

fertilizers

<https://www.agoramores.com/permaculture/soil/fertilizers>

Tags: [growing](#) · [soil](#)

Related

soil

- [compost crops](#)
- [Aqualfs](#)
- [nitrogen fixing](#)
- [Cover Crops](#)
- [don't weed dandelions, you need the phosorpas](#)
- [evergreen nitrogen](#)

growing

- [Perennial Tubers](#)
- [Almonds](#)
- [Sweet potato](#)
- [Bee Keeping](#)
- [Annual Tea](#)
- [cannabis marketing](#)

[#permaculture](#)

topics

[don't weed dandelions, you need the phosorpas](#)

primary

Nitrogen (N)

it seems to be the amount of green growth is a modest or limited explanatory power of nitrogen replishment.

organic sources

Manure: Animal manure, such as cow, horse, [poultry](#), or sheep manure, is a rich source of organic nitrogen. It releases nitrogen slowly as it decomposes, providing a steady supply to plants.

Compost: Compost is made from organic matter like kitchen scraps, yard waste, and plant residues. It contains a variety of nutrients, including nitrogen, in a form that plants can readily absorb.

Cover Crops: Leguminous cover crops like clover, vetch, and alfalfa have the ability to fix atmospheric nitrogen through symbiotic relationships with nitrogen-fixing bacteria. When these cover crops are incorporated into the soil, they release nitrogen, enriching the soil.

Green Manure: Similar to cover crops, green manure crops like mustard, rye, and [buckwheat](#) can be grown specifically to add organic matter and nitrogen to the soil. They are typically grown for a short period and then turned into the soil before flowering to release their nutrients.

Fish Emulsion: Fish emulsion is a liquid organic fertilizer made from fish waste. It's high in nitrogen and also contains other nutrients like phosphorus and potassium.

Blood Meal: Blood meal is a dry powder made from dried animal blood. It's a concentrated source of nitrogen and can be used to provide a quick nitrogen boost to plants.

Feather Meal: Feather meal is made from processed poultry feathers and is high in nitrogen. It releases nitrogen slowly over time as it breaks down in the soil.

Soybean Meal: Soybean meal is a byproduct of soybean oil production and is often used as an organic fertilizer. It's rich in nitrogen and also contains other nutrients like phosphorus and potassium.

Phosphorus (P)

organic

P dynamic accumulators **Bone Meal:** Bone meal is made from ground-up animal bones and is a rich source of phosphorus, typically in the form of calcium phosphate. It's slow-release and can provide a steady supply of phosphorus to plants over time.

Rock Phosphate: Rock phosphate is a natural mineral rock that contains high levels of phosphorus in the form of phosphate minerals. It's a slow-release fertilizer that provides phosphorus to plants as it gradually breaks down in the soil.

Guano: Guano, which is the excrement of seabirds or bats, is a valuable organic fertilizer rich in phosphorus, nitrogen, and other nutrients. It can be used as a soil amendment or a component of compost.

Fish Bone Meal: Fish bone meal is made from ground-up fish bones and is another organic source of phosphorus. It's particularly beneficial for promoting root development and flowering in plants.

Manure: Animal manure, such as cow, horse, poultry, or sheep manure, contains phosphorus along with other nutrients. Using composted manure as a soil amendment can help replenish phosphorus levels in the soil.

Seaweed: Seaweed or kelp meal is a natural organic fertilizer that contains phosphorus, along with a range of other nutrients and trace minerals. It can be used as a soil amendment or added to compost.

Bat Guano: Bat guano is another type of organic fertilizer derived from bat excrement. It's high in phosphorus and nitrogen and can be used to improve soil fertility and promote plant growth.

Cover Crops: Some leguminous cover crops, such as clover and vetch, have the ability to accumulate

phosphorus in their biomass. When these cover crops are incorporated into the soil, they release phosphorus as they decompose, enriching the soil.

organic sources

Potassium (K)

Wood Ash: Wood ash is a byproduct of burning wood, and it contains potassium carbonate along with other minerals. It can be used as an organic potassium fertilizer when applied to soil in moderation. However, it's essential to be cautious with wood ash application as it can raise soil pH and affect nutrient balance.

Banana Peels: Banana peels are rich in potassium and can be composted or used directly as a fertilizer. Dried and ground banana peels can also be added to potting soil or garden beds to provide a slow-release source of potassium.

Kelp Meal: Kelp meal is a natural organic fertilizer made from dried seaweed or kelp. It's rich in potassium, as well as other essential nutrients and trace minerals. Kelp meal can be used as a soil amendment or added to compost to boost potassium levels.

Greensand: Greensand is a naturally occurring mineral composed of glauconite, which is rich in potassium and other minerals. It's commonly used as an organic fertilizer and soil conditioner to improve soil structure and provide potassium to plants over time.

Compost: Compost is a valuable source of organic matter and nutrients, including potassium. Adding compost to soil helps improve soil fertility and provides a slow-release source of potassium for plants.

