



## 7.1 Principles of Organic Production

7.1.01	<p>(Article 5 (834/2007))</p> <p>In addition to the overall principles set out in Section 1.6.01, organic farming shall be based on the following specific principles:</p> <ul style="list-style-type: none"> <li>(a) The maintenance and enhancement of soil life and natural soil fertility, soil stability and soil biodiversity preventing and combating soil compaction and soil erosion, and the nourishing of plants primarily through the soil ecosystem;</li> <li>(b) The minimisation of the use of non-renewable resources and off-farm inputs;</li> <li>(c) The recycling of wastes and by-products of plant and animal origin as input in plant and livestock production;</li> <li>(d) Taking account of the local or regional ecological balance when taking production decisions;</li> <li>(e) The maintenance of plant health by preventative measures, such as the choice of appropriate species and varieties resistant to pests and diseases, appropriate crop rotations, mechanical and physical methods and the protection of natural enemies of pests.</li> </ul>
7.1.02	<p>(Article 12 (834/2007))</p> <p>1. In addition to the general farm production rules laid down in Section 1.9.01, the following rules shall apply to organic plant production:</p> <ul style="list-style-type: none"> <li>(a) Organic plant production shall use tillage and cultivation practices that maintain or increase soil organic matter, enhance soil stability and soil biodiversity, and prevent soil compaction and soil erosion;</li> <li>(b) The fertility and biological activity of the soil shall be maintained and increased by multiannual crop rotation including legumes and other green manure crops, and by the application of livestock manure or organic material, both preferably composted, from organic production;</li> <li>(c) The use of biodynamic preparations is allowed;</li> <li>(d) In addition, fertilisers and soil conditioners may only be used if they have been authorised for use in organic production under Section 1.10;</li> <li>(e) Mineral nitrogen fertilisers shall not be used;</li> <li>(f) All plant production techniques used shall prevent or minimise any contribution to the contamination of the environment;</li> <li>(g) The prevention of damage caused by pests, diseases and weeds shall rely primarily on the protection by natural enemies, the choice of species and varieties, crop rotation, cultivation techniques and thermal processes;</li> <li>(h) In the case of an established threat to a crop, plant protection products may only be used if they have been authorised for use in organic production under Section 1.10;</li> <li>(i) For the production of products other than seed and vegetative propagating material only organically produced seed and propagating material shall be used. To this end, the mother plant in the case of seeds and the parent plant in the case of vegetative propagating material shall have been produced in accordance with the rules laid down in this Regulation for at least 1 generation, or, in the case of perennial crops, 2 growing seasons;</li> <li>(j) Products for cleaning and disinfection in plant production shall be used only if they have been authorised for use in organic production under Section 1.10.</li> </ul>

7.1.03	<p>(Article 12 (834/2007))</p> <p>2. The collection of wild plants and parts thereof, growing naturally in natural areas, forests and agricultural areas is considered an organic production method provided that:</p> <ul style="list-style-type: none"> <li>(a) Those areas have not, for a period of at least 3 years before the collection, received treatment with products other than those authorised for use in organic production under Sections 1.10.01 – 1.10.05;</li> <li>(b) The collection does not affect the stability of the natural habitat or the maintenance of the species in the collection area.</li> </ul> <p>3. The measures necessary for the implementation of the production rules contained in this Article shall be adopted in accordance with the procedure referred to in Section 1.15.02.</p>
7.1.04	<p>(Article 17 (834/2007))</p> <p>1. The following rules shall apply to a farm on which organic production is started:</p> <ul style="list-style-type: none"> <li>(a) The conversion period shall start at the earliest when the operator has notified his activity to the competent authorities and subjected his holding to the control system in accordance with Section 5.2.01;</li> <li>(b) During the conversion period all rules established by this Regulation shall apply;</li> <li>(c) Conversion periods specific to the type of crop or animal production shall be defined;</li> <li>(d) On a holding or unit partly under organic production and partly in-conversion to organic production, the operator shall keep the organically produced and in-conversion products separate and the animals separate or readily separable and keep adequate records to show the separation;</li> <li>(e) In order to determine the conversion period referred to above, a period immediately preceding the date of the start of the conversion period, may be taken into account, in so far as certain conditions concur.</li> </ul> <p>2. The measures and conditions necessary for the implementation of the rules contained in this Article, and in particular the periods referred to in paragraph 1(c) to (e) shall be defined in accordance with the procedure referred to in Section 1.15.02.</p>

## 7.2 Separation of Organic and Non-organic Production

### Separation

7.2.01	<p>Production must take place in a unit of which the production premises, land parcels, pasturage, open-air exercise areas, open air runs, livestock buildings, and, where applicable, the premises for the storage of crops, crop products, livestock products, raw materials and inputs, are clearly separate from those of any other unit not producing in accordance with the rules laid down in this Manual.</p>
7.2.02	<p><i>It is not obligatory to convert an entire estate or holding to organic management. The final area of a converted organic unit on a larger holding must be sufficiently large to allow a self-sufficient, commercially viable organic production unit to be established, with its own land, buildings, facilities and records. For an arable unit, this normally means that the number of fields converted should at least match the number of years in the rotation.</i></p>
7.2.03	<p>It is not acceptable to have converted fields scattered over a larger non-organic holding unless these are part of a planned conversion which will result in the organic fields being grouped together as a distinct block of land.</p>

7.2.04	Units, including the livestock buildings and storage areas, on a holding registered as in-conversion, organic or non-organic must be clearly identified as such on the Farm Plan. All farm personnel must be made aware of this so as to avoid the incorrect use of prohibited materials on in-conversion or organic land.
7.2.05	On part converted holdings undergoing a staged conversion, the separation between organic and non-organic land must be identified and maintained by means of a physical boundary such as a wall, ditch, hedge or fence. The use of boundary stones, plough furrow or track is not sufficient.

#### Storage of Non-permitted Materials

7.2.06	(Article 35 (1) (889/2008)) For the storage of products, areas shall be managed in such a way as to ensure identification of lots and to avoid any mixing with or contamination by products and/or substances not in compliance with the organic production rules. Organic products shall be clearly identifiable at all times.
7.2.07	(Article 35 (2) (889/2008)) Storage on the unit of input products other than those compatible with this Manual is not permitted.
7.2.08	(Article 35 (3) (889/2008)) The storage of allopathic veterinary medicinal products and antibiotics is permitted on holdings provided that they have been prescribed by a veterinarian in connection with treatment as referred to in Section 8.1.03 of this Manual, that they are stored in a supervised location and that they are entered in the livestock record as referred to in Section 6.3.14 of this Manual.
7.2.09	Where prohibited materials are stored for use on a non-registered unit on the same holding, the storage area must be clearly labelled as such and be locked or secured under the supervision of the producer. The store must be clearly marked on the farm plan.
7.2.10	Buildings and stores used for organic or non-organic uses on a part converted holding undergoing a staged conversion must have their use and status identified on the Farm Plan and be clearly labelled to avoid confusion.

#### Parallel Production of Organic and Non-organic Crops

7.2.11	(Article 66 (3) (889/2008)) Where an operator runs several production units in the same area, the units producing non-organic products, together with storage premises for input products (such as fertilisers, plant protection products, seed) must also be subject to the inspection arrangements laid down in this Manual.
7.2.12	The same variety as, or a variety that cannot be easily differentiated from those produced on the non-organic unit, may not be produced at the organic / converting units.

7.2.13	<p>(Article 40 (1) (889/2008))</p> <p>Where the conditions laid down in Section 1.10.02 apply, a producer may run organic and non-organic production units in the same area:</p> <p>(a) In the case of the production of perennial crops, which require a cultivation period of at least 3 years, where varieties cannot be easily differentiated, provided the following conditions are met:</p> <p>(i) The production in question forms part of a conversion plan in respect of which the producer gives a firm undertaking and which provides for the beginning of the conversion of the last part of the area concerned to organic production in the shortest possible period which may not in any event exceed a maximum of 5 years;</p> <p>(ii) Appropriate measures have been taken to ensure the permanent separation of the products obtained from each unit concerned;</p> <p>(iii) The control authority or control body is notified of the harvest of each of the products concerned at least 48 hours in advance;</p> <p>(iv) Upon completion of the harvest, the producer informs OF&amp;G of the exact quantities harvested on the units concerned and of the measures applied to separate the products;</p> <p>(v) The conversion plan and the control measures referred to in Chapters 1 and 2 of Title IV have been approved by the competent authority; this approval shall be confirmed each year after the start of the conversion plan.</p> <p>(b) In the case of areas intended for agricultural research or formal education agreed by the Member States' competent authorities and provided the conditions set out in point (a) (ii), (iii), (iv) and the relevant part of point (v) are met;</p> <p>(c) In the case of production of seed, vegetative propagating material and transplants and provided the conditions set out in point (a) (ii), (iii), (iv) and the relevant part of point (v) are met;</p> <p>(d) In the case of grassland exclusively used for grazing.</p>
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### Records

7.2.14	The records must be kept of purchases, production and sales for all the units within the holding as required in Section 6 of this Manual.
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## 7.3 Conversion to Organic Production

7.3.01	Conversion from non-organic to organic production must be effected using permitted techniques, as defined in this Manual, and in accordance with a progressive conversion plan designed to convert an area of land large enough to permit organic production to be developed and sustained.
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### The Organic Conversion / Management / System Plan

