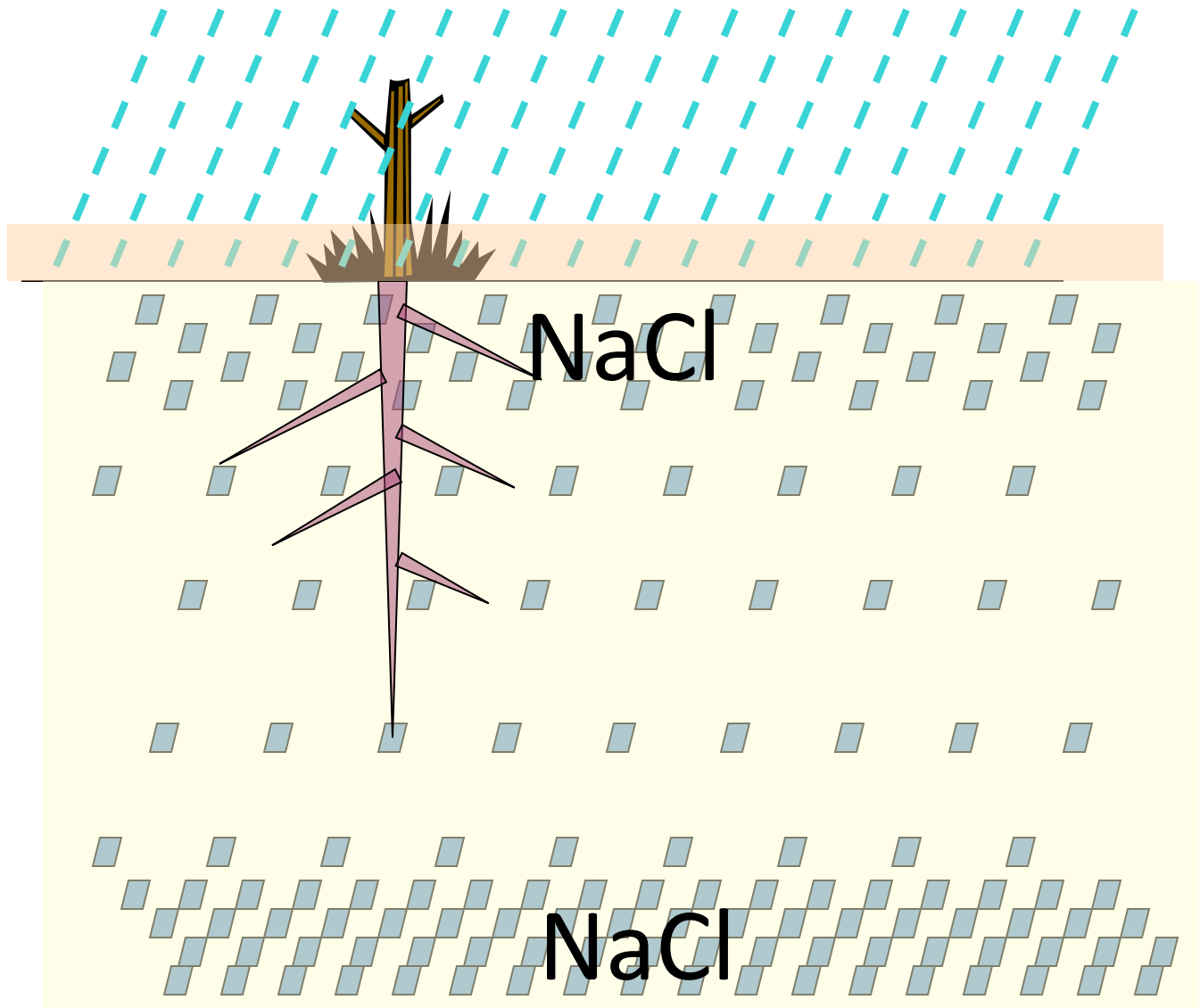


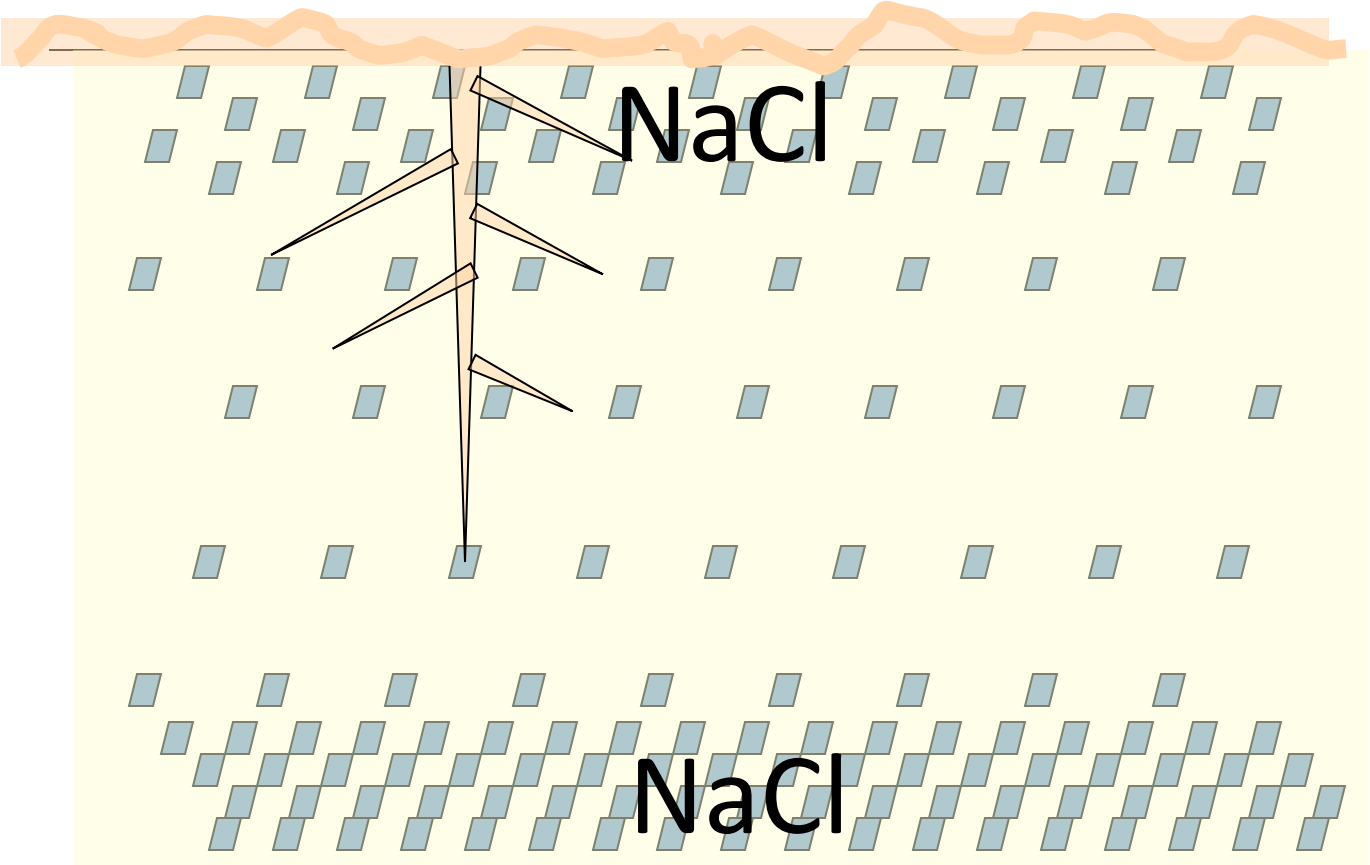


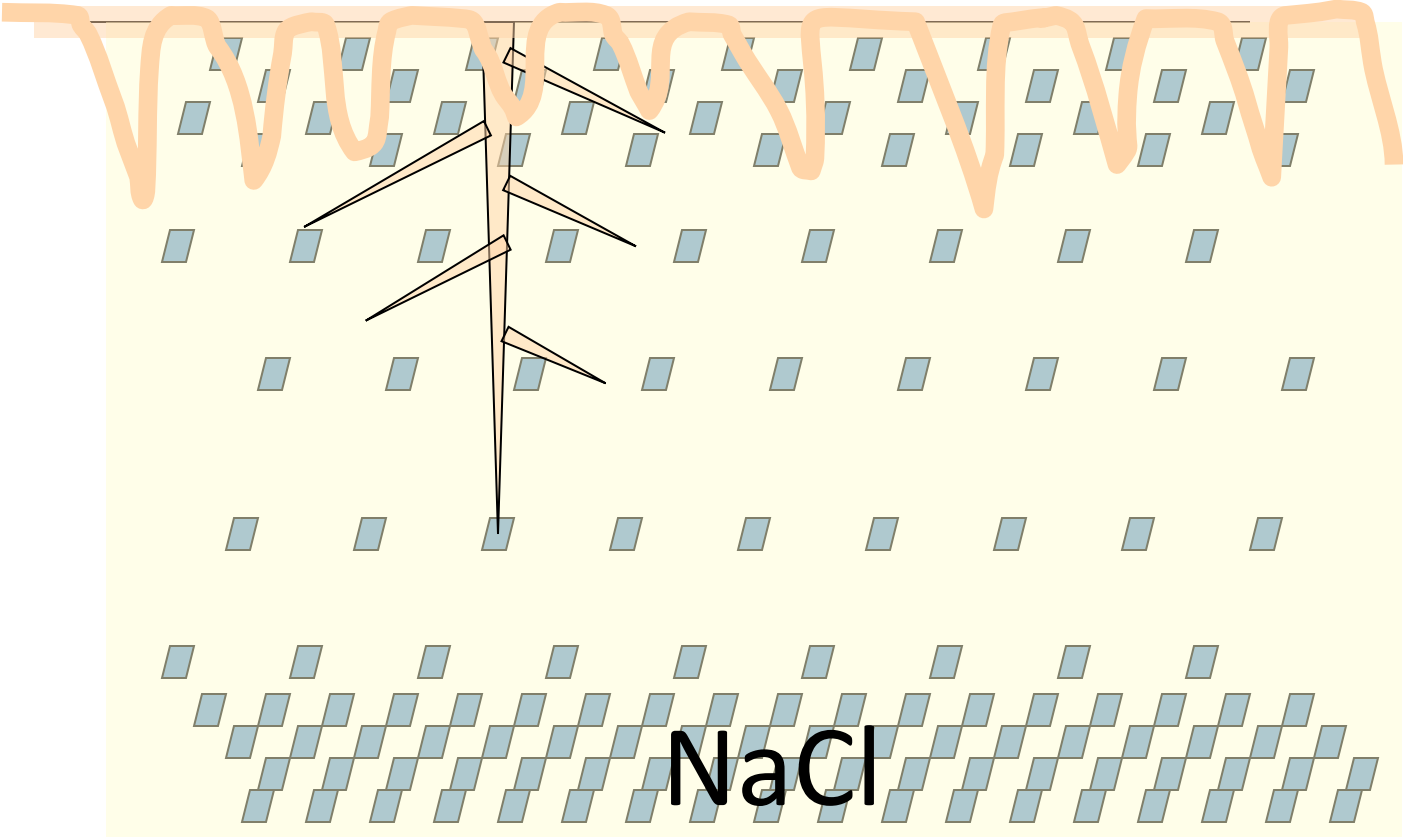


NaCl

NaCl







NaCl

灌漑の不備

- 年降水量が250mm以下の乾燥地で農業をするためには灌漑が不可欠
- 適切な排水が行なわれないと、灌漑水に溶けた塩類が地表に析出

Improper irrigation

- Irrigation is necessary to conduct agriculture in dry area with annual precipitation < 250 mm.
- However, if proper drainage is not provided, salt dissolved in the irrigation water will accumulate on the soil surface.

圃場からの排水の再利用

- 河川水の塩類濃度上昇
- 不耕化した灌漑地の合計
2000万～2500万ヘクタール
(20～25万平方キロメートル)
- 世界の全耕地面積1450万平方キロメートル

Reuse of drained water from the field

- It causes the rise in salt concentration in river water.
- Total devastated area of irrigated land is 20 – 25 million ha (200 – 250 thousand square kilometer).
- It is 1.4 – 1.7 % of total arable land in the world.