

Crops and soil organic matter

The contribution of a crop to the soil organic matter is expressed in effective organic matter (EOM). EOM is the part of the organic matter that is still left in soil one year after cultivation. Organic matter consists of both a dynamic (labile) and a stable fraction. The more nitrogen, the faster the breakdown by mineralization.

| CROP | EOM (kg/ha) | CROP | EOM (kg/ha) |
|---|----------------|--|----------------|
| Achillea | 0 | Crocuses | 150 |
| Aconitum (monkshood) | 0 | Daffodil, large bulbs | 700 |
| Agapanthus (African Lily) | 0 | Daffodil, small bulbs | 200 |
| Alchemilla Mollis | 0 | Daffodils | 500 |
| Alfalfa (year 1) | 1350 | Dahlia (incl. crop residue) | 750 |
| Alfalfa (year 2) | 2050 | Delphinium | 0 |
| Allium | 300 | Dicentra | 0 |
| Amaranthus | 0 | Dried flowers | 0 |
| Anthirrhinum (snapdragon) | 0 | Dwarf beans | 650 |
| Asclepias | 0 | Dwarf French beans (incl. straw) | 650 |
| Asparagus (existing) | 1000 | Dwarf string beans (excl. harvest residue) | 170 |
| Asparagus (new) | 0 | Dwarf string beans (incl. harvest residue) | 650 |
| Aster | 250 | Echinops (globe thistle) | 0 |
| Astilbe (false spirea) | 0 | Endive | 450 |
| Astrantia | 0 | Eremurus (foxtail lilies) | 0 |
| Beans (other) (excl. crop residue) | 170 | Fallow black soil | 0 |
| Beans (other) (incl. crop residue) | 650 | Fallow land | 0 |
| Beetroot | 600 | Field beans (excl. harvest residue) | 170 |
| Beetroots for seed (excl. crop residue) | 450 | Field beans (excl. harvest residue) | 1000 |
| Begonia (tuberous) | 0 | Flax | 100 |
| Belgian endive | 600 | Florence fennel (excl. foliage) | 400 |
| Broad beans | 650 | Florence fennel (incl. foliage) | 750 |
| Broccoli | 1150 | Flower seed | 0 |
| Brussels sprouts (excl. stalk) | 1300 | Fodder beet (excl. head + leaf residue) | 975 |
| Brussels sprouts (incl. stalk) | 2000 | Fodder beet (excl. head + leaf residue) | 1275 |
| Bunching carrots | 700 | Forage peas | 200 |
| Bupleurum | 0 | Garlic | 300 |
| Cabbage (other) | 1150 | Gentian | 0 |
| Campanula | 0 | Gladioli (cormels) | 1900 |
| Caraway (incl. straw) | 1275 | Gladioli (corms) | 1000 |
| Carnation (spray) | 250 | Grain maize | 200 |
| Carrots (other) | 100 | Grass seed | 2300 |
| Carthamus | 0 | Grassland (autumn sowing) | 450 |
| Cauliflower (excl. crop residue) | 1000 | Grassland (year 1) | 1175 |
| Cauliflower (incl. crop residue) | 1150 | Grassland (year 2 or more) | 1400 |
| Celeriac (excl. foliage) | 400 | Gypsophila (baby's-breath) | 0 |
| Celeriac (incl. foliage) | 1000 | Headed cabbage | 1150 |
| Celery | 450 | Helenium | 0 |
| Chelone | 0 | Helianthus (sunflower) | 0 |
| Chervil | 300 | Helleborus (Christmas rose) | 0 |
| Chinese cabbage | 450 | Hemp | 660 |
| Chives | 300 | Herbs | 300 |
| Chrysanthemum | 0 | Hosta | 0 |
| Climbing green beans | 650 | Hyacinths | 350 |
| Clover | 1200 | Hydrangea | 0 |
| Common chicory | 700 | Hypericum | 0 |
| Corn Cob Mix | 1900 | Iceberg lettuce | 450 |
| Courgettes | 250 | Irises | 400 |