7.3.02	<p>A producer converting a holding or part of a holding for the first time or an existing producer converting an additional area of land must complete an OF&amp;G Conversion Plan or Extension Application Form. The Plan must include the following information:</p> <p>(a) Description - A general description of the holding, current and planned;</p> <p>(b) Farm Plan and Schedule of Fields;</p>
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7.3.08	<i>The conversion period shall commence at the date on which the applicant has submitted their conversion plan to the OF&amp;G office.</i>
7.3.09	<p>(Article 36 (2) (889/2008))</p> <p>The competent authority may decide to recognise retroactively as being part of the conversion period any previous period in which:</p> <ul style="list-style-type: none"> <li>(a) the land parcels were subject of measures defined in a programme implemented pursuant to Regulations (EC) No 1257/99, (EC) No 1698/2005, or in another official programme, provided that the measures concerned ensure that products not authorised for organic production have not been used on those parcels, or;</li> <li>(b) the parcels were natural or agricultural areas which were not treated with products not authorised for organic production:</li> </ul> <p>The period referred to in point (b) can be taken into consideration retroactively only where satisfactory proof has been furnished to Defra allowing it to satisfy itself that the conditions were met for a period of at least three years.</p>
7.3.10	<p>All land must undergo a monitored 24-month conversion period as a minimum. However, OF&amp;G may, with the approval of Defra, derogate this period by a maximum of 4 months provided that:</p> <ul style="list-style-type: none"> <li>(a) The field input records available to the inspector confirm that the land has been managed in accordance with this Manual during the period derogated;</li> <li>(b) The visible physical evidence also confirms this; and</li> <li>(c) Defra approves the application.</li> </ul>
7.3.11	<p>In exceptional cases OF&amp;G may make a special application to Defra for a reduction in the conversion period extending to not more than 12 months. Only land meeting one of the following criteria will be considered:</p> <ul style="list-style-type: none"> <li>(a) Land managed non-organically by an existing organic farmer, which has been subject to inspection by the approved inspection body as part of its normal inspection procedures;</li> <li>(b) Land which is subject to a statutory environmental management scheme where no prohibited inputs are allowed and which is subject to independent inspection by Defra inspectors to confirm this;</li> <li>(c) Registered land which has changed ownership and which lost its organic status during the transfer due to a lack of inspection.</li> </ul>
7.3.12	<p>(Article 36 (3) (889/2008))</p> <p>OF&amp;G may, with the approval of Defra, decide in certain cases to extend the conversion period laid down in this Manual having regard to the previous parcel use.</p>
7.3.13	<i>Land that has been contaminated by the use of residual pesticides, or other long acting contaminants, may require an additional period of conversion to permit the contaminant to disperse. A soil analysis may be specified to determine the levels of contamination.</i>

#### Statutory Control Programmes

7.3.14	<p>(Article 36 (4) (889/2008))</p> <p>In the case of parcels which have already been converted to or were in the process of conversion to organic farming, and which are treated with a product not authorised for organic production, Defra may shorten the conversion period referred to in Section 7.3.07 in the following 2 cases:</p> <ul style="list-style-type: none"> <li>(a) parcels treated with a product not authorised for organic production as part of a compulsory disease or pest control measure imposed by Defra;</li> </ul>
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7.3.14 cont.	<p>(b) parcels treated with a product not authorised for organic production as part of scientific tests approved by Defra.</p> <p>In the cases provided for in points (a) and (b) of the first subparagraph, the length of the conversion period shall be fixed taking account of the following factors:</p> <p>(c) the process of degradation of the product concerned shall guarantee, at the end of the conversion period, an insignificant level of residues in the soil and, in the case of a perennial crop, in the plant;</p> <p>(d) the harvest following the treatment may not be sold with reference to organic production methods.</p> <p>DEFRA shall inform the other Member States and the Commission of its decision to require compulsory measures.</p>
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#### In-conversion Products

7.3.15	A plant product may only be classed as in-conversion and sold under the label 'Product produced In-conversion to Organic Farming' if a conversion period of at least 12 months before harvest has been complied with and it complies with the labelling standards in Section 4 of this Manual.
7.3.16	Animal products must not be marketed as an 'In-conversion' product - see Section 4 of this Manual.

## 7.4 Avoidance of Genetically Modified Organisms

### General Principles

7.4.01	<p>Genetic engineering is prohibited in organic farming and food production. Organic products must be produced / processed without the use of:</p> <p>(a) Genetically modified organisms (GMOs);</p> <p>(b) Derivatives of GMOs, including ingredients, additives and processing aids.</p>
7.4.02	Operators must take all reasonable measures and exert all due diligence to prevent any such use in organic systems during production, processing, storage and transport. See Section 5.11 for further information.
7.4.03	It is recognised that some non-organic materials currently permitted for use in organic systems pose additional risks of GM contamination to organic production systems. Pending the removal of such materials from the organic standards, operators must obtain up to date verifiable evidence from their suppliers confirming that these products do not contain GMOs or their derivatives, backed up by analysis if required.
7.4.04	Organic certification may be withdrawn from specific crops or land where, following an evaluation and, where appropriate, analysis, OF&G considers that GMOs or their derivatives have been used.

### Farm Production

7.4.05	Organic production must not take place for at least 5 years on land that has been planted with genetically modified crops.
7.4.06	The production of genetically engineered crops on any part of a holding under the same management that includes a registered organic unit is not permitted. Where genetically engineered crops are grown on another non-organic holding in the area managed by the same operator, these must be totally separated from the organic unit in terms of distance, management and use of machinery.



7.4.07	Operators must notify the OF&G office of any possible sources of genetic pollution that they become aware of that may pose a risk to their organic holdings or crops. OF&G will carry out a risk assessment of such crops within 3 kilometres, following the procedures in Section 5 of this Manual.
7.4.08	<b><i>Partnership Programme – OF&amp;G will undertake an assessment of organic farms within a 6 mile radius of GM crops notified to it, following the procedures in Section 5 of this Manual.</i></b>

#### Seeds and Propagating Materials

7.4.09	Seeds, seedlings, plant propagation materials, inoculants, other microbial inputs, products for crop protection and other crop production inputs produced by the use of GMOs or their derivatives are prohibited.
7.4.10	Materials for fertilisers and soil conditioners produced by the use of GMOs or their derivatives, such as those made from genetically modified crops, plant residues or by-products are prohibited.

#### Record Keeping

7.4.11	Adequate records must be kept, and be available for inspection to verify that GMOs or their derivatives have not been used in any stage of organic production and processing.
7.4.12	Verifiable and up to date evidence must be obtained from all relevant suppliers in order to confirm that the products or ingredients or other inputs identified in this section that are supplied to the operator are not produced from GMOs or their derivatives.
7.4.13	<i>The requirement for verifiable evidence only applies to non-organic raw materials, products, additives and processing aids. Materials that have been organically produced or naturally based minerals can be assumed not to be produced by the use of GMOs or their derivatives.</i>
7.4.14	An operator on a farm production unit, on-farm processing unit or small scale processing unit shall require that the suppliers of all relevant non-organic raw materials supply a signed declaration, statement, letter or a printed product label which confirms that the material is not produced from GMOs. OF&G Record Sheet 2 - Declaration of Non-Genetically Modified Content - can be used for this purpose.

## 7.5 Biodiversity and Care of the Environment

### Biodiversity and Conservation Plan

7.5.01	Producers must abide by all legal requirements and Defra Codes of Practice in respect of the environment at all times.
7.5.02	All producers are required to draw up a Biodiversity and Conservation Plan for the holding to record the existing features of conservation importance and the plans to enhance the biodiversity of the holding during the conversion. The Plan must be kept up to date.
7.5.03	<i>The OF&amp;G Record Sheet 1 – ‘The Farm Biodiversity and Conservation Plan’ - can be used for this purpose. A conservation plan drawn up for another authority may be acceptable.</i>
7.5.04	Concern for the environment should manifest itself in willingness to consult appropriate conservation bodies and in high standards of conservation management throughout the organic holding.

7.5.04 cont.	<i>It is recommended that a conservation advisory body be approached to assist with drafting the Plan.</i>
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**Natural Features**

7.5.05	Natural features such as streams, ponds, wetlands, heathland and species-rich grassland must be recorded and retained.
7.5.06	<i>Areas identified by conservation bodies to be of conservation value must not be damaged by inappropriate management, such as the draining of wetlands or the exploitation of peat bogs.</i>
7.5.07	<i>Traditional practices approved by conservation bodies and used to maintain areas of conservation value, such as the periodic burning of heather, are permitted.</i>
7.5.08	Grazing management of natural (or semi-natural) habitats such as grassland, heath, moorland, heather, bog and rushy uplands, must aim to prevent poaching of the soil and over grazing. Localised heavy stocking, particularly in the nesting season, should be avoided.

**Hedges**

7.5.09	Hedges and walls should be retained and managed using traditional methods and materials as far as possible.
7.5.10	In hedge maintenance the nesting season and wildlife requirements for winter-feeding or shelter should be taken into account. Hedge trimming should generally not take place between 1 March and 31 August.
7.5.11	More frequent trimming is permitted for hedges on roadsides, which must be trimmed under Local Authority Regulations to maintain traffic visibility.
7.5.12	Where practicable, the maintenance of hedges should result in hedges at diverse stages of growth. Biannual trimming or trimming alternate sides annually should be practised for this purpose. More frequent trimming should only be part of an appropriate plan drawn up with the aid of a conservation body.

