

# Soil



Soil is a substrate that plants grow in. It is a mixture of nutrients, organic materials, clay, and pieces of rock. Soil also holds water which allows the surrounding plants to use that water.

# Crops



Crops use the available nutrients in the soil to grow. As they are growing crops use a variety of nutrients including nitrogen (N), phosphorus (P), and potassium (K). In Iowa Corn and Soybeans are the most common crops.

# Turkey Feed



Turkey feed is a mixture of corn, soybeans, vitamins, minerals and amino acids. Corn supplies carbohydrates which are used for energy. Soybeans are ground into a meal which is a major source of protein.

# Poults



Poults are young turkeys. Poults hatch after incubating in their egg for 28 days. After they hatch the males and females are separated and sent to different farms. In Iowa, we raise mostly male poults.



# Toms




Toms are male turkeys. We raise mostly toms in Iowa. Toms grow larger than females. Toms typically reach their market weight of 38 pounds at 18 weeks old. Toms are used for products like deli meat after they are processed.

# Litter



All animals poop. Turkey manure is called litter. This litter can be used as a fertilizer on fields. It supplies nitrogen (N), Phosphorus (P), and potassium (K) back into the soil. Turkey manure also contains calcium, magnesium and many other micronutrients.

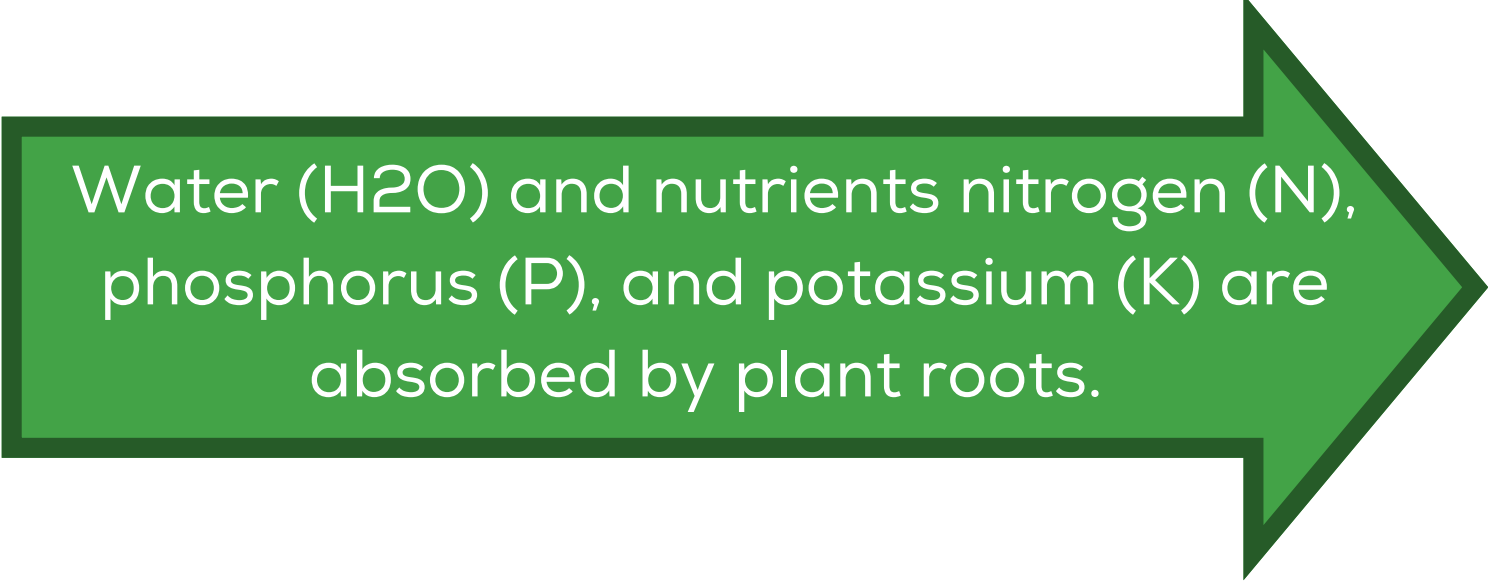
# Matter Arrows



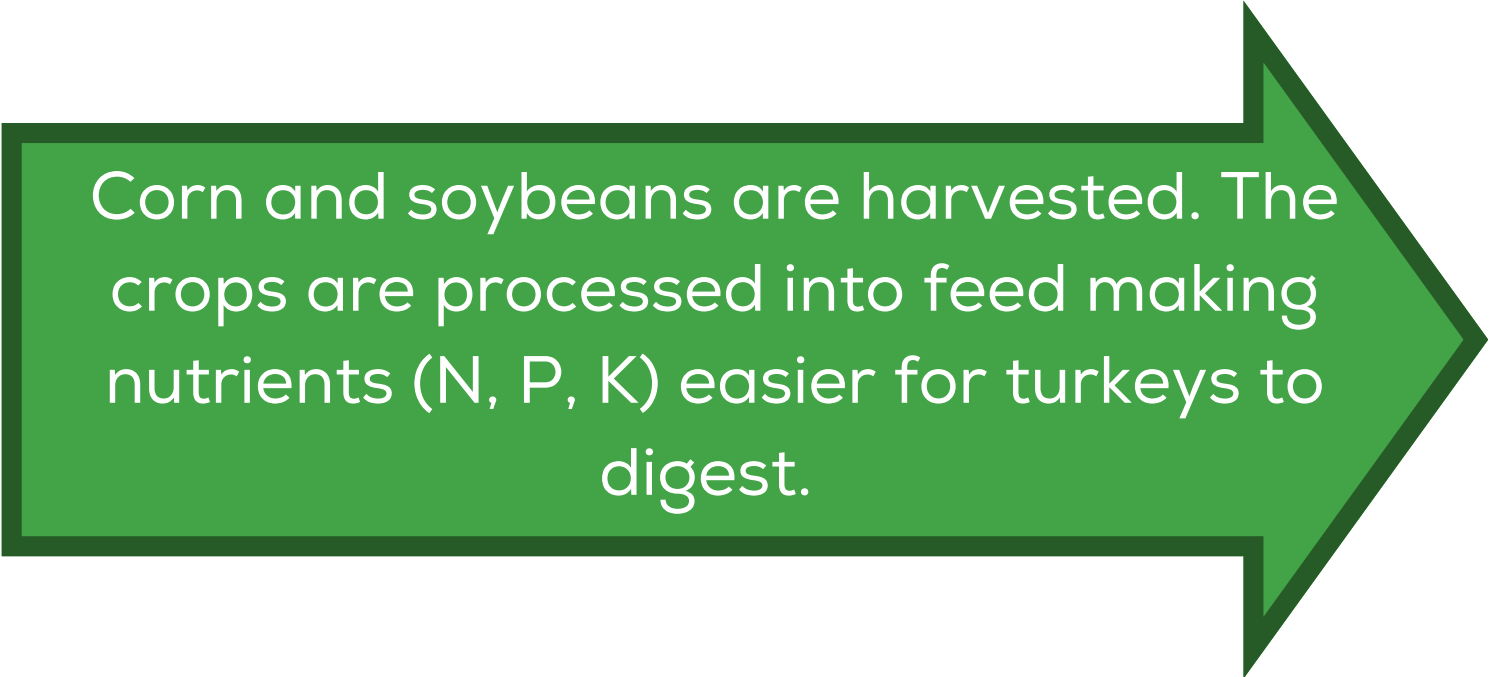
Carbon dioxide ( $\text{CO}_2$ ) is absorbed by plant leaves.