| CROP | EOM (kg/ha) | CROP | EOM (kg/ha) |
|--|----------------|---|----------------|
| Japanese onions | 300 | Radish | 0 |
| Kale (excl. crop residue) | 750 | Rapeseed | 975 |
| Kale (incl. crop residue) | 900 | Rapini/broccoli rabe | 0 |
| Kohlrabi (excl. leaf residue) | 300 | Red cabbage (excl. harvest residue) | 1000 |
| Kohlrabi (incl. leaf residue) | 550 | Red cabbage (incl. harvest residue) | 1150 |
| Kohlrabi from seed | 300 | Rhubarb | 0 |
| Lathyrus | 0 | Rudbeckia | 0 |
| Leek (excl. leaf residue) | 100 | Savoy cabbage (excl. harvest residue) | 1000 |
| Leek (incl. leaf residue) | 450 | Savoy cabbage (incl. harvest residue) | 1440 |
| Lettuce (head) | 300 | Scabiosa (pincushion flower) | 0 |
| Lilies | 450 | Scorzonera (black salsify) | 600 |
| Limonium | 0 | Seed onions | 300 |
| Lysimachia | 0 | Seed potatoes | 875 |
| Malting barley (excl. straw) | 1310 | Shallots | 500 |
| Malting Barley (incl. straw) | 1940 | Silage maize (continuous cultivation) | 660 |
| Mangetout | 170 | Silage maize (crop rotation) | 660 |
| Matthiola (stock) | 0 | Solidago (goldenrods) | 0 |
| Nigella | 0 | Specialty flower bulbs | 0 |
| Oat (excl. straw) | 1570 | Spinach | 300 |
| Oat (incl. straw) | 2470 | Spring onions | 300 |
| Onion sets | 300 | Strawberries | 300 |
| Orthogalum (Star-of-Bethlehem) | 0 | Sugar beets (excl. head + leaf residue) | 375 |
| Other arable crops | 0 | Sugar beets (incl. head + leaf residue) | 1275 |
| Other flower bulbs | 0 | Summer barley (excl. straw) | 1310 |
| Other flower crops | 0 | Summer barley (incl. straw) | 1940 |
| Other vegetable crops | 0 | Summer carrots | 700 |
| Pak choi | 450 | Summer rye (excl. straw) | 1910 |
| Papaver | 0 | Summer rye (incl. straw) | 1940 |
| Paris market carrot | 700 | Summer wheat (excl. straw) | 1630 |
| Parsley | 250 | Summer wheat (incl. straw) | 2590 |
| Pearl onions | 300 | Swede (excl. foliage) | 550 |
| Peas (canning/freezing) (excl. crop residue) | 170 | Swede (incl. foliage) | 1150 |
| Peas (canning/freezing) (incl. crop residue) | 1000 | Sweet William (Dianthus barbatus) | 0 |
| Peas (other) (excl. crop residue) | 170 | Triticale (excl. straw) | 1600 |
| Peas (other) (incl. crop residue) | 1000 | Triticale (incl. straw) | 2530 |
| Peony/Paeonia | 0 | Tulips | 500 |
| Phlox | 0 | Veronica | 0 |
| Physalis (Chinese lantern) | 0 | Vicia (vetch) | 645 |
| Pickling cucumber | 250 | White cabbage (excl. crop residue) | 1000 |
| Pickling onions | 300 | White cabbage (excl. crop residue) | 1150 |
| Plant grain silage | 750 | Winter barley (excl. straw) | 1570 |
| Pointed cabbage (excl. harvest residue) | 1000 | Winter barley (incl. straw) | 2350 |
| Pointed cabbage (incl. harvest residue) | 1150 | Winter carrots | 700 |
| Poppy seed | 750 | Winter rye (excl. straw) | 1500 |
| Potato (consumption) | 875 | Winter rye (incl. straw) | 2520 |
| Potatoes for starch | 875 | Winter wheat (excl. straw) | 1640 |
| Pumpkin | 650 | Winter wheat (incl. straw) | 2630 |
| Radicchio | 300 | Zantedeschia (arum lily or calla lily) | 0 |
| Radicchio rosso | 300 | | |

Manure and soil organic matter

The contribution of manure to the soil organic matter is expressed in effective organic matter (EOM). EOM is the part of the organic matter that is still left in soil one year after cultivation. Organic matter consists of both a dynamic (labile) and a stable fraction. The more nitrogen, the faster the breakdown by mineralization.