**Ditches**

7.5.13	In ditch maintenance the nesting season and wildlife requirements for winter-feeding or shelter should be taken into account. Ditch cleaning should generally not take place between 1 March and 31 August.
7.5.14	<i>This will not apply where the ditch is maintained by the local water authority or drainage board and the producer has no control over the maintenance programme.</i>
7.5.15	<i>Where possible sections of existing vegetation should be left in place for the rapid re-establishment of the habitat.</i>

**Alterations to Traditional Boundaries**

7.5.16	If it is considered that there are reasonable grounds for alteration to hedges or to traditional field boundaries, these must first be discussed with a conservation advisor and written approval must be obtained from OF&G. If alteration does prove to be necessary, consideration should be given to the need for compensatory environmental work.
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**Woodland Management**

7.5.17	The retention and management of trees in accordance with local custom and woodland practice is essential. Where replanting is to take place, indigenous varieties of trees and shrubs should be given preference. Where practicable, natural regeneration and coppicing of appropriate species should be practised.
7.5.18	<i>Clear felling should be restricted so as to retain a diversity of age classes and habitat within the woodland areas of the holding.</i>

**Avoidance of Pollution**

7.5.19	All farm wastes must be handled in such a way as to minimise the disease risk to humans and animals and to minimise pollution of the environment. Adequate provision must be made for the storage and application of animal wastes. Farm chemicals must be disposed of safely in accordance with the manufacturer's instructions.
7.5.20	Care must be taken in the spreading of manures, slurry and fertilisers. The application of manure and fertilisers within 10 metres of ditches and watercourses and within 50 metres of wells and boreholes must be avoided. The spreading of manure or slurry on frozen ground or on saturated ground must be avoided so as to prevent excessive run off.
7.5.21	A minimum of 1 metre must be left uncultivated around field margins and manures and slurries should not be spread within 2 metres of a hedge.
7.5.22	Animal carcasses must be disposed of promptly and legally, e.g. <ul style="list-style-type: none"> <li>(a) Licensed collection service;</li> <li>(b) Hunt kennels;</li> <li>(c) Defra Disposal Scheme;</li> <li>(d) On-farm incineration.</li> </ul>
7.5.23	The on-farm incineration of farm wastes, such as poultry offal, from an on-farm processing operation must be carried out using incinerators approved by the appropriate authority.

**Heritage Sites**

7.5.24	Sites of heritage interest such as archaeological sites, historical sites, ridge and furrow fields etc. must be recorded.
7.5.25	The land management must seek to preserve such features of archaeological or historical value or interest by avoiding for example, the levelling of ridge and furrow and the cultivation of monuments or earth works.

**Miscellaneous**

7.5.26	New buildings should be designed and located to have minimum impact on the landscape.
7.5.27	Existing rights of access should be maintained.
7.5.28	Farm buildings, yards, tracks and gateways etc. must be maintained in a neat and tidy manner to ensure the safety of farm personnel, visitors, members of the public and livestock.

## New Hedge and Woodland Plantings

7.5.29	<i>Producers are encouraged to improve the biodiversity of the holding by means of creative conservation projects. These include the establishment of new hedges, tree plantings, woodlands, wildlife corridors and beetle banks.</i>
7.5.30	<i>Where new hedges and woodlands are to be planted, these must be protected from animals by appropriate fencing. Weeds should be controlled by means of cutting and mulching.</i>

## 7.6 Soil Management

## Soil Management

7.6.01	(Article 3 (1) (889/2008)) Where the nutritional needs of plants cannot be met by measures provided for in Section 7.1.02, only fertilisers and soil conditioners referred to in Sections 7.14 and 7.16 of this Manual may be used in organic production and only to the extent necessary. Operators shall keep documentary evidence of the need to use the product.																
7.6.02	<i>To achieve this the management of the soil should ensure that:</i> <i>(a) The organic matter content of the soil is at least maintained or increased by the addition of organic residues as manures, green manures, leys and crop residues;</i> <i>(b) Periodic soil analyses are taken to monitor the pH, nutrients and deficiencies;</i> <i>(c) Nutrient deficiencies are corrected to maintain the conditions for the appropriate level of microbial activity necessary to break down plant residues and minerals into the simple salts that can be absorbed by the plant roots;</i> <i>(d) Where possible, maintaining a protective cover of vegetation, especially over the winter through the use of growing crops or green manures, to protect the soil surface from the damaging effects of heavy rain or strong winds;</i> <i>(e) Where possible, the soil profile and organisms are disturbed as little as possible, such as by the avoidance of deep ploughing which will bring anaerobic organisms to the surface and bury aerobic organisms in anaerobic conditions.</i>																
7.6.03	In some circumstances background environmental contamination or residues from previous agricultural practice or levels of naturally occurring substances in the soil may render the land unsuitable for organic production. Therefore, at the sole discretion of OF&G, analysis of soil, manures, fertilisers and crops may be required before a Certificate of Compliance can be granted or renewed.																
7.6.04	Where there is evidence that the heavy metals in the soil exceed the following, OF&G may require a management plan to ensure that the heavy metals are not transferred to the crops or livestock:  <table border="0"> <thead> <tr> <th><b>Heavy metal</b></th> <th><b>mg/kg (ppm) in the soil</b></th> </tr> </thead> <tbody> <tr> <td>Zinc</td> <td>150</td> </tr> <tr> <td>Chromium</td> <td>150</td> </tr> <tr> <td>Mercury</td> <td>1</td> </tr> <tr> <td>Lead</td> <td>100</td> </tr> <tr> <td>Nickel</td> <td>50</td> </tr> <tr> <td>Cadmium</td> <td>2</td> </tr> <tr> <td>Copper</td> <td>50</td> </tr> </tbody> </table>	<b>Heavy metal</b>	<b>mg/kg (ppm) in the soil</b>	Zinc	150	Chromium	150	Mercury	1	Lead	100	Nickel	50	Cadmium	2	Copper	50
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Zinc	150																
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## 7.7 Seeds and Plant Propagation

7.7.01	<p>(Article 45 (1) (889/2008))</p> <p>Where the conditions laid down in Section 1.11.02 (b) apply,</p> <ul style="list-style-type: none"> <li>(a) Seed and vegetative propagating material from a production unit in conversion to organic farming may be used;</li> <li>(b) Where point (a) is not applicable, Member States may authorise the use of non-organic seed or vegetative propagating material if not available from organic production. However, for the use of non-organic seed and seed potatoes the following Sections 7.7.02 to 7.7.09 apply.</li> </ul>
7.7.02	<p>(Article 45 (2) (889/2008))</p> <p>Non-organic seed and seed potatoes may be used, provided that the seed or seed potatoes are not treated with plant protection products, other than those authorised for treatment of seed in accordance with Section 7.12, unless chemical treatment is prescribed in accordance with Council Directive 2000/29/EC (16) for phytosanitary purposes by the competent authority of the Member State for all varieties of a given species in the area where the seed or seed potatoes are to be used.</p>

### Conditions for granting authorisations

7.7.03	<p>(Article 45 (3) (889/2008))</p> <p>Species for which it is established that organically produced seed or seed potatoes are available in sufficient quantities and for a significant number of varieties in all parts of the Community are set out in Annex X of this Regulation.</p> <p>The species listed in Annex X may not be subject of authorisations pursuant to Section 7.7.01(b), unless these are justified by one of the purposes referred to in Section 7.7.04(d).</p>
7.7.04	<p>(Article 45 (5) (889/2008))</p> <p>Authorisation to use seed or seed potatoes not obtained by the organic production method may only be granted in the following cases:</p> <ul style="list-style-type: none"> <li>(a) Where no variety of the species which the user wants to obtain is registered in the database referred to in Section 7.7.10;</li> <li>(b) Where no supplier, meaning an operator who markets seed or seed potatoes to other operators, is able to deliver the seed or seed potatoes before sowing or planting in situations where the user has ordered the seed or seed potatoes in reasonable time;</li> <li>(c) Where the variety which the user wants to obtain is not registered in the database referred to in Section 7.7.10, and the user is able to demonstrate that none of the registered alternatives of the same species are appropriate and that the authorisation therefore is significant for his production;</li> <li>(d) Where it is justified for use in research, test in small-scale field trials or for variety conservation purposes agreed by the competent authority of the Member State.</li> </ul>
7.7.05	<p>(Article 45 (6) (889/2008))</p> <p>The authorisation shall be granted before the sowing of the crop.</p>
7.7.06	<p>(Article 45 (7) (889/2008))</p> <p>The authorisation shall be granted only to individual users for one season at a time and OF&amp;G shall register the quantities of seed or seed potatoes authorised.</p>

7.7.07	OF&G Record Sheet 4a – ‘Non-organic Seed Approval Application Form’ - must be used to apply for the approval. Failure to seek approval <b>in advance</b> for the use of non-organic seeds may result in the withdrawal of organic certification for the crop(s).
7.7.08	(Article 45 (8) (889/2008)) By way of derogation from Section 7.7.06, Defra may grant to all users a general authorisation for a given: (a) Species when and in so far as the condition laid down in Section 7.7.04 (a) is fulfilled, or (b) Variety when and in so far as the conditions laid down in Section 7.7.04 (c) are fulfilled. Such authorisations shall be clearly indicated in the database.
7.7.09	(Article 45 (9) (899/2008)) Authorisation may only be granted during periods for which the database is updated, as set out by Defra.

**Database**

7.7.10	(Article 48 (1) (889/2008)) Defra will set up and maintain a national database on which the suppliers of organic seed should register the seed and seed potato varieties they have available ( <a href="http://www.organicxseeds.com">www.organicxseeds.com</a> ).
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**Access to information**

7.7.11	(Article 52 (1) (889/2008)) The information in the database shall be available through the internet, free of charge, to the users of seed or seed potatoes and to the public. Defra may decide, upon request, to provide an extract of the data concerning one or several groups of species from the database manager.
7.7.12	(Article 52 (2) (889/2008)) Defra shall ensure that all users who are registered according to Section 1.4.03 are informed, at least once a year, about the system and how to obtain the information in the database.

**7.8 Grassland Management****Permanent Pasture**

7.8.01	Permanent pasture should be self-sufficient in nitrogen through the inclusion of clovers in the sward.
7.8.02	The sale of forage as a cash crop should not exceed 1 year in 4 due to the loss of nutrients, unless the fertility can be maintained by the practices permitted in this Manual, such as by the ranging of poultry and is monitored by regular soil analyses.