Manure: Animal manure, such as cow, horse, poultry, or sheep manure, contains potassium along with other nutrients. Using composted manure as a soil amendment can help replenish potassium levels in the soil.

Coffee Grounds: Used coffee grounds are a source of potassium and other nutrients. They can be added to compost or directly incorporated into the soil to provide potassium to plants.

Fish Emulsion: Fish emulsion is a liquid organic fertilizer made from fish waste. It's high in potassium, nitrogen, and other nutrients, making it suitable for providing a quick boost of potassium to plants.

secondary

Calcium (Ca)

Limestone: Limestone is a naturally occurring sedimentary rock composed primarily of calcium carbonate. It's commonly used as a soil amendment to raise soil pH and provide calcium to plants.

Gypsum: Gypsum, or calcium sulfate, is another natural mineral source of calcium. It can be used as a soil amendment to improve soil structure, reduce soil compaction, and supply calcium to plants.

Eggshells: Crushed eggshells are a source of calcium carbonate and can be added to compost or directly incorporated into the soil to provide calcium to plants. Eggshells break down slowly, releasing calcium over time.

Bone Meal: Bone meal is made from ground-up animal bones and is a rich source of calcium along with phosphorus. It can be used as a soil amendment to provide calcium to plants and improve soil fertility.

Seaweed: Seaweed or kelp meal is a natural organic fertilizer that contains calcium along with other nutrients and trace minerals. It can be used as a soil amendment or added to compost to boost calcium levels in the soil.

Magnesium (Mg)

Sulfur (S)

Iron (Fe)

Manganese (Mn)

Zinc (Zn)

Copper (Cu)

Molybdenum (Mo)

Boron (B)

Chlorine (Cl)

Cobalt (Co)

[https://chem.libretexts.org/Bookshelves/Introductory_Chemistry/Chemistry_for_Changing_Times_\(Hill_and_McCreary\)/20%3A_Chemistry_Down_on_the_Farm/20.01%3A_Farming_and_Chemicals-_Fertilizers](https://chem.libretexts.org/Bookshelves/Introductory_Chemistry/Chemistry_for_Changing_Times_(Hill_and_McCreary)/20%3A_Chemistry_Down_on_the_Farm/20.01%3A_Farming_and_Chemicals-_Fertilizers)

Merged Segment (.review/organized/F/Fertilizers.md)

**power: moderator: reference: tags: [] created: 2024-11-13T11:40
updated: 2026-06-28T00:50 date created: Wednesday, November
13th 2024, 4:40:11 pm date modified: Wednesday, August 6th 2025,
2:05:19 am time created: Wednesday, November 13th 2024, 4:40:11
pm last update: Thursday, August 7th 2025, 9:27:08 pm**

#permaculture

topics

don't weed dandelions, you need the phosorpas

primary

Nitrogen (N)

it seems to be the amount of green growth is a modest or limited explanatory power of nitrogen replishment.

organic sources

Manure: Animal manure, such as cow, horse, poultry, or sheep manure, is a rich source of organic nitrogen. It releases nitrogen slowly as it decomposes, providing a steady supply to plants.

Compost: Compost is made from organic matter like kitchen scraps, yard waste, and plant residues. It contains a variety of nutrients, including nitrogen, in a form that plants can readily absorb.

Cover Crops: Leguminous cover crops like clover, vetch, and alfalfa have the ability to fix atmospheric nitrogen through symbiotic relationships with nitrogen-fixing bacteria. When these cover crops are incorporated into the soil, they release nitrogen, enriching the soil.

Green Manure: Similar to cover crops, green manure crops like mustard, rye, and buckwheat can be grown specifically to add organic matter and nitrogen to the soil. They are typically grown for a short period and then turned into the soil before flowering to release their nutrients.

Fish Emulsion: Fish emulsion is a liquid organic fertilizer made from fish waste. It's high in nitrogen and also contains other nutrients like phosphorus and potassium.

Blood Meal: Blood meal is a dry powder made from dried animal blood. It's a concentrated source of nitrogen and can be used to provide a quick nitrogen boost to plants.

Feather Meal: Feather meal is made from processed poultry feathers and is high in nitrogen. It releases nitrogen slowly over time as it breaks down in the soil.

Soybean Meal: Soybean meal is a byproduct of soybean oil production and is often used as an organic fertilizer. It's rich in nitrogen and also contains other nutrients like phosphorus and potassium.

Phosphorus (P)

organic

P dynamic accumulators **Bone Meal:** Bone meal is made from ground-up animal bones and is a rich source of phosphorus, typically in the form of calcium phosphate. It's slow-release and can provide a steady supply of phosphorus to plants over time.

Rock Phosphate: Rock phosphate is a natural mineral rock that contains high levels of phosphorus in the form of phosphate minerals. It's a slow-release fertilizer that provides phosphorus to plants as it gradually

breaks down in the soil.

