

C05F

ORGANIC FERTILISERS NOT COVERED BY SUBCLASSES [C05B](#), [C05C](#), e.g. FERTILISERS FROM WASTE OR REFUSE

Definition statement

This place covers:

Materials affecting the growth of plants solely by supplying nutrients ordinarily required for growth or materials which are used to prevent or cure mineral deficiencies in plants as listed below:

- Fertilisers made from animal corpses or parts thereof;
- Fertilisers from human or animal excrements, e.g. manure;
- Fertilisers from distillery waste, e.g., molasses, vinasses, sugar plant or similar wastes or residues;
- Fertilisers from waste water, e.g. sewage sludge, sea slime, ooze or similar masses;
- Fertilisers from household or town refuse;
- Other organic fertilisers, e.g. peat or brown coal.

Preparation of fertilisers characterised by the composting step or apparatus therefor.

Preparation, treatment or modification of any of the materials above: e.g. by chemical means (e.g. addition of stabilisers or preservatives), physical means (e.g. irradiation, concentration, purification or separation) or combination of both chemical and physical means, with the proviso that the resultant product is proper for classification in this subclass.

Methods of preparing fertilisers from waste or refuse in general.

Apparatus for the manufacture thereof.

Relationships with other classification places

In contrast to fertilisers ([C05](#)), plant growth regulators ([A01N](#)) are those materials that alter a plant through chemical modification of plant metabolism, for example auxins.

Soil-conditioning materials or soil-stabilising materials are classified in group [C09K 17/00](#) and cover mixtures of soil-conditioning materials or soil-stabilising materials with fertilisers where the composition in question is characterised by the soil-conditioning or soil-stabilising properties.

Mixtures of fertilisers are covered individually by different subclasses of class [C05](#), while mixtures of soil-conditioning materials or soil-stabilising materials with fertilisers where the composition in question is characterised by the fertilising activity and fertilisers characterised by their form are classified in subclass [C05G](#).

Whilst the subject matter of subclass [C05F](#) deals with organic fertilisers not covered by subclasses [C05B](#) and [C05C](#) per se, group [A01C 3/00](#) deals with methods of treating manure/methods of manuring per se and group [A01C 21/00](#) deals with methods of fertilising per se.

Inorganic fertilisers not covered by subclasses [C05B](#) or [C05C](#) and fertilisers producing carbon dioxide are classified in subclass [C05D](#).

Apparatus relevant to the class [C05](#) (if no specific entry for apparatus is provided, e.g. group [C05F 1/02](#) - apparatus for the manufacture of fertilisers from animal corpses or parts thereof) are classified in the place dealing with the process or in the place dealing with the products as such. Additionally, individual or specific types of apparatus should be classified in the relevant area of the IPC, e.g. in group [F26B 17/00](#).

References

References out of a residual place

Examples of places in relation to which this place is residual:

Phosphatic fertilisers	C05B
Nitrogenous fertilisers	C05C

Informative references

Attention is drawn to the following places, which may be of interest for search:

Harrows with means for distributing fertilisers	A01B 25/00
Fertiliser distributors	A01C 15/00
Mowers combined with dispensing apparatus, e.g. for fertilisers	A01D 43/14
Horticulture; Cultivation of vegetables, flowers, rice, fruit, vines, hops or seaweed; Forestry; Watering	A01G
Root feeders; Injecting fertilisers into the roots	A01G 29/00
Earthworms	A01K 67/33
Processes or devices for granulating materials, in general	B01J 2/00
Destroying solid waste or transforming solid waste into something useful or harmless	B09B 3/00
Methods or installations for de-watering, drying or incineration of sludge	C02F 11/00
Soil-conditioning or soil-stabilising materials	C09K 17/00

Special rules of classification

- An ingredient in a mixture of fertilisers, or a single fertiliser which contains more than one of the chemical elements on which the subdivision into subclasses is based, is classified only in the first of the appropriate places. Thus, a nitrophosphate or an ammoniated superphosphate is classified in subclass [C05B](#) but not in subclass [C05C](#), magnesium phosphate is classified in subclass [C05B](#) but not in subclass [C05D](#), and calcium cyanamide in subclass [C05C](#) but not in subclass [C05D](#).
- Information relative to the form in which the fertiliser is presented, e.g. granulation, coating, etc. is always given in addition to the chemical composition of the fertilisers.
- Any ingredient in a mixture, which is considered to present information of interest for search, is also classified using a combination of classification symbols. If a document concerns embodiments comprising mixtures whose elements are covered individually by different subclasses, groups or subgroups, the document is classified with a C-Set.