**Unimproved Grassland**

7.8.03	By way of derogation, the requirements in Section 7.8.01 are not required for fields that are subject to an Environmental Management Agreement designed to encourage species diversity by minimising fertility.
7.8.04	<i>The mowing of unimproved and species-rich meadows for hay should first permit the grasses and flowers to set seed and avoid disturbing ground-nesting birds and permit the young birds to escape.</i>

7.8.05	<i>Grassland that is subject to an agreement with an Agri-environment Scheme or Conservation Body or designated as a Site of Special Scientific Interest should be managed in accordance with those agreements or codes of practice and the Standards set out in this Manual.</i>
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**Temporary Leys**

7.8.06	<i>For optimal livestock health, leys for grazing and forage production should ideally have a wide range of species diversity through the inclusion of mixed grasses, clovers and herb varieties.</i>
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**Forage Conservation**

7.8.07	Where organic, in-conversion and/or non-organic silage or hay is conserved, these must be clearly labelled and stored separately. Organic and in-conversion forage can be ensiled in the same clamp provided they are layered in the proportions specified in the Animal Feed section of Section 8 of this Manual.
7.8.08	The use of silage additives and processing aids must conform to the requirements of Section 8.4 of this Manual.
7.8.09	Silage stores must be sited, constructed and maintained to prevent pollution of watercourses or ground water by silage effluent. Effluent storage tanks should be installed and should be able to: <ul style="list-style-type: none"> <li>(i) Provide sufficient effluent storage for unusually wet silage;</li> <li>(ii) Prevent water entering the system and so causing the effluent to overflow.</li> </ul>

**Management of Common Land**

7.8.10	(Article 17 (3) (889/2008)) Organic livestock may graze common land provided that: <ul style="list-style-type: none"> <li>(i) The land has not been treated with products other than those allowed for in this Manual for at least 3 years;</li> <li>(ii) Any animals which use the land concerned, which are not subject to the requirements of this Manual are derived from extensive production as defined in Article 36 of Regulation (EC) No 1698/2005 or in Article 22 of Regulation 1257/1999; or for other species not mentioned in that Regulation, the number of animals per ha corresponding to 170kg of Nitrogen per ha/year (Section 8);</li> <li>(iii) Any livestock products produced by animals reared in accordance with the provisions of this Manual, whilst using this land, shall not be regarded as being from organic production unless adequate segregation from other animals not complying with the requirements of this Manual can be proved to the satisfaction of OF&amp;G.</li> </ul>
7.8.11	Adequate segregation shall be maintained by identifying the animals with the owner's ear tags or flock mark.
7.8.12	The use of common grazing will apply where the following requirements can be fulfilled: <ul style="list-style-type: none"> <li>(i) Where a management agreement is in place, the rules must preclude the use of herbicides and non-permitted pesticides and fertilisers;</li> <li>(ii) Where there are no existing rules in place, a voluntary agreement should be reached between the Commoners and the owners to ensure that the management practices do not contravene these Standards or failing that, it should be demonstrated that these Standards are observed by default;</li> <li>(iii) The plan and area of the common, the numbers of Commoners and animals permitted to each, must be notified;</li> </ul>

7.8.12 cont.	<ul style="list-style-type: none"> <li>(iv) The stock belonging to the organic Commoner must be clearly identified;</li> <li>(v) The husbandry practices of the Commoners and the general health status of the stock must be in accordance with Section 8 of this Manual;</li> <li>(vi) Organic stock must not be subject to communal veterinary treatments;</li> <li>(vii) Organic stock must not have access to supplementary feeding and minerals provided by other Commoners;</li> <li>(viii) There must be no risk of overstocking which would run counter to any environmental restrictions in these Standards, such as through overgrazing vegetation or poaching;</li> <li>(ix) The use of the common land must be necessary to the overall management of the unit and accord with good management practices to minimise disease incidence in the herd or flock and to meet annual feed restrictions.</li> </ul>
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## 7.9 Arable and Horticultural Crops

### Conversion

7.9.01	Land entering conversion following a period of exploitative cropping, such as continuous arable production, must normally be sown to a fertility building clover/grass ley for the duration of the conversion.
7.9.02	<i>Where it is impractical to sow all the area to a fertility building crop and provided that the planned rotation is acceptable, part of the total area of land entering conversion may continue with a cereal or other crop during the first year of conversion provided that it is undersown to the fertility building crop in the second year.</i>

### Parallel Production of Organic and Non-organic Crops

7.9.03	The same variety as, or a variety that cannot be easily differentiated from those produced at a unit not producing in accordance with the rules laid down in this Manual, may not be produced at these units. However, producers may derogate from the rule referred to above under the conditions specified in Section 7.2.13.
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### Protection from Contamination

7.9.04	Efforts should be made to provide an effective windbreak where there is a risk of spray drift contamination.
7.9.05	Any known spray drift contamination must be notified to OF&G.
7.9.06	To minimise the risk of contamination, such as by spray drift, where a crop such as cereals or vegetables is to be grown for direct human consumption in a field adjacent to non-organic crops subject to boom spraying, or adjacent to other sources of contamination, such as soil contaminated by heavy metals from mining or industry, a hedge or tree planting should be established to act as a long-term windbreak.
7.9.07	Until the hedge or planting has become established as an effective windbreak or, as an alternative where a windbreak is not possible, such as where a dyke forms the boundary, a buffer zone of 10 metres (including the boundaries, roads and ditches) must be left uncropped. This must be increased to 20 metres if adjacent to a non-organic top fruit orchard. <i>The buffer zone can be left as grass and mown for forage or be treated as set aside or a grant aided conservation area.</i>



**Crop Rotations – Maintenance of Fertility**

7.9.08	<i>Arable and field scale horticultural rotations should be self-sufficient in nitrogen through the use of legumes such as red and white clovers, peas and beans, tares and lucerne, combined with the recycling of manures.</i>
7.9.09	<p><i>This may be checked through the use of nutrient budgeting and the following rotations are suggested as being acceptable models, with the nitrogen fixed (+) or lost (-) in Kg N/ha/year indicated (assuming that all forage and internally produced manures are recycled within the system):</i></p> <p>(i) <i>5 year rotation for a mixed arable and livestock system - 2 years white clover and ryegrass ley (+270) / winter wheat (-80) / potatoes (-113) / winter barley (-93) undersown to clover (+100) leaves an approximate balance of +84kg nitrogen per hectare;</i></p> <p>(ii) <i>7 year rotation for a mixed arable and livestock system - 2 years white clover and ryegrass ley (+270) / winter wheat (-80) / potatoes (-113) / spring beans (+35) / spring wheat (-64) / spring barley (-74) leaves an approximate balance of -26kg nitrogen per hectare;</i></p> <p>(iii) <i>5 year rotation for a stockless arable system - one year red clover (+350) / potatoes (-113) / spring wheat (-64) / winter beans (+42) / spring wheat (-64) leaves an approximate balance of +151kg nitrogen per hectare;</i></p> <p>(iv) <i>5 year rotation for field vegetables - red clover (+350) / potatoes (-113) and winter green manure (0) / onions (-40) / cauliflower (-104) / salads (-20) leaves an approximate balance of +73kg nitrogen per hectare.</i></p>
7.9.10	<i>In small-scale intensive horticultural and greenhouse cropping situations, the rotations may fall short of the above requirement for nitrogen self-sufficiency provided that maximum use is made of fertility building legumes and green manures.</i>
7.9.11	<i>In rotations where the leys are grazed by pigs and poultry, fed mainly from brought-in feed and subject to applications of manures from these enterprises, the use of legumes in the leys should be reduced to avoid the over-production of nitrogen and a pollution risk.</i>
7.9.12	Rotations falling outside the above models must comply with the requirements of this Section and will be considered following the calculation of a nutrient budget.
7.9.13	<i>The rotation should utilise crops with varying root systems.</i>
7.9.14	<i>By using shallow and deep-rooted plants during the course of the rotation, the whole soil profile will be explored by the plant roots thus taking advantage of all the available nutrients present in the soil solution.</i>
7.9.15	<i>The rotations should also maintain or increase the organic matter content in the soil.</i>

**Crop Rotations - Pest and Disease Control**

7.9.16	<i>The rotations should also separate crops of similar pest and disease susceptibility.</i>
7.9.17	<p><i>To prevent the build-up of soil-borne pathogens a rotation should ensure that:</i></p> <p>(i) <i>No more than 2 cereal crops are grown in successive years without a break crop;</i></p> <p>(ii) <i>No more than 5 combinable crops, including cereal and legumes are grown in successive years without a prolonged period of leys or green manures to act as a fertility building break;</i></p> <p>(iii) <i>As a minimum, main crop potatoes, onions or brassicas are not planted in the same land more than one year in 4 or, if grown 2 years running, more than 2 years in 8.</i></p>

7.9.18	<i>In intensive glasshouse and greenhouse cropping, the rotations may fall short of the above requirement for the separation of crops of similar pest and disease susceptibility provided that these can be controlled by methods permitted in this Manual.</i>
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**Crop rotations - Protecting the Soil**

7.9.19	<i>The rotation should minimise the length of the time the soil is left uncovered through the use of growing crops and green manures where appropriate. Uncovered soil is subject to loss of nutrients through nitrification and leaching, especially during the autumn and over the winter, and should be avoided whenever possible by a green cover crop.</i>
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**Crop Rotations - Permanent Crops**

7.9.20	<i>The need for rotations does not apply to permanent and perennial crops such as permanent pasture, soft fruit and top fruit.</i>
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**Arable Crops**

