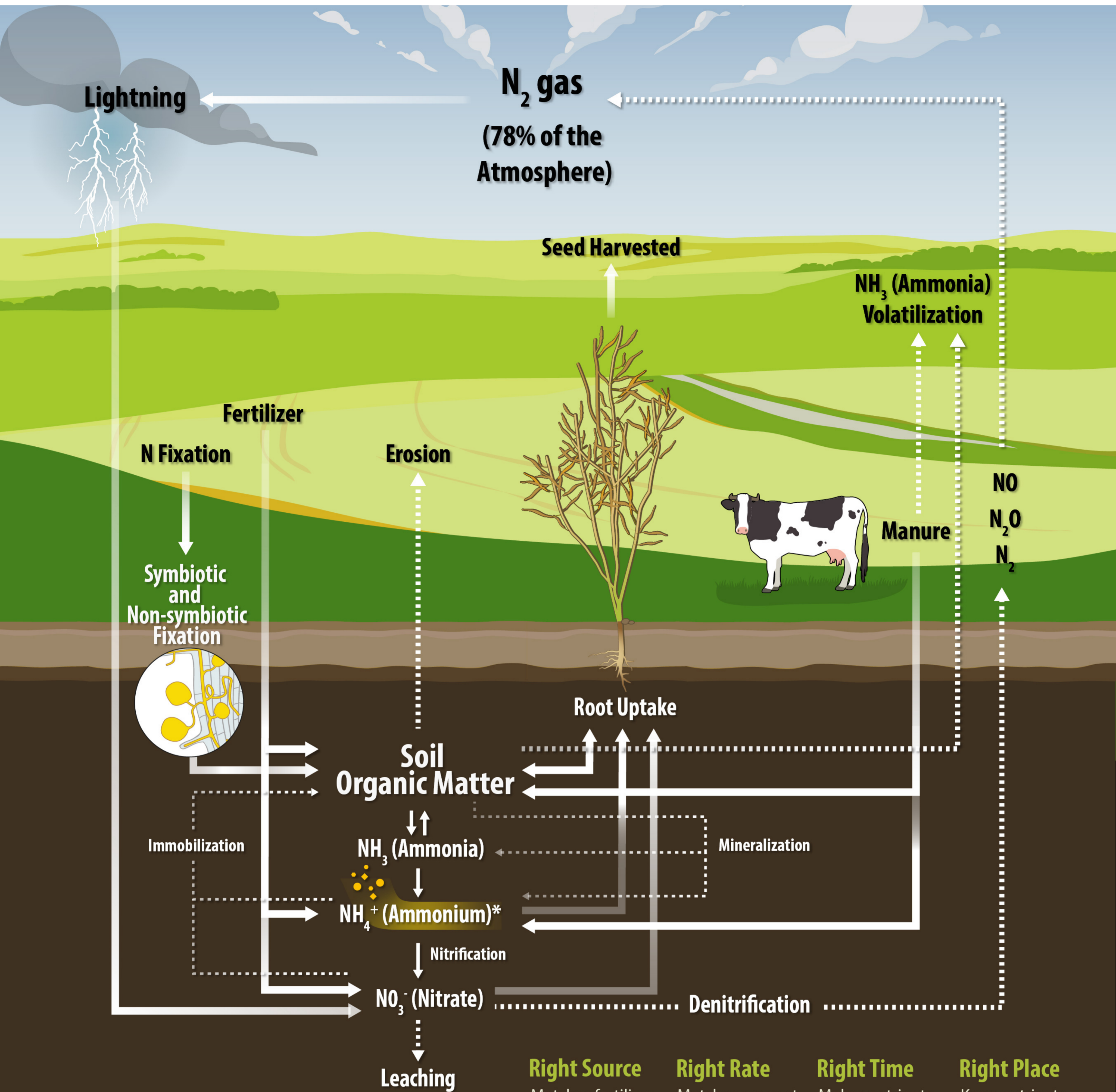


# Nitrogen Cycle

← Gains ←····· Losses



← Gains ←····· Losses



**\*Factors conducive to NH<sub>3</sub> formation, volatilization and toxicity:**



## Chemical Composition of Soil

- High pH
- High concentration of CaCO<sub>3</sub>



## Weathering Conditions

- High temperatures increase reaction rates and soil drying, concentration of NH<sub>4</sub><sup>+</sup> and NH<sub>3</sub>
- Optimum moisture content for dissolving fertilizer



## Other Conditions Conducive to Volatilization Losses

- High wind velocity
- Soil quality allowing rapid air exchange (Sandy, lumpy soil or porous soil)
- Fertilizer, manure or legume residue left at or near soil surfaces