The following rules apply:

- The first element of the C-Set corresponds to the first relevant (sub)group mentioned in the classification scheme independently of the importance or relevance of the element in the whole fertiliser mixture;
- the following element or elements of the C-Set are added sequentially in the order in which they appear in the classification scheme to the first element using a ",".

Example: a fertiliser containing a mixture of superphosphate ([C05B 1/02](#)), ammonium nitrate ([C05C 1/00](#)) and potassium chloride ([C05D 1/02](#)) will be given the C-Sets [C05B 1/02](#), [C05C 1/00](#), [C05D 1/02](#).

Example: a fertiliser containing a mixture of either superphosphate ([C05B 1/02](#)) or ammonium nitrate ([C05C 1/00](#)) with potassium chloride ([C05D 1/02](#)) will be given the C-Sets [C05B 1/02](#), [C05D 1/02](#) and [C05C 1/00](#), [C05D 1/02](#).

- Processes where the composting step is the characterising feature, or apparatus therefor, are classified in groups [C05F 17/00](#) or [C05F 17/90](#).

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

fertiliser (fertiliser material)	natural or artificial substance containing the chemical elements that improve growth and productiveness of plants.
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Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

- "amendment", "plant food", "plant nutrient", "agricultural chemical", "enrichment" and "fertiliser"

In patent documents, the following words/expressions are often used with the meaning indicated:

enrichment	fertiliser
soil amendment	composition capable of modifying the chemical (pH) or physical (structure) condition of soils for agricultural purposes

C05F 1/00

Fertilisers made from animal corpses, or parts thereof

Definition statement

This place covers:

Fertilisers made from whole animal corpses; from parts of animals which can not be more specifically classified in the subgroups of this group, such as non differentiated processes for treating fish or meat or animal derived materials; fertilisers from general materials such as proteinaceous materials and animal material not further specified.

References

Limiting references

This place does not cover:

Fertilisers from animal excrements	C05F 3/00
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Special rules of classification

Mixtures of these fertilizers with other fertilizers belonging individually to other groups of the classification will be given a Combination-set as explained under the Note for class [C05](#).

C05F 3/00

Fertilisers from human or animal excrements, e.g. manure

Definition statement

This place covers:

Fertilisers from animal excrements, manure, liquid manure, etc.

References

Limiting references

This place does not cover:

Fertilisers from waste water, sludge or similar masses	C05F 7/00
Processing liquids by a fermentation step	C05F 17/40
Treating manure	A01C 3/00

Special rules of classification

Documents relating to a manure composition or process for its preparation in combination with an apparatus for obtaining thereof are classified as the Combination-set ([C05F 3/00](#), [C05F 3/06](#)).

Mixtures of these fertilizers with other fertilizers belonging individually to other groups of the classification will be given a Combination-set as explained in the Note under [C05](#).

C05F 3/06

Apparatus for the manufacture

Definition statement

This place covers:

Apparatus for the manufacture of fertilisers from excrements of animal or human origin.

Relationships with other classification places

Closets for human excrements are classified under [A47K 11/00](#).

Treatment of animal manure is classified under [A01C 3/00](#).

References

Limiting references

This place does not cover:

Apparatus for composting excrement	C05F 17/90
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Special rules of classification

- Apparatus to manufacture fertilisers are classified primarily in the corresponding groups of the [C05](#) field.
- All information contained in a document, claims but also examples or other part of the description can be classified if they are considered to contain relevant information in the field.
- Group [C05F 3/06](#) covers all apparatus for the manufacture of fertilisers from excrements of animal or human origin.
- Since the group has no further subdivisions all documents relating to these sorts of apparatus should be classified in this group.
- If the structure of the apparatus contains technical details relevant for classification in other fields, extra symbols in other relevant fields might be given. This group is non-limiting, i.e. it is possible to have documents classified here and in other relevant groups.

As an example, a bio-mass processing system wherein one or more mixers, mixes a bed of bio-mass material such as manure in a defined length and width portion of the bed, in a dryer, is classified in

[C05F 3/06](#) but also in [F26B 9/00](#) (machines or apparatus for drying solid materials) and [F26B 23/00](#) (heating arrangements).

C05F 7/00

Fertilisers from waste water, sewage sludge, sea slime, ooze or similar masses

Definition statement

This place covers:

This group covers processes for producing fertilizers from waste water, sewage sludge, sea slime, ooze or similar masses, and the corresponding products

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Methods or installations for de-watering, drying or incineration of sewage sludge	C02F 11/00
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C05F 9/00

Fertilisers from household or town refuse

Definition statement

This place covers:

Fertilisers from wastes from human settlements, garbage, waste paper etc.