7.9.21	When set aside land is used as the fertility building phase of a rotation, the land must be sown to a legume such as a grass/clover mix to provide the nitrogen for the following crops. It is not permissible to rely on natural regeneration unless this is full of clover.
7.9.22	<i>Stockless rotations are permitted but it is essential that these are carefully tailored to the soil type in order to maintain soil structure and fertility.</i>

**Horticultural Crops**

7.9.23	Transplants from non-organic sources and produced using permitted non-organically produced materials listed in Sections 7.14 and 7.16 of this Manual must be planted in organic soil for a minimum of 6 weeks before they can be harvested and marketed as an organic crop or product.
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**Protected Crops and Long Season Glasshouse Crops**

7.9.24	(Article 4 (889/2008)) Hydroponic production is prohibited.
7.9.25	Greenhouse crops must be grown in the soil. The production of organic crops in soil-less systems or in grow bags containing permitted non-organically produced materials listed in Sections 7.14 and 7.16 of this Manual are not permitted.
7.9.26	The conversion periods specified in Section 7.3 apply to protected cropping.
7.9.27	Rotations and/or mixed cropping are required to provide pest and disease control and contribute to fertility building and biodiversity.
7.9.28	Where a glasshouse used for the production of organic crops and transplants is on a unit also producing non-organic crops and transplants, the house must be dedicated for organic production and clearly labelled as such. The house must have its own dedicated: <ul style="list-style-type: none"> <li>(i) Air space and ventilation - on a large multispan house, 1 or more bays can be sealed off from the rest of the house by a polythene sheet from gutter to the floor;</li> <li>(ii) Irrigation/liquid feeding system – to ensure that only permitted fertilising and pest control materials are given to the organic plants.</li> </ul>
7.9.29	As a special measure for protected heated cropping only, the upper limit on imported nitrogen is 600kg N/ha/year of which a maximum of 170kg may come from animal origin.

7.9.30	At least 51% of the nitrogen must originate from organic production in the form of composted farmyard manure, crop residues and vegetative material, with the balance coming from the permitted manures and fertilisers from non-organic sources specified in Sections 7.14 and 7.16.
7.9.31	100% of the waste produced on the protected cropping area must be composted and reused on the organic holding unless contamination with pests and/or diseases makes this impossible.
7.9.32	Soil sterilisation or pasteurisation by steam, hot water vapour, hot water or hot air from whatever source of heat, including solar is permitted only by prior approval of OF&G and in any event, not in 2 consecutive years and not more than twice in any 6 year period provided that a crop rotation was also practised.
7.9.33	Lighting is permitted.
7.9.34	Fossil fuels must not be burnt solely to produce carbon dioxide.
7.9.35	The cleaning of glasshouses and equipment shall be as follows: <ul style="list-style-type: none"> <li>(i) Irrigation equipment should be cleaned with approved cleaning materials that must not come into contact with the crop or soil. This must be done outside of the protected structure when it is the only way of ensuring that such contact can be prevented. It is acceptable to use a system that ensures flushing water is directed outside the protected structure;</li> <li>(ii) Internal glass surfaces must only be cleaned with water and/or steam;</li> <li>(iii) External glass surfaces may be cleaned with approved cleaning materials. Management of cleaning run-off must meet all environmental standards.</li> </ul>

#### Pot Plants and Herbs

7.9.36	Plants grown in pots and trays, such as potted herbs and wheatgrass, intended for sale to the final consumer and labelled as organically produced must be grown in substrates mainly composed of materials derived from organic farming but not including soil or peat. A minimum of 75% of the substrate must originate from organic sources, yielding 51% of the nutrient content expressed as nitrogen. The balance must be composed of materials listed in Sections 7.14 and 7.16 of this Manual.
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### 7.10 Weed Control

7.10.01	The use of all herbicides, including traditional materials such as diesel, plant oils and salt solutions is prohibited.
7.10.02	Weeds shall be controlled by a combination of the following practices: <ul style="list-style-type: none"> <li>(i) Choice of appropriate species and varieties of crops - <i>selecting crops and varieties which will compete with weeds</i>;</li> <li>(ii) An appropriate rotational programme - <i>alternating weed suppressing with weed susceptible crops</i>;</li> <li>(iii) Mechanical cultivation procedures - <i>traditional ploughing, fallowing, bastard fallows and stale seed beds, topping perennial weeds before seeding etc</i>;</li> <li>(iv) <i>Cultural practices - chitted vegetable and potato seed, transplants, higher sowing rates, cutting for silage rather than hay etc</i>;</li> <li>(v) Mechanical control - <i>plastic mulches (other than PVC), paper mulches (without glossy or coloured inks), steerage hoeing, brush weeding, comb harrowing etc</i>;</li> </ul>

7.10.02 cont.	<p>(vi) <i>Thermal processes - post emergence flame weeding field crops such as carrots using propane burners etc;</i></p> <p>(vii) <i>Grazing practices – paddock grazing at high stocking rates, treading down by cattle etc;</i></p> <p>(viii) <i>The steam sterilisation of soils in protected structures is restricted and requires approval before use (see Section 7.9.32). Record Sheet 9 must be used for this purpose;</i></p> <p>(ix) <i>Manual control - hand weeding, roguing, hoeing, etc.</i></p>
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### 7.11 Pest and Disease Control in Crops

7.11.01	Only in the case of immediate threat to the crop may recourse be had to the substances referred to in Section 7.12 of this Manual.
7.11.02	Operators involved in the use of pesticides must have a copy of the Code of Practice for using Plant Protection Products, and should be familiar with this.
7.11.03	<p>(Article 5 (1) (889/2008))</p> <p>Pests and diseases shall be controlled by a combination of the following measures:</p> <p>(a) <i>Choice of appropriate species and varieties of crops - selecting crops and varieties or grafted rootstocks which are resistant to pests or diseases;</i></p> <p>(b) <i>An appropriate rotational programme - alternating crops to prevent the build-up of soil-borne diseases;</i></p> <p>(c) <i>Protection by natural enemies of pests through provisions favourable to them - headlands, beetle banks, pond, conservation areas, hedges, nesting sites etc;</i></p> <p>(d) <i>Release of approved predators;</i></p> <p>(e) <i>Cultural practices - closer sowing, transplants, etc, to compensate for slugs;</i></p> <p>(f) <i>Mechanical control - traps, barriers, light, sound etc;</i></p> <p>(g) <i>Thermal processes - steam sterilisation of glasshouse soils, buildings and equipment;</i></p> <p>(h) <i>The steam sterilisation of soils in protected structures is restricted and requires approval before use (see Section 7.9.32). Record Sheet 9 must be used for this purpose;</i></p> <p>(i) <i>Maintaining a high standard of hygiene - control of volunteer weeds, composting of vegetable waste, etc.</i></p>

#### Storage of Permitted Pesticides

7.11.04	Pesticides must be stored in their original containers in a locked store such as a metal cabinet. The store must be clearly labelled as containing pesticides, be constructed of impervious materials and be able to contain a spillage, fire or other accidental occurrence.
7.11.05	Stored pesticides should be clearly labelled and checked for current approval annually, e.g. by using the UK Pesticide Guide published by the British Crop Protection Council. Out of date pesticides must be disposed of according to current legislation and the Defra Code of Practice for Using Plant Protection Products.

#### Application of Permitted Pesticides

7.11.06	Pesticides must only be used in accordance with the statutory conditions of use given on the product label. Use under 'long term arrangements' or 'off-label approval' must be in accordance with the 'Notice of Approval' document issued by the Chemicals Regulation Directorate (CRD), a copy of which must be available to justify compliance.
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7.11.07	All pesticide applications must comply with the requirements of the Control of Pesticide Regulations (COPR) and the Control of Substances Hazardous to Health (COSHH) and the Defra Codes of Practice.
7.11.08	Where an advisor, consultant or trade representative advises on pesticide usage on a registered farm, the producer must obtain their relevant BASIS qualification number. The advisor must have read this Manual and agree to advise on pesticide usage in compliance with these Standards.
7.11.09	Operators of spraying equipment must have a certificate of competence under the Food and Environmental Protection Act (FEPA), or be born before 31 December 1964 (Grandfather rights) and have undergone training. Untrained staff must be under the supervision of a trained operator.
7.11.10	Applications must not be made in unsuitable conditions where wind may result in drift onto non-target areas, especially public places, private property and watercourses.
7.11.11	Local beekeepers must be given a minimum of 24 hours notice of the intention to spray insecticides hazardous to bees.

### Spraying Equipment

7.11.12	All equipment, particularly spraying equipment, used on the organic unit must be free from non-permitted materials or substances that may contaminate the crops and produce.
7.11.13	A full and approved cleaning programme must be undertaken between spraying operations and this must be recorded.
7.11.14	Dedicated equipment should be used wherever possible. A contractor may be used provided that the equipment is cleaned prior to use and the producer keeps a record to prove this has been checked.
7.11.15	Crop sprayers must be calibrated at the beginning of the season and adequately maintained subsequently.
7.11.16	The disposal of spray washings and empty pesticide containers must follow current legislation and the procedures described in the Defra Code of Practice for Using Plant Protection Products.

### Control of Vermin

7.11.17	<i>All legal methods of controlling vermin, including rodents, rabbits and moles are permitted.</i>
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## 7.12 Permitted Products for Plant Protection

7.12.01	Storage on the organic unit and the use of input products other than those listed below is not permitted.
7.12.02	(Section 7.11.01) Only in cases of immediate threat to the crop may recourse be had to the following products. (Annex II (889/2008)) These substances may be used in accordance with the provisions given in Section 7.11 of this Manual and they may be used only in so far as approval is given for their use under the relevant UK legislation. †Indicates the active ingredients that are currently approved pesticide products for use in agriculture, horticulture or the home garden in the UK.