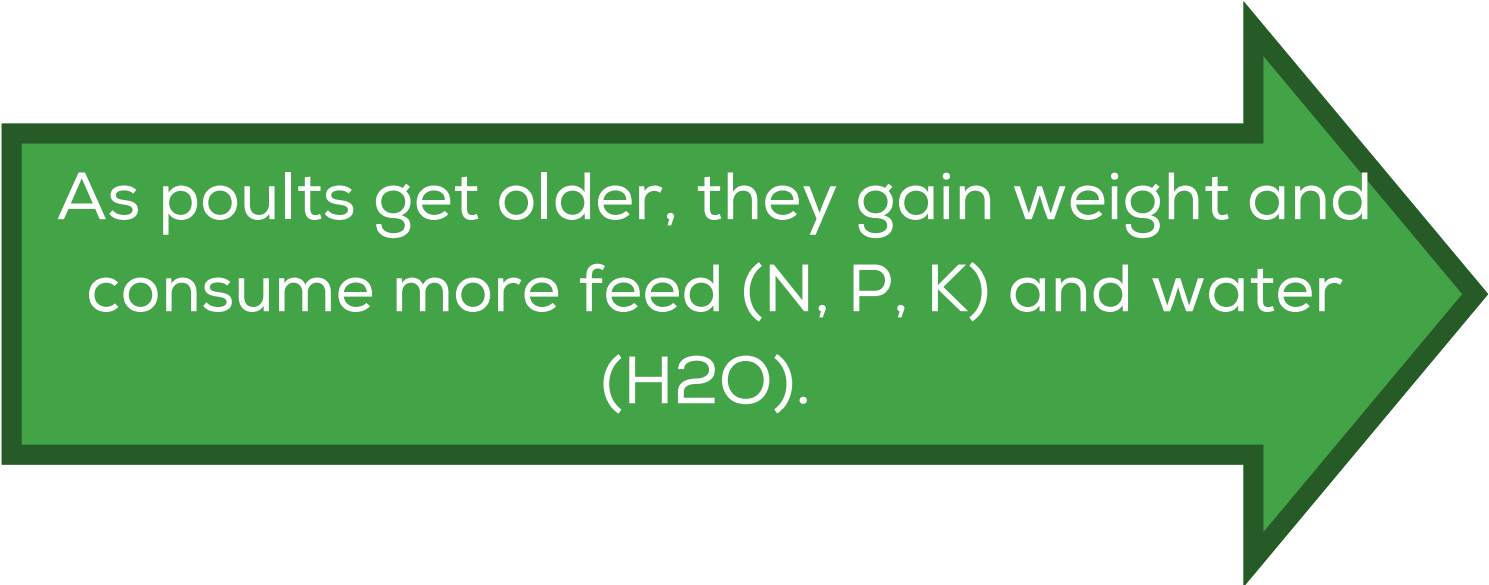
Plants release oxygen ( $\text{O}_2$ ).



Water ( $\text{H}_2\text{O}$ ) and nutrients nitrogen (N), phosphorus (P), and potassium (K) are absorbed by plant roots.



Corn and soybeans are harvested. The crops are processed into feed making nutrients (N, P, K) easier for turkeys to digest.



As poults get older, they gain weight and consume more feed (N, P, K) and water (H<sub>2</sub>O).



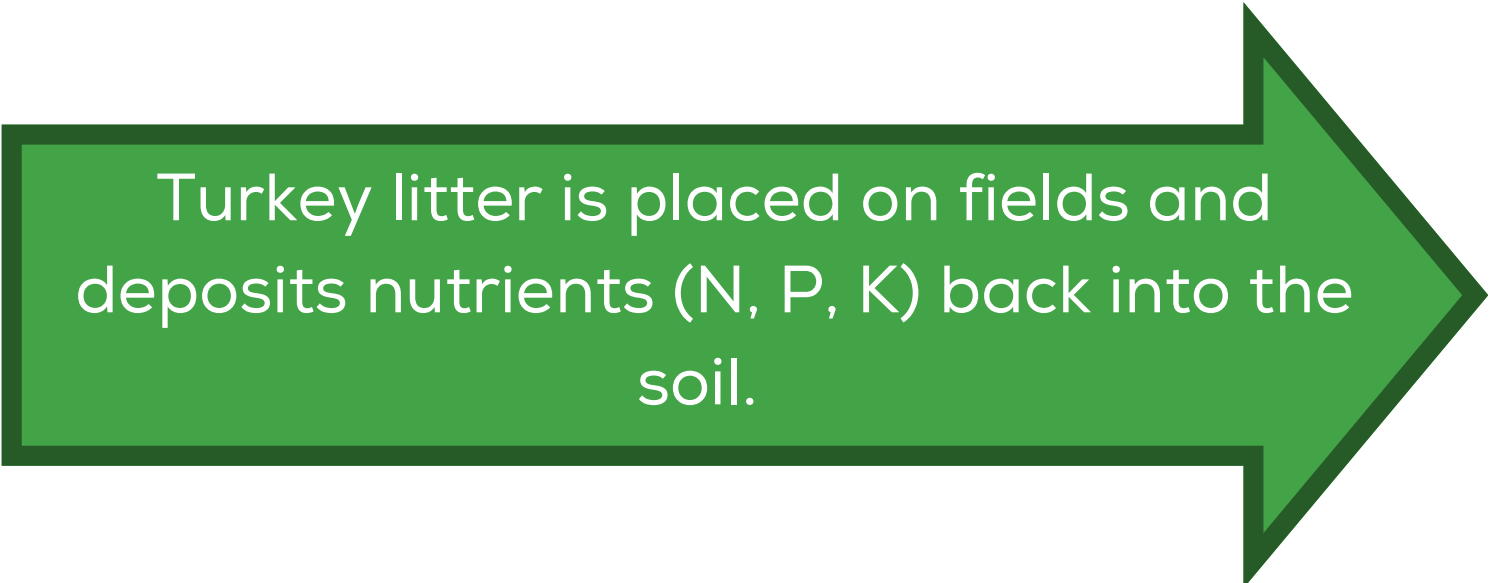
Turkeys exhale carbon dioxide (CO<sub>2</sub>).