Relationships with other classification places

Treatment of town refuse [B09B](#).

References

Limiting references

This place does not cover:

Fertilisers from town/sewage sludge	C05F 7/00
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Special rules of classification

Mixtures of these fertilizers with other fertilizers belonging individually to other groups of the classification will be given a Combination-set as explained under Note for class [C05](#).

Fertilisers from town refuse treated by a fermentation process should always be given a classification in [C05F 17/00](#).

C05F 9/04

Biological compost

Definition statement

This place covers:

Composted material per se obtained from household waste or any other source where no pertinent class exists in [C05F 17/00](#).

References

Limiting references

This place does not cover:

Preparation of fertilizers from household or town refuse characterised by the composting step	C05F 17/00
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Special rules of classification

When a fertiliser mixture contains mature compost as one of its components, the subgroup [C05F 9/04](#) should be given in combination to the groups corresponding to other components of the fertiliser in order to indicate the presence of compost material in the mixture.

C05F 11/00

Other organic fertilisers

Definition statement

This place covers:

Fertilisers from organic products, natural or synthetic, not covered by any of the previous classes.

Some examples of materials belonging to this class are wood products such as bark or sawdust, fibrous materials, polymers, seaweeds.

References

Limiting references

This place does not cover:

Humic acids or materials containing them, peat, coal and similar	C05F 11/02
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C05F 11/02

from peat, brown coal, and similar vegetable deposits

Definition statement

This place covers:

Materials containing humic substances or materials capable of supplying humic materials after treatment. Humic materials themselves e.g. humic acids, fulvic acids, himatomelanic acids etc.

C05F 11/04**Horticultural earth from peat (growth substrates containing peat [A01G 24/28](#))****Definition statement***This place covers:*

Peat based horticultural earth, an organic fertiliser.

References**Limiting references***This place does not cover:*

Growth substrates containing peat	A01G 24/28
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C05F 17/00**Preparation of fertilisers characterised by biological or biochemical treatment steps, e.g. composting or fermentation****Definition statement***This place covers:*

All processes for obtaining a fertilizer by fermentation of organic wastes not covered by one of the further subgroups.

Special rules of classification

No Combination-sets are used in this group and its subgroups.

Every aspect of a document is classified separately with the pertinent codes.

C05F 17/05**Treatments involving invertebrates, e.g. worms, flies or maggots****Relationships with other classification places**Worm breeding is classified in [A01K 67/33](#).**C05F 17/10****Addition or removal of substances other than water or air to or from the material during the treatment (for activating or stimulating the treatment [C05F 17/20](#))****Definition statement***This place covers:*

Fermentation processes where materials are added or extracted in order to modify the course of the fermentation.

Typical compounds are pH adjusters, structure-improving materials, etc.

References

Limiting references

This place does not cover:

Using specific microorganisms or substances for activating or stimulating the treatment	C05F 17/20
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C05F 17/15

{the material being gas}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Chemical or biological purification of waste gases	B01D 53/34
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C05F 17/20

using specific microorganisms or substances, e.g. enzymes, for activating or stimulating the treatment (use of invertebrates [C05F 17/05](#))

Definition statement

This place covers:

Fermentation processes where specific microorganisms are added.

References

Limiting references

This place does not cover:

Use of invertebrates	C05F 17/05
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C05F 17/40

Treatment of liquids or slurries

Definition statement

This place covers:

Fermentation of liquids or combination of solids and liquids to obtain a compost.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Fertilisers from manures	C05F 3/00
Fertilisers from sludge	C05F 7/00
Treatment of manures	A01C 3/00

C05F 17/90**Apparatus therefor****Definition statement**

This place covers:

Apparatus for processing wastes by fermentation step which do not fall under any of the subgroups that follow.

Special rules of classification

No Combination-sets are used in this group and its subgroups.

Every aspect of a document is classified in each relevant group.

C05F 17/907**Small-scale devices without mechanical means for feeding or discharging material, e.g. garden compost bins****Definition statement**

This place covers:

Bins, garden composters.

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Refuse receptacles	B65F 1/00
Refuse receptacles adapted for compost	B65F 2001/1489

C05F 17/979**the other material being gaseous****Definition statement**

This place covers:

Apparatus with means for forced aeration of composting masses, e.g. aeration patterns.

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Floors roofs or bottoms for drying solid materials	F26B 25/10
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Special rules of classification

Devices presenting aeration merely caused by a natural draft is not taken into account for classification in this group.

C05F 17/986

the other material being liquid

Definition statement

This place covers:

Humidification devices.