7.12.02 cont.	Name	Description, compositional requirements, conditions for use
	Azadirachtin extracted from Azadirachta indica (Neem tree)	<ul style="list-style-type: none"> <li>Insecticide</li> </ul>
	Beeswax	<ul style="list-style-type: none"> <li>Pruning agent</li> </ul>
	Gelatine	<ul style="list-style-type: none"> <li>Insecticide</li> </ul>
	Hydrolysed proteins	<ul style="list-style-type: none"> <li>Attractant - Only in authorised application in combination with other appropriate products from this list</li> </ul>
	Lecithin	<ul style="list-style-type: none"> <li>Fungicide</li> </ul>
	Plant oils (e.g. mint oil, pine oil, caraway oil)	<ul style="list-style-type: none"> <li>Insecticide, acaricide, fungicide and sprout inhibitor</li> </ul>
	† Pyrethrins extracted from Chrysanthemum cinerariaefolium	<ul style="list-style-type: none"> <li>Insecticide</li> </ul>
	Quassia extracted from Quassia amara	<ul style="list-style-type: none"> <li>Insecticide, repellent</li> </ul>
	† Rotenone extracted from Derris spp. and Lonchocarpus spp. and Terphrosia spp	<ul style="list-style-type: none"> <li>Insecticide</li> <li>Must be approved by OF&amp;G before use</li> </ul>

#### Biological Pest and Disease Control

7.12.03	(Annex II 889/2008) The following micro-organisms may be used for biological control:	
	Micro-organisms (bacteria, viruses and fungi) e.g. Bacillus thuringiensis, Granulosis virus	<ul style="list-style-type: none"> <li>Approved for use under COPR</li> </ul>

#### Substances produced by micro-organisms

7.12.04	Spinosad	<ul style="list-style-type: none"> <li>Insecticide</li> <li>Only where measures are taken to minimise the risk to key parasitoids and to minimise the risk of development of resistance</li> <li>Must be approved by OF&amp;G before use</li> </ul>
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#### Conventional pesticides used in traps or dispensers

7.12.05	(Article 5 (2) (889/2008)) For products used in traps and dispensers, except pheromone dispensers, the traps and/or dispensers shall prevent the substances from being released into the environment and prevent contact between the substances and the crops being cultivated. The traps shall be collected after use and disposed of safely.	
	<b>Name</b>	<b>Description, compositional requirements, conditions for use</b>
	Diammonium phosphate	<ul style="list-style-type: none"> <li>Attractant - only in traps</li> </ul>

7.12.05 cont.	Pheromones	<ul style="list-style-type: none"> <li>• Insect attractant, sexual behaviour disruptor</li> <li>• Only in traps and dispensers</li> </ul>
	Pyrethroids (only deltamethrin or lambdacyhalothrin)	<ul style="list-style-type: none"> <li>• Insecticide - only in traps with specific attractants</li> <li>• Only against <i>Batrocera oleae</i> and <i>Ceratitis capitata</i> wíed</li> </ul>
7.12.06	(Annex IIB IIIA) The following preparations to be surface spread between cultivated plants:	
	Ferric phosphate (iron (III) orthophosphate)	<ul style="list-style-type: none"> <li>• Molluscicide</li> </ul>

**Traditional Pesticides**

7.12.07	(Annex IIB IV) The following substances from traditional use in organic farming may be used:	
	<p>Copper in the form of:</p> <p>Copper hydroxide Copper oxychloride (tribasic) Copper sulphate Cuprous oxide Copper octanoate</p>	<ul style="list-style-type: none"> <li>• Fungicide - up to 6kg copper per ha per year</li> <li>• For perennial crops, Member States may, by derogation from the previous paragraph, provide that the 6 kg copper limit can be exceeded in a given year provided that the average quantity actually used over a 5-year period consisting of that year and of the 4 preceding years does not exceed 6 kg</li> <li>• Must be approved by OF&amp;G before use.</li> </ul>
7.12.08	Ethylene	Degreening bananas, kiwis and kakis; Degreening of citrus fruit only as part of a strategy for the prevention of fruit fly damage in citrus; Flower induction of pineapple; sprouting inhibition in potatoes and onions.
	Fatty acid potassium salt (soft soap)	<ul style="list-style-type: none"> <li>• Insecticide</li> </ul>
	Potassium alum (Kalinite)	<ul style="list-style-type: none"> <li>• Prevention of ripening of bananas</li> </ul>
	Lime sulphur (Calcium polysulphide)	<ul style="list-style-type: none"> <li>• Fungicide, insecticide, acaricide</li> <li>• Must be approved by OF&amp;G before use</li> </ul>
	Paraffin oil	<ul style="list-style-type: none"> <li>• Insecticide, acaricide</li> </ul>
	Mineral oils	<ul style="list-style-type: none"> <li>• Insecticide, fungicide</li> <li>• Only in fruit trees, vines, olive trees and tropical crops (e.g. bananas)</li> <li>• Must be approved by OF&amp;G before use</li> </ul>
	Potassium permanganate	<ul style="list-style-type: none"> <li>• Fungicide, bactericide</li> <li>• Only in fruit trees, olive trees and vines</li> </ul>
	Quartz sand	<ul style="list-style-type: none"> <li>• Repellent</li> </ul>
	Sulphur	<ul style="list-style-type: none"> <li>• Fungicide, acaricide, repellent</li> </ul>

7.12.08 cont	Calcium hydroxide	<ul style="list-style-type: none"> <li>Allowed as a fungicide to control <i>Nectria galligena</i> only in fruit trees, including nurseries</li> </ul>
	Potassium bicarbonate	<ul style="list-style-type: none"> <li>Fungicide</li> </ul>

**Algicides, Disinfectants and Sanitisers**

7.12.09	The following preparations may be used for the disinfecting of crop equipment:	
	Disinfectants approved under COSHH	<ul style="list-style-type: none"> <li>Must not come into direct contact with the crop or soil</li> </ul>

**7.13 Manures and Plant Wastes**

7.13.01	<i>Manures and slurries produced and recycled on the holding are a principal means of moving fertility horizontally round the farm. Every effort must be made to conserve the nutrients by careful storage and applications.</i>
7.13.02	The storage and spreading of manures and slurries on the holding must observe the requirements of Protecting our Water, Soil and Air – a Code of Good Agricultural Practice for Farmers, Growers and Land Managers. Producers are required to have this Code of Practice and be familiar with its requirements.
7.13.03	Producers must prepare a Farm Waste Management Plan (FWMP) and Risk Management Plan as required in the Code of Practice. Record Sheet 10 can be used for this purpose.

**Storage of Slurry**

7.13.04	<p>Storage facilities for livestock manure must be of a capacity to preclude the pollution of water by direct discharge, or by run-off and infiltration of the soil. Adequate provision must be made for the storage of manure/slurry prior to application. Manure/slurry stores must be able to:</p> <ul style="list-style-type: none"> <li>(i) Cope with the volume of production of manure/slurry produced on the holding and enable flexibility of slurry application timing by provision of adequate volume of storage;</li> <li>(ii) To ensure sound fertiliser management, the capacity of such storage facilities for livestock manure and slurry must exceed the storage capacity required for the longest period of the year in which any application of fertiliser to the land is either inappropriate (considered to be 4 months under UK codes of practice) or when such application is prohibited, in cases where the production unit is located within a designated Nitrate Vulnerable Zone;</li> <li>(iii) Prevent liquid effluents from manure/slurry entering watercourses and ground water.</li> </ul>
7.13.05	<p><i>In addition, the storage of slurry should take into account the following:</i></p> <ul style="list-style-type: none"> <li>(i) <i>The store should be constructed and maintained in accordance with the Control of Pollution Act;</i></li> <li>(ii) <i>To reduce ammonia emission, slurry should be removed from collecting areas, drains and buildings regularly, mixed thoroughly in the reception pit, and, if not to be regularly aerated, a crust should be allowed to form;</i></li> <li>(iii) <i>An efficient agitation system should be fitted to break up crusts prior to application. Mixing should take place on windy days to minimise the nuisance value of the odours. The direction of wind in relation to houses should be checked;</i></li> <li>(iv) <i>Separation through weeping wall systems or mechanical separation is recommended. The liquid portion can be stored without stirring or spread as dirty water and the solids composted;</i></li> </ul>



7.13.05 cont.	<p>(v) <i>Anaerobic digestion is recommended as it may reduce emissions by 80% during and after spreading whilst producing a utilisable bio-gas;</i></p> <p>(vi) <i>Regular aerobic treatment is recommended where appropriate as it will reduce pathogens and weed seed viability, stabilise nitrogen and reduce ammonia emissions by up to 80% during and after spreading.</i></p>
7.13.06	Where effluents are treated in settlement ponds, ditches or reed beds and ultimately discharged into watercourses, the producer must have the written approval of the Environment Agency for the discharge.

