

Organic Fertilizers and Soil Amendments (N=nitrogen, P=phosphate, K=potassium or potash)

| Item | Description | Examples | N-P-K | Sources |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Crop residue | For most gardens, roots and above-ground plant growth are the most important sources of organic matter. When choosing varieties and crop rotations, consider how much residue will be generated, and how many months each year plants will be growing and creating organic matter. | <ul style="list-style-type: none"> • Healthy leaves, stems, and chopped up stalks from crops • Brassica leaves | <ul style="list-style-type: none"> • | <ul style="list-style-type: none"> • Chopping organics • Compost bins • Heaping organics • Trenching organics |
| Green manure (cover crop) | Finding appropriate cover crops is difficult in regions with a short growing season, but there are options and the research and development of appropriate crops is expanding. | <ul style="list-style-type: none"> • Crimson clover • Field peas • Hairy vetch • Medics • Red clover • Sweet clover • White clover • Winter (annual) rye | <ul style="list-style-type: none"> • • • • • • • • | <ul style="list-style-type: none"> • Kerns Landscaping • Mother Earth Gardens • Gertens • Online |
| Livestock manure | Spreading manure over your land is an excellent way to enhance organic matter, supply nutrients, and prevent manure from becoming a pollutant. If animals are not part of your operation, neighboring farmers may be a source. | <ul style="list-style-type: none"> • Bat Guano – High N • Bat Guano – High P • Blood meal • Bone meal • Chicken manure • Cow manure • Fish emulsion • Fish powder • Fish meal • Fish parts • Horse manure • Sheep Manure | <ul style="list-style-type: none"> • 10-3-1 • 3-10-1 • 12-0-0 • 3-15-0 • 1.7-2.4-1.7 • 1.1-0.7-1.2 • 5-2-2 • 5-2-2 • 12-.25-1 • 10-6-2 • .70-.30-.60 • .70-.30-.90 | <ul style="list-style-type: none"> • Cowsmo • Garden Centers • Kerns Landscaping • Mother Earth Gardens • Pegasus Riding School • Hobby farms • Local chicken coops |
| Processed wastes | Vegetable processing plants, wood processing plants, breweries, and other industries generate organic wastes that can be useful soil amendments. | <ul style="list-style-type: none"> • Alfalfa meal or pellets • Brewery waste (hops) • Corn gluten meal • Cottonseed meal • Kelp meal and powder • Kitchen compost • Mushroom compost • Soybean Meal (SBM) • Stump grindings | <ul style="list-style-type: none"> • 2-1-2 • • 9-0-0 • 6-0.4-1.5 • 1-0-4 • 2.5-.75-1.5 • 2-1.5-3 • 7-2-1 • | <ul style="list-style-type: none"> • Breweries • Commercial kitchens • Garden centers • Home kitchen • Tree trimmers |
| Sewage sludge and biosolids | Human wastes are also nutrient-rich. Spreading sludge on land is cheaper for communities than some other methods of treatment and disposal. If your local community will make it available, ask about the source and content of the sludge. | <ul style="list-style-type: none"> • Milorganite • Urea • Night soil | <ul style="list-style-type: none"> • 5-2-0 • • | <ul style="list-style-type: none"> • Garden centers • etc. |

How common manures measure up

| Manure | Chicken | Dairy cow | Horse | Steer | Rabbit | Sheep |
|--------|-------------|-------------|-------------|-------------|-------------|-------------|
| N-P-K | 1.1-.80-.50 | .25-.15-.25 | .70-.30-.60 | .70-.30-.40 | 2.4-1.4-.60 | .70-.30-.90 |

Sources: *Rodale's All-New Encyclopedia of Organic Gardening*, *An Illustrated Guide to Organic Gardening*, by Sunset Publishing, and the *Rodale Guide to Composting*.

Note: Nutrient values of manures vary greatly, depending on the diet and age of the animals, and the nature and quantity of bedding in the mix.

Chicken manure

Poultry manure (chicken in particular) is the richest animal manure in N-P-K. Chicken manure is considered "hot" and must be composted before adding it to the garden. Otherwise, it will burn any plants it comes in contact with.

Dairy (cow) manure

"Dairy Manure may be the single most useful soil-builder around," says Ann Lovejoy, lifetime organic gardener and writer in Seattle, Washington. "Washed dairy manure from healthy cows is just about perfect for garden use; it can be used as a topdressing and for soil improvement," she adds. Dairy manure is preferable to steer manure, which has a higher salt and weed seed content. Though cow manure has low nutrient numbers, that's what makes it safe to use in unlimited quantities.

Horse manure

Horse manure is about half as rich as chicken manure, but richer in nitrogen than cow manure. And, like chicken droppings, it's considered "hot". Horse manure often contains a lot of weed seeds, which means it's a good idea to compost it using a hot composting method.

Rabbit manure

Rabbit manure is even higher in nitrogen than some poultry manures and it also contains a large amount of phosphorus--important for flower and fruit formation.

Sheep manure

Sheep manure is another "hot" manure. It is somewhat dry and very rich. Manure from sheep fed hay and grain will be more potent than manure from animals that live on pasture.

Steer manure

Steer manure is one of the old standbys, but it's not the most beloved because it often contains unwanted salts and weed seeds.

<http://www.plantea.com/manure.htm>

<http://www.allotment-garden.org/compost-fertiliser/npk-manures-compost.php>

(Additional soil amendments and fillers: [Greensand](#), [Gypsum](#), [Lime](#), [Potash](#))