The Chemistry of Peanuts



Plant Nutrients

Different elements are critical to have in the soil so that peanuts can successfully grow into the snack you know and love.

What do peanuts need to grow?



Potassium: Sources include potassium chloride, potassium sulfate, potassium nitrate, and potassium-magnesium sulfate. **Calcium:** Peanut plants need calcium, supplied by the application of calcium sulfate (aka gypsum).

Phosphorous: Diammonium phosphate, ammonium polyphosphate or other inorganic sources of phosphate are used in peanut production as phosphorous sources.

Keeping Plants Growing

Requires backup, which comes in the way of herbicides, fungicides & pesticides, which keep crops alive and safe from disease and weeds.

Common Crop Health Tools

Herbicides

Used to prevent weeds from forming and taking away resources from the crops.

Fungicides

Help avoid fungus from growing on or around crops, preventing crop infection.

Pesticides

Work to keep away bugs that threaten peanut crops.

Prep & Transport

After peanuts are picked, shelled, and sorted, they are packaged in woven polypropylene totes and sent to cold storage.

Ready to Enjoy!

Peanuts get packaged for consumers using a variety of tools and containers. Did you know that peanut butter accounts for roughly 60% of U.S. peanut production?

Cold Storage Chemistry

Cold storage relies on metal panels insulated with **polyurethane foam**. Cold storage warehouses also use common refrigerants like **anhydrous ammonia**.



Keeping Peanuts Fresh

On their way to store shelves, peanuts are packaged in **airtight containers or resealable bags** to preserve freshness by preventing oxidation, moisture, and odor transfer. Rigid containers often include a freshness seal made from **polystyrene or polyethylene foam** or other barrier materials like foil or plastic film.

Jars: Made from polyethylene terephthalate with a polypropylene lid

Freshness seal: Made from polyethylene foam or other barrier materials like foil or plastic film.



Peanut butter: Made using nitrogen as a fluffing agent.