Guano: Guano, which is the excrement of seabirds or bats, is a valuable organic fertilizer rich in phosphorus, nitrogen, and other nutrients. It can be used as a soil amendment or a component of compost.

Fish Bone Meal: Fish bone meal is made from ground-up fish bones and is another organic source of phosphorus. It's particularly beneficial for promoting root development and flowering in plants.

Manure: Animal manure, such as cow, horse, poultry, or sheep manure, contains phosphorus along with other nutrients. Using composted manure as a soil amendment can help replenish phosphorus levels in the soil.

Seaweed: Seaweed or kelp meal is a natural organic fertilizer that contains phosphorus, along with a range of other nutrients and trace minerals. It can be used as a soil amendment or added to compost.

Bat Guano: Bat guano is another type of organic fertilizer derived from bat excrement. It's high in phosphorus and nitrogen and can be used to improve soil fertility and promote plant growth.

Cover Crops: Some leguminous cover crops, such as clover and vetch, have the ability to accumulate phosphorus in their biomass. When these cover crops are incorporated into the soil, they release phosphorus as they decompose, enriching the soil.

organic sources

Potassium (K)

Wood Ash: Wood ash is a byproduct of burning wood, and it contains potassium carbonate along with other minerals. It can be used as an organic potassium fertilizer when applied to soil in moderation. However, it's essential to be cautious with wood ash application as it can raise soil pH and affect nutrient balance.

Banana Peels: Banana peels are rich in potassium and can be composted or used directly as a fertilizer. Dried and ground banana peels can also be added to potting soil or garden beds to provide a slow-release source of potassium.

Kelp Meal: Kelp meal is a natural organic fertilizer made from dried seaweed or kelp. It's rich in potassium, as well as other essential nutrients and trace minerals. Kelp meal can be used as a soil amendment or added to compost to boost potassium levels.

Greensand: Greensand is a naturally occurring mineral composed of glauconite, which is rich in potassium and other minerals. It's commonly used as an organic fertilizer and soil conditioner to improve soil structure and provide potassium to plants over time.

Compost: Compost is a valuable source of organic matter and nutrients, including potassium. Adding compost to soil helps improve soil fertility and provides a slow-release source of potassium for plants.

Manure: Animal manure, such as cow, horse, poultry, or sheep manure, contains potassium along with other nutrients. Using composted manure as a soil amendment can help replenish potassium levels in the soil.

Coffee Grounds: Used coffee grounds are a source of potassium and other nutrients. They can be added to compost or directly incorporated into the soil to provide potassium to plants.

Fish Emulsion: Fish emulsion is a liquid organic fertilizer made from fish waste. It's high in potassium, nitrogen, and other nutrients, making it suitable for providing a quick boost of potassium to plants.

secondary

Calcium (Ca)

limestone: Limestone is a naturally occurring sedimentary rock composed primarily of calcium carbonate. It's commonly used as a soil amendment to raise soil pH and provide calcium to plants.

Gypsum: Gypsum, or calcium sulfate, is another natural mineral source of calcium. It can be used as a soil amendment to improve soil structure, reduce soil compaction, and supply calcium to plants.

Eggshells: Crushed eggshells are a source of calcium carbonate and can be added to compost or directly incorporated into the soil to provide calcium to plants. Eggshells break down slowly, releasing calcium over time.

Bone Meal: Bone meal is made from ground-up animal bones and is a rich source of calcium along with phosphorus. It can be used as a soil amendment to provide calcium to plants and improve soil fertility.

Seaweed: Seaweed or kelp meal is a natural organic fertilizer that contains calcium along with other nutrients and trace minerals. It can be used as a soil amendment or added to compost to boost calcium levels in the soil.

Magnesium (Mg)

Sulfur (S)

Iron (Fe)

Manganese (Mn)

Zinc (Zn)

Copper (Cu)

Molybdenum (Mo)

Boron (B)

Chlorine (Cl)

Cobalt (Co)

[https://chem.libretexts.org/Bookshelves/Introductory_Chemistry/Chemistry_for_Changing_Times_\(Hill_and_McCreary\)/20%3A_Chemistry_Down_on_the_Farm/20.01%3A_Farming_and_Chemicals-_Fertilizers](https://chem.libretexts.org/Bookshelves/Introductory_Chemistry/Chemistry_for_Changing_Times_(Hill_and_McCreary)/20%3A_Chemistry_Down_on_the_Farm/20.01%3A_Farming_and_Chemicals-_Fertilizers)

created: 2024-11-13T11:40 updated: 2025-07-16T14:55

**power: moderator: reference: tags: [] created: 2024-11-13T11:40
updated: 2026-06-28T00:38 date created: Wednesday, November
13th 2024, 4:40:11 pm date modified: Wednesday, August 6th 2025,
2:05:19 am time created: Wednesday, November 13th 2024, 4:40:11
pm last update: Thursday, August 7th 2025, 9:27:08 pm**