| MANURE TYPE | EOM | N | w.c. N | w.c. N |
|----------------------------|--------|--------|--------|--------|
| | ton/ha | kg/ton | autumn | spring |
| Broiler manure (solid) | 280 | 30,5 | 0,25 | 0,62 |
| Cattle manure (solid) | 85 | 6,4 | 0,25 | 0,48 |
| Cattle slurry | 5 | 4 | 0,25 | 0,93 |
| Dry chicken manure (solid) | 190 | 24,1 | 0,25 | 0,58 |
| Duck manure (solid) | 105 | 8,3 | 0,25 | 0,55 |
| Fox manure (solid) | 95 | 17,7 | 0,25 | 0,8 |
| Goat manure (solid) | 90 | 8,5 | 0,25 | 0,65 |
| Horse manure (solid) | 125 | 5 | 0,25 | 0,8 |
| Liquid cattle manure | 30 | 4,2 | 0,25 | 0,66 |
| Liquid chicken manure | 25 | 10,2 | 0,25 | 0,84 |
| Liquid porker manure | 18 | 7 | 0,25 | 0,75 |
| Liquid sow manure | 10 | 4,2 | 0,25 | 0,8 |
| Liquid veal calf manure | 5 | 3 | 0,25 | 0,82 |
| Mink manure (solid) | 95 | 17,7 | 0,25 | 0,8 |
| Pelleted chicken manure | 230 | 19,1 | 0,25 | 0,73 |
| Pig manure (solid) | 65 | 7,5 | 0,25 | 0,65 |
| Porker slurry | 2 | 6,5 | 0,25 | 0,94 |
| Rabbit manure (solid) | 185 | 13,6 | 0,25 | 0,65 |
| Sheep manure (solid) | 105 | 6,6 | 0,25 | 0,65 |
| Sow slurry | 3 | 2 | 0,25 | 0,94 |
| Turkey manure (solid) | 230 | 24,7 | 0,25 | 0,82 |

| COMPOST TYPE | EOM | N | w.c. N | w.c. N |
|--|--------|--------|--------|--------|
| | ton/ha | kg/ton | autumn | spring |
| AVEBE compost | 110 | 3,3 | 0,10 | 0,10 |
| Green and food waste compost | 183 | 6,9 | 0,10 | 0,10 |
| Green waste compost | 190 | 8,5 | 0,10 | 0,10 |
| Humuskal (a humus-lime mix) | 150 | 7,3 | 0,10 | 0,10 |
| Humus-rich soil | 88 | 4 | 0,10 | 0,10 |
| Laco compost (certified compost) | 193 | 8,6 | 0,10 | 0,10 |
| Nature compost (grass + woody waste compost) | 185 | 6,8 | 0,10 | 0,10 |
| Recro compost (certified compost) | 132 | 8,9 | 0,10 | 0,10 |
| Spent mushroom compost | 126 | 5,2 | 0,10 | 0,25 |

w.c. = working coefficient

Green manuring and soil organic matter

The contribution of green manuring to the soil organic matter is expressed in effective organic matter (EOM). EOM is the part of the organic matter that is still left in soil one year after cultivation. Organic matter consists of both a dynamic (labile) and a stable fraction. The more nitrogen, the faster the breakdown by mineralization.

| GREEN MANURING | EOM (kg/ha) | N-delivery (kg/ha) |
|--|----------------|-----------------------|
| Black medick | 790 | 60 |
| Bristle oat (Avena Strigosa) | 850 | 30 |
| English ryegrass (sown among straw and stalks) | 980 | 30 |
| English ryegrass (sown below cover crop) | 1155 | 30 |
| Evening primrose | 700 | 60 |
| Field mustard | 840 | 30 |
| Forage turnip | 830 | 30 |
| Italian ryegrass (sown among straw and stalks) | 1080 | 30 |
| Italian ryegrass (sown below cover crop) | 1255 | 30 |
| Oilseed radish | 850 | 30 |
| Phacelia | 850 | 30 |
| Red clover (sown below cover crop) | 1165 | 60 |
| Summer rapeseed | 770 | 30 |
| Tagetes | 865 | 30 |
| Temporary grassland (autumn sowing) | 450 | 30 |
| Vicia (vetch) | 645 | 30 |
| White clover (sown below cover crop) | 850 | 60 |
| White mustard | 850 | 30 |
| Winter rye | 850 | 30 |