### Storage of Farmyard Manures

7.13.07	The storage of manures must comply with Protecting our Water, Soil and Air – A Code of Good Agricultural Practice for Farmers, Growers and Land Managers, which is designed to minimise the release of ammonia and objectionable odours into the air and prevent the pollution of watercourses.
7.13.08	<p><i>The storage of farmyard manure should take into account the following:</i></p> <p>(i) <i>A store for solid manures should be designed for ease of handling and elimination or pollution risk with a concrete or hardcore base and a means of collecting effluent and run-off into a sump tank;</i></p> <p>(ii) <i>Storage under cover where possible or under plastic sheeting is recommended to minimise nutrient loss through leaching;</i></p> <p>(iii) <i>Semi-solid slurry can be stored in an earth banked or weeping wall structure, the liquid being treated separately;</i></p> <p>(iv) <i>Short term storage in the field is acceptable provided there is no risk of pollution - manure stacks must not be less than 10m from a field drain or watercourse and 50m from a spring, well or borehole;</i></p> <p>(v) <i>The aerobic composting of all manures is recommended through active and repeated turning and mixing.</i></p>
7.13.09	<i>Composting is the process whereby materials are turned and fermented aerobically in order to encourage the breeding of bacteria and to kill off weed seeds and pathogens. The heap should heat up to a temperature of at least 60°C.</i>

### Applications of Manure and Slurry

7.13.10	<p>The application of manure and slurry must comply with the Defra Protecting our Water, Soil and Air – A Code of Good Agricultural Practice for Farmers, Growers and Land Managers. The principal requirements, which must be identified in the Farm Waste Management Plan, are as follows:</p> <p>(i) Care must be taken when spreading manure or slurry to avoid run-off, and the pollution of watercourses and ground water. The application of manure/slurry within 10 metres of ditches and watercourses and within 50 metres of wells, springs and boreholes must be avoided;</p> <p>(ii) Subject to prevailing legislation e.g. for NVZs, the rate of application should only be to the extent that the total nitrogen in the manure or slurry does not exceed the crop requirements and, as a general guide, does not exceed the equivalent of 2.5 livestock units or 250kg N/ha/yr;</p> <p>(iii) Attention must be paid to the capacity of the ground to absorb the manure or slurry at the time of application. The spreading of manure or slurry on frozen ground or on saturated ground should be avoided, so as to prevent excessive run off. When conditions appear unfavourable and pollution seems likely to occur, application must not take place;</p>
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7.13.10 cont.	(iv) Manure or slurry must not be applied to high-risk fields as identified in the FWMP, especially waterlogged or poorly drained soils, fields likely to flood and sloping fields at field capacity.												
7.13.11	<i>To avoid leaching of nutrients, manure and concentrated slurry should not be spread between October and February, unless the area has low winter rainfall or the climate is favourable enough for the grass or crops to grow all through the winter.</i>												
7.13.12	Separated liquids and dirty water diluted with rainwater can be sprayed onto grassland over the winter when conditions permit, provided that the applications are rotated round a number of fields.												
7.13.13	(Article 15 (1) (889/2008)) The total stocking density shall be such as not to exceed the limit of 170kg of nitrogen per year and hectare of agricultural area as referred to in Section 7.13.15.												
7.13.14	(Article 15 (2) (899/2008)) To determine the appropriate density of livestock referred to above, Defra shall set out the livestock units equivalent to the above limit, taking as a guideline, the figures laid down in Section 8.7.13 or the relevant national provisions adopted pursuant to Directive 91/676/EEC.												
7.13.15	(Article 3 (2) (889/2008)) The total amount of livestock manure, as defined in Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources, applied on the holding may not exceed 170kg of nitrogen per year/hectare of agricultural area used. This limit shall only apply to the use of farmyard manure, dried farmyard manure and dehydrated poultry manure, composted animal excrements, including poultry manure, composted farmyard manure and liquid animal excrements.												
7.13.16	<i>This includes the manure dropped on the pasture by animals, the manures produced whilst they are housed and any manures brought onto the holding. 170kg of nitrogen equates approximately to:</i> <table border="0" style="margin-left: 40px;"> <tr> <td><i>Farmyard Manure</i></td> <td><i>28t/ha</i></td> <td><i>Mushroom Compost</i></td> <td><i>28t/ha</i></td> </tr> <tr> <td><i>Stable Manure</i></td> <td><i>24t/ha</i></td> <td><i>Poultry Deep Litter</i></td> <td><i>5t/ha</i></td> </tr> <tr> <td><i>Municipal Compost</i></td> <td><i>34t/ha</i></td> <td><i>Poultry Layer Manure</i></td> <td><i>8t/ha</i></td> </tr> </table>	<i>Farmyard Manure</i>	<i>28t/ha</i>	<i>Mushroom Compost</i>	<i>28t/ha</i>	<i>Stable Manure</i>	<i>24t/ha</i>	<i>Poultry Deep Litter</i>	<i>5t/ha</i>	<i>Municipal Compost</i>	<i>34t/ha</i>	<i>Poultry Layer Manure</i>	<i>8t/ha</i>
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7.13.17	(Article 3 (3) (889/2008)) Organic-production holdings may establish written cooperation agreements exclusively with other holdings and enterprises that comply with the organic production rules, with the intention of spreading surplus manure from organic production. The maximum limit as referred to in Section 7.13.15, shall be calculated on the basis of all of the organic production units involved in such cooperation.												
7.13.18	Manures produced on the organic holding must not be exported to a non-organic unit or holding.												

#### Criteria for Permitting Manures to be Brought-in

7.13.19	All brought-in non-organic manures must be listed in Section 7.14 of this Manual and must have approval from OF&G prior to being brought-in or used. Approval will normally be given only for: <ul style="list-style-type: none"> <li>(i) Manure from a non-organic livestock enterprise grazing in-conversion land prior to the conversion of the livestock enterprise;</li> <li>(ii) The exchange of an equivalent quantity of non-organic manure for the organic straw used as bedding by a non-organic livestock enterprise (2 tonnes farmyard manure is equivalent to 1 tonne of straw in terms of potash recycled);</li> </ul>
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7.13.19 cont.	<ul style="list-style-type: none"> <li>(iii) Manures brought-in during the conversion period to build up the organic matter content of the soil, especially a sandy soil or a soil severely depleted of organic matter due to a history of over-exploitative cropping;</li> <li>(iv) Manures brought in to support small-scale intensive horticultural production and intensive greenhouse production;</li> <li>(v) Local manures brought in to replace P and K lost as crops are sold, in preference to rock minerals shipped in from overseas or long distances.</li> </ul>
7.13.20	<p>Approval will be given to bring in manure only after a Nutrient Budget has been completed. The permitted quantities and application rates will be calculated taking into account the following:</p> <ul style="list-style-type: none"> <li>(i) The combination of the nitrogen produced from the legumes in a crop rotation and the manure applications must not result in surpluses leaching into the ground water;</li> <li>(ii) The total application of nitrogen as manures and slurries must not exceed 170kg N/ha/yr over the whole holding;</li> <li>(iii) Given compliance with i) and ii), the correcting of P and K deficiencies in the soil and the replacement of losses taken off in the crops.</li> </ul> <p><i>An application to import manures must be made using OF&amp;G Record Sheet 9 – ‘Restricted Practice and Material Approval Application Form’. Alternatively a Self-assessment procedure can be followed using OF&amp;G Technical Leaflet 111 – ‘Self Assessment Procedure for Importing Non-organic Animal Manures’, available from the Certification Office or the OF&amp;G website at <a href="http://www.organicfarmers.org.uk">www.organicfarmers.org.uk</a>.</i></p>

#### Acceptable Production Systems

7.13.21	<p>Except where tighter limits are imposed in Section 7.14.04, all brought-in materials must comply with the following maximum concentrations for heavy metals:</p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;"><b>Metal</b></th> <th style="text-align: left;"><b>mg/kg (ppm) of dry matter:</b></th> <th style="text-align: left;"><b>Metal</b></th> <th style="text-align: left;"><b>mg/kg (ppm) of dry matter:</b></th> </tr> </thead> <tbody> <tr> <td>Cadmium:</td> <td>10</td> <td>Mercury:</td> <td>2</td> </tr> <tr> <td>Chromium:</td> <td>1000</td> <td>Nickel:</td> <td>100</td> </tr> <tr> <td>Copper:</td> <td>400</td> <td>Zinc:</td> <td>1000</td> </tr> <tr> <td>Lead:</td> <td>25</td> <td></td> <td></td> </tr> </tbody> </table>	<b>Metal</b>	<b>mg/kg (ppm) of dry matter:</b>	<b>Metal</b>	<b>mg/kg (ppm) of dry matter:</b>	Cadmium:	10	Mercury:	2	Chromium:	1000	Nickel:	100	Copper:	400	Zinc:	1000	Lead:	25		
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Copper:	400	Zinc:	1000																		
Lead:	25																				
7.13.22	<p>For the manure to be acceptable, the animals must:</p> <ul style="list-style-type: none"> <li>(i) Free range on pasture during the grazing season;</li> <li>(ii) Be well bedded on straw, shavings or other plant wastes when housed;</li> <li>(iii) In the case of poultry deep-litter systems, the live-weight stocking rate at maturity does not exceed 30kg per square metre.</li> </ul>																				

#### Avoidance of Genetically Modified Organisms

7.13.23	<p>Fertilisers, composts, manures and other nutrient inputs containing GMOs or their derivatives are prohibited. Manures from livestock that have consumed feeds containing GMOs or their derivatives during the 3 months prior to the manure being produced are prohibited. Fertilisers or manures derived from genetically engineered crops, plant residues or by-products, are prohibited.</p>
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**Composting Periods**

7.13.24	All brought-in non-organic manures must receive the appropriate composting or storage prior to application. As a minimum these composting and storage periods should be: <ol style="list-style-type: none"> <li>(i) Farmyard and stable manure - stacked for 6 months or properly composted;</li> <li>(ii) Poultry and pig manure - stacked for 12 months or properly composted.</li> </ol>
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**Unacceptable Production Systems**

7.13.25	Animal manures from factory farming origin are prohibited.
7.13.26	<i>In the absence of a definition of factory farming from the EU Commission, the following criteria have been adopted as a definition:</i> <ol style="list-style-type: none"> <li>(i) <i>Systems in which animals are permanently confined or kept in cages (eg. battery systems, sow farrowing crates, barley beef systems);</i></li> <li>(ii) <i>Systems in which animals are kept permanently without bedding, in the dark or in temperature controlled housing (e.g. intensive indoor pig fattening systems);</i></li> <li>(iii) <i>Poultry systems permanently housed on deep-litter where the live-weight stocking rate at maturity exceeds 30kg per square metre;</i></li> <li>(iv) <i>Systems in which animals are fed genetically modified feedstuffs.</i></li> </ol>
7.13.27	The following materials are also prohibited: <ol style="list-style-type: none"> <li>(i) Sewage sludge, the processed products of sewage sludge and septic tank contents;</li> </ol>

**7.14 Permitted Manures and Soil Conditioners**

7.14.01	Compounded products must only contain materials listed in Sections 7.14 and 7.16.
7.14.02	(Article 3 (4) (889/2008)) Appropriate preparations of micro-organisms may be used to improve the overall condition of the soil or the availability of nutrients in the soil or in the crops.
7.14.03	(Article 3 (5) (889/2008)) For compost activation appropriate plant-based preparations or preparations of micro-organisms may be used.