Turkeys inhale oxygen (O<sub>2</sub>).



Matter that the turkeys don't digest is a co-product. In poultry this product is called litter.



Turkey litter is placed on fields and deposits nutrients (N, P, K) back into the soil.

# Energy Arrows



Plants transform solar energy into stored energy.



Plants break down matter to transform it into energy.



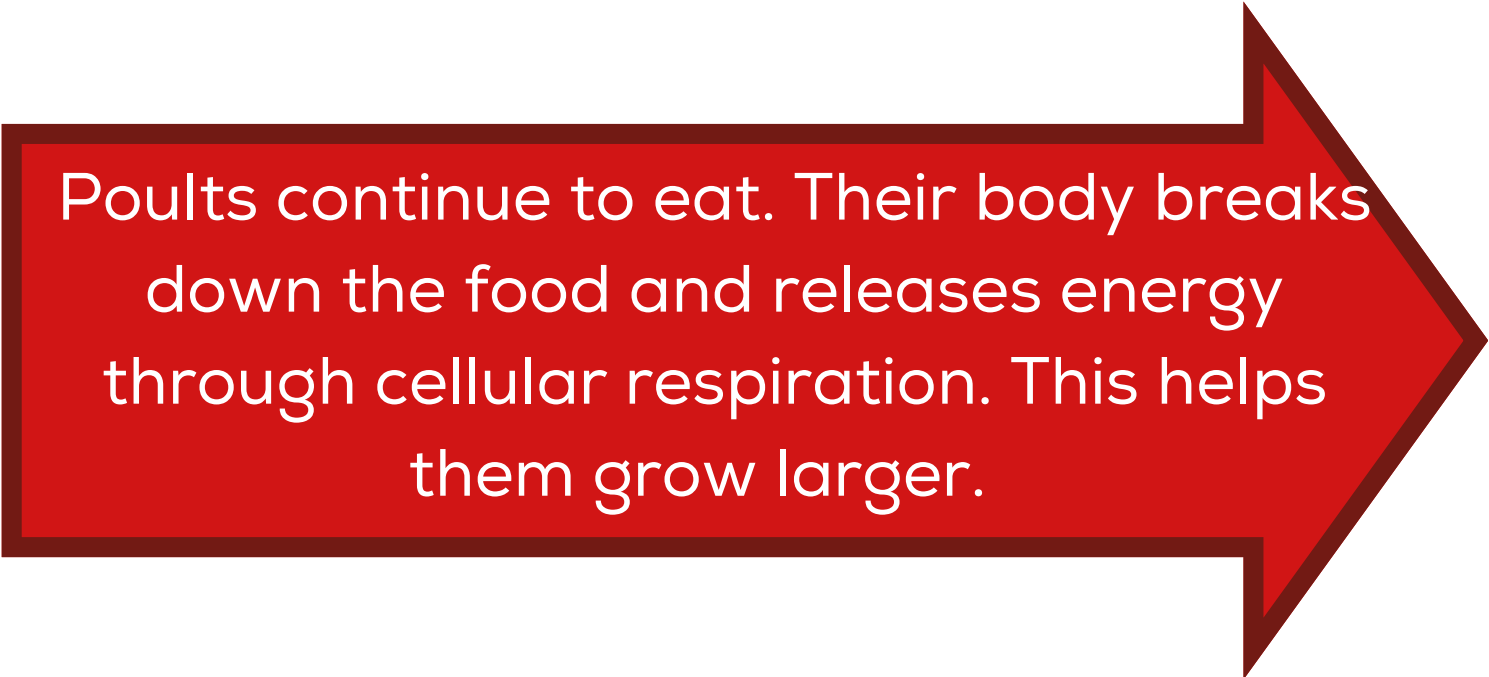
Cracked corn is a carbohydrate that stores a lot of energy.



Digestion of turkey feed releases energy.



Turkeys transfer heat energy into the air.



Poults continue to eat. Their body breaks down the food and releases energy through cellular respiration. This helps them grow larger.