

Mendel's Pea Plant Experiments

The 19th-Century Hybridisation Study that Unlocked the Laws of Inheritance

During the mid-nineteenth century, Gregor Mendel set up a basic framework of rules governing inheritance, shifting biology from observational guesswork to structural science.

1856

Experimentation
Begins

7 Years of Continuous Hybridisation

1863

Data Collection
Concludes

The Revolutionary Approach



Statistical Logic

The Innovation:

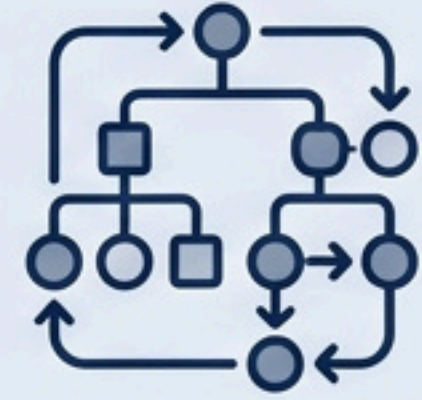
For the first time, statistical analysis and mathematical logic were applied to biological problems.



Large Sample Sizes

The Impact:

Studying massive numbers of plants gave unprecedented credibility to the collected data.



Successive Generations

The Proof:

Testing inferences on successive generations of test plants proved his results pointed to general rules, not just unsubstantiated ideas.

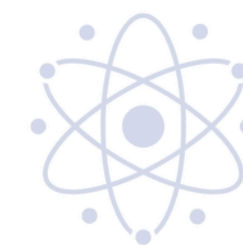
NEET TAKEAWAY

Mendel's success was driven by three unprecedented methodologies: Statistics + Large Samples + Successive Generations.



You've Learned the Theory. Let's Test Them Now.

$$E=mc^2$$



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Key Highlights

- » Free Study Material, Videos & Infographics
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- » Get Clear Explanations, Not Just Marks
- » Track Your Performance Smarter



Why the Garden Pea?

Mendel selected 14 true-breeding pea plant varieties as pairs.

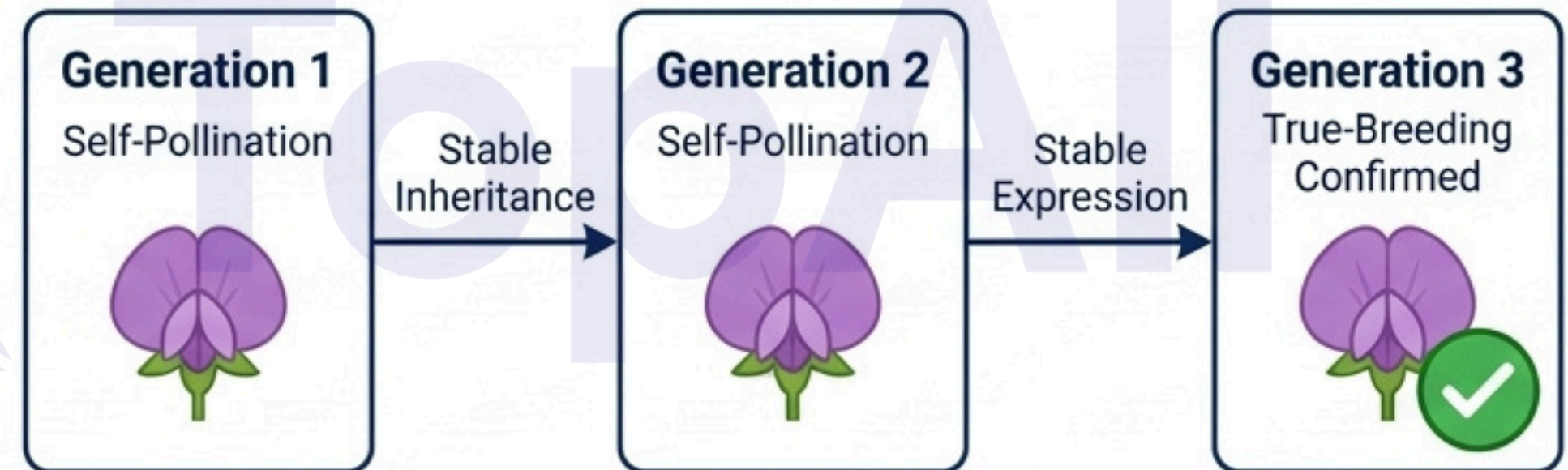
Key Advantage: These plants naturally manifested characters as two easily distinguishable, opposing traits (e.g., tall vs. dwarf).



Establishing True-Breeding Lines



A line that has undergone continuous self-pollination, showing stable trait inheritance and expression for several generations.



The 7 Contrasting Traits of Mendel's Peas

Character	Dominant Trait	Recessive Trait
Stem height		
Flower colour		
Flower position		
Pod shape		
Pod colour		
Seed shape		
Seed colour		



You've Learned the Theory.

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