



## World Food Prize 2025

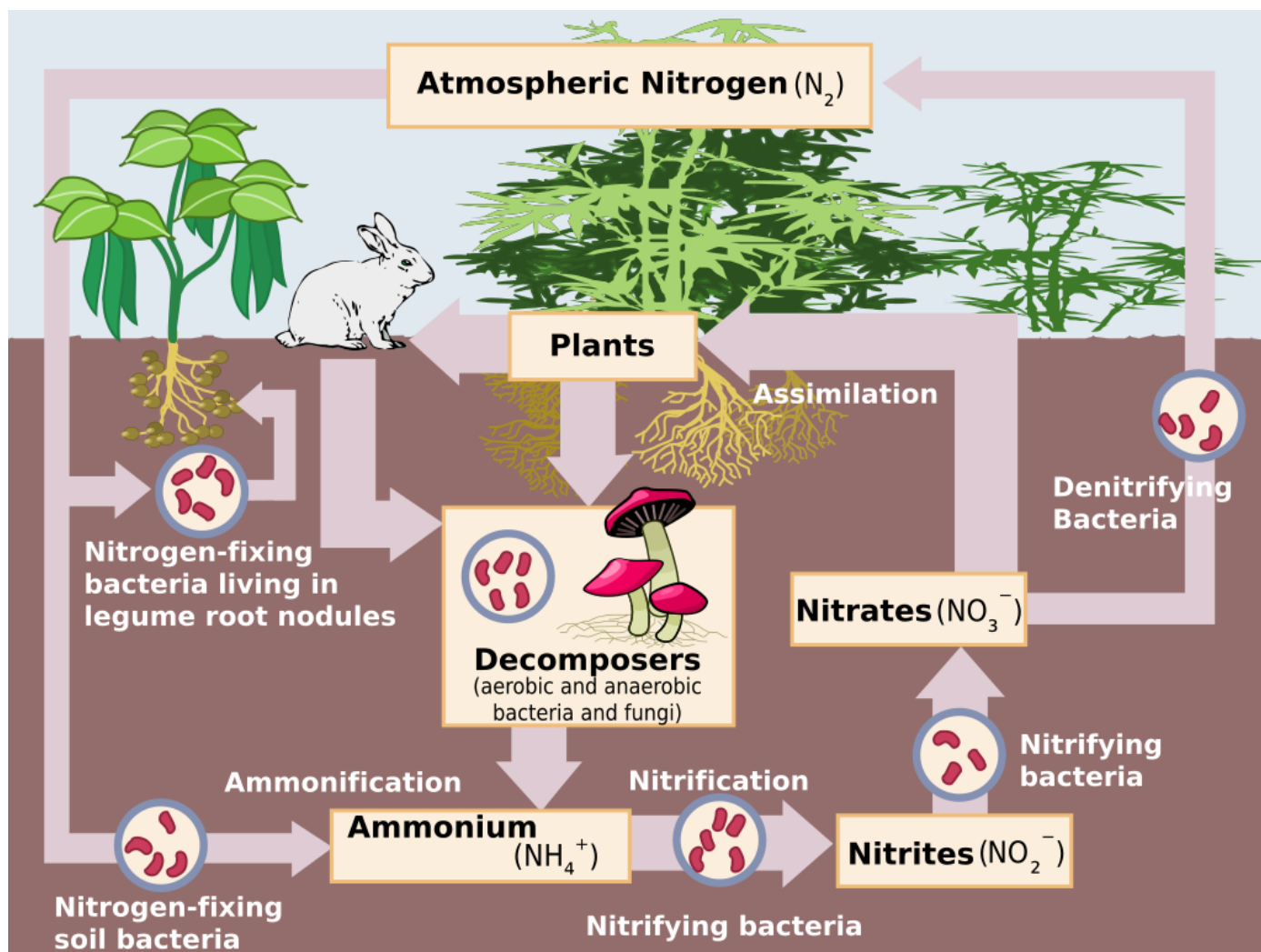
[Source: DTE](#)

**Brazilian** microbiologist **Mariangela Hungria** has been awarded the **World Food Prize 2025** for her pioneering work in **Biological Nitrogen Fixation(BNF)** and development of **microbial technologies** that reduce chemical fertiliser use.

- **Mariangela** pioneered **rhizobia-based nitrogen fixation** in legumes, this innovation reduced chemical fertilizer use, saving **Brazilian farmers USD 40 billion annually**, and boosted soybean production **from 15 million tonnes in 1979 to an estimated 173 million tonnes** by 2025.
- Her work drove **Brazil's "Micro Green Revolution"** through **sustainable, low-cost microbial technologies**.

### **Biological Nitrogen Fixation(BNF):**

- Biological nitrogen fixation is a natural process where certain **microorganisms convert atmospheric nitrogen ( $N_2$ ) into ammonia ( $NH_3$ )**, a form usable by plants.
  - This improves soil fertility and lessens the need for chemical fertilizers.
  - Key nitrogen-fixing bacteria include ***Rhizobium*, *Anabaena*, *Nostoc*, *Azotobacter*, and *Clostridium pasteurianum***.



#### World Food Prize:

- It was founded in **1986** by Nobel Laureate **Norman Borlaug**, is a top global award recognizing contributions in **improving food quantity, quality and accessibility** and **agriculture**.
- It awards **USD 500,000 annually** to innovators in **agriculture, nutrition, food technology, and hunger alleviation**.
- The first recipient was India's **M.S. Swaminathan (1987)**, father of **Indian green revolution**.

Read More: [World Food Day 2024](#)