**Materials of Plant and Animal Origin**

7.14.04	The following products may be used in accordance with the requirements of Section 7.6.01 and only in accordance with the provisions of the legislation in general agriculture in the UK.	
	<b>Name</b>	<b>Description, compositional requirements, conditions for use</b>
	Farmyard manure:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• Product comprising a mixture of animal excrements and vegetable matter (animal bedding)</li> <li>• Factory farming origin forbidden</li> </ul>
	Dried farmyard manure and dehydrated poultry manure:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• Factory farming origin forbidden</li> </ul>

7.14.04 cont.	Name	Description, compositional requirements, conditions for use
	Composted animal excrements, including poultry manure and composted farmyard manure:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• Factory farming origin forbidden</li> </ul>
	Liquid animal excrements (slurry, urine, etc):	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• Use after controlled fermentation and/or appropriate dilution</li> <li>• Factory farming origin forbidden</li> </ul>
	Composted or fermented household waste:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• Product obtained from source-separated household waste, which has been submitted to composting or anaerobic fermentation for biogas production</li> <li>• Only vegetable and animal waste</li> <li>• Only when produced in a closed and monitored collection system, accepted by Defra</li> <li>• Maximum concentrations in mg/kg of dry matter: Cadmium: 0.7; Copper: 70; Nickel: 25; Lead: 45; Zinc: 200; Mercury: 0.4; Chromium (total): 70; Chromium (VI): 0 (Limit of determination)</li> </ul>
	Peat:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• Use limited to horticulture - Plant propagation only</li> <li>• From a source which does not harm peat bogs recognised to be of conservation value</li> </ul>
	Mushroom culture wastes:	<ul style="list-style-type: none"> <li>• The initial composition of the substrate must be limited to products of this list</li> </ul>
	Dejecta of worms (vermicompost) and insects:	<ul style="list-style-type: none"> <li>•</li> </ul>
	Guano:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> </ul>
	Composted or fermented mixture of vegetable matter:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• Product obtained from a mixture of vegetable matter which has been submitted to composting or to anaerobic fermentation for biogas production</li> <li>• The maximum levels of heavy metals must not exceed those listed in the PAS 100 requirements</li> <li>• These can be obtained by contacting OF&amp;G</li> </ul>

7.14.04 cont.	Name	Description, compositional requirements, conditions for use
	Products or by-products of animal origin as below: - blood meal; - hoof meal; - horn meal; - bone meal or degelatinised bone meal; - fish meal; - meat meal; - feather, hair and 'chiquette' meal; - wool; - fur; - hair; - dairy products.	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use.</li> <li>• Maximum concentration in mg/kg of dry matter of Chromium (VI): 0 (Limit of determination)</li> </ul>
	Products and by-products of plant origin for fertilisers (for instance, oilseed cake meal, cocoa husks, malt culms, etc):	
	Seaweeds and seaweed products:	As far as directly obtained by: <ol style="list-style-type: none"> <li>(i) physical processes including dehydration, freezing and grinding;</li> <li>(ii) extraction with water or aqueous acid and/or alkaline solution;</li> <li>(iii) fermentation.</li> </ol>
	Sawdust and wood chips; Composted bark; Wood ash.	<ul style="list-style-type: none"> <li>• Wood not chemically treated after felling.</li> </ul>
	(Article 3 (4) Annex IA 2.4) Appropriate preparations of Micro-organisms:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• Not genetically modified</li> <li>• Approved for use in agriculture</li> <li>• May be used to improve the overall condition of the soil or the availability of nutrients in the soil or in the crops</li> </ul>
	(Annex IA 2.3) So called "Biodynamic preparations" Stone meal and clays:	<ul style="list-style-type: none"> <li>• From stone meal, farmyard manure or plants may be used</li> </ul>

## 7.15 Mineral Fertilisers and Supplementary Nutrients

7.15.01	<p>Producers must have approval from OF&amp;G before importing and using fertilisers where it is indicated as – 'Must be approved by OF&amp;G before use'. This is also required for compound products, which have a restricted material in their composition.</p> <p><i>An application to import a restricted fertiliser must be made using OF&amp;G Record Sheet 9 – 'Restricted Practice &amp; Material Approval Application Form'. Alternatively a self-assessment procedure can be followed using OF&amp;G Technical Leaflet 114 – 'Self Assessment Procedure for Using Approved Potash Fertilisers, available from OF&amp;G.</i></p>
7.15.02	<p>Approval will normally be given for potash materials such as Sylvinite or Sulphate of Potash only on receipt of representative soil analysis for each field indicating a K<sub>2</sub>O Index of 2- or less. The clay content and organic matter must be measured and be considered when assessing application rates.</p>

7.15.03	It is the responsibility of all producers to check that any fertiliser is compliant with the permitted materials listed in Section 7.16. The use of any fertiliser containing a material not listed will result in loss of certification for the land.
7.15.04	Where an advisor, consultant or trade representative advises on fertiliser usage on a registered farm, the producer must obtain their relevant Fertiliser Advisor's Certificate and Training Scheme (FACTS) qualification number. The advisor must have read this Manual and agree to advise on fertiliser usage in compliance with these Standards.
7.15.05	Approved fertilisers must be stored on a hard surface, preferably under cover where spillage can be contained rather than carried by run-off water into watercourses. Liquids must be stored in suitable, secure containers away from watercourses.
7.15.06	Fertiliser spreaders must be adequately maintained and calibrated annually according to the manufacturer's instructions.
7.15.07	<i>Regular soil analyses should be undertaken, preferably at the same point in the rotation to monitor the soil fertility. Applications of approved fertilisers should be made on the basis of measured deficiencies and matched to future crop requirements.</i>
7.15.08	Producers must take care to avoid any practices that have an environmental impact and avoid any detrimental impact on features of conservation value.

## 7.16 Permitted Fertilisers of Mineral Origin

7.16.01	Compounded products must contain only materials listed in Sections 7.14 and 7.16.
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### Materials of Mineral Origin

7.16.02	The following products may be used in accordance with Section 7.6.01 and in accordance with the provisions of the legislation applicable in general agriculture in the UK.	
	<b>Name</b>	<b>Description, compositional requirements, conditions for use</b>
	Soft ground rock phosphate:	Product as specified in point 7 of Annex IA.2. to Regulation (EC) No 2003/2003 of the European Parliament and of the Council relating to fertilisers, Cadmium content less than or equal to 90 mg/kg of P <sub>2</sub> O <sub>5</sub>
	Aluminium calcium phosphate (e.g. Red slag):	Product as specified in point 6 of Annex IA.2. of Regulation 2003/2003, Cadmium content less than or equal to 90 mg/kg of P <sub>2</sub> O <sub>5</sub> Use limited to basic soils (pH > 7.5)
	Basic slag:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• Product as specified in point 1 of Annex IA.2. of Regulation 2003/2003</li> </ul>
	Crude potassium salt (e.g. Kainite/Kainit, Sylvinit, etc):	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• Product as specified in point 1 of Annex IA.2. of Regulation 2003/2003</li> </ul>

7.16.02 cont.	Name	Description, compositional requirements, conditions for use
	Potassium sulphate, possibly containing magnesium salt:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• Obtained from crude potassium salt by a physical extraction process, containing possibly magnesium salts</li> </ul>
	Stillage and stillage extract:	<ul style="list-style-type: none"> <li>• Ammonium stillage excluded</li> </ul>
	Calcium carbonate of natural origin (chalk, marl, ground limestone, phosphate chalk):	<ul style="list-style-type: none"> <li>• <i>Includes Dolomitic limestone and dredged calcareous sea sand</i></li> </ul>
	Breton ameliorant (maërl), calcified seaweed:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> </ul>
	Magnesium and calcium carbonate of natural origin (e.g. magnesium chalk, ground magnesium limestone etc):	<ul style="list-style-type: none"> <li>• Only of natural origin</li> </ul>
	Magnesium sulphate (e.g. Kieserite or Epsom Salts):	<ul style="list-style-type: none"> <li>• Only of natural origin</li> </ul>
	Calcium chloride solution:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• Foliar treatment of apple trees after identification of deficit of calcium (bitter pit)</li> </ul>
	Calcium sulphate (gypsum):	<ul style="list-style-type: none"> <li>• Product as specified in point 1 of Annex ID. of Regulation 2003/2003</li> <li>• Only of natural origin</li> </ul>
	Industrial lime from sugar production:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• By-product of sugar production from sugar beet</li> </ul>
	Industrial lime from vacuum salt production:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• By-products of the vacuum salt production from brine found in mountains</li> </ul>
	Elemental sulphur:	<ul style="list-style-type: none"> <li>• Must be approved by OF&amp;G before use</li> <li>• Product as specified in Annex ID.3. of Regulation 2003/2003</li> </ul>
	Trace elements (e.g. manganese sulphate, copper sulphate):	<ul style="list-style-type: none"> <li>• Inorganic micronutrients listed in part E of Annex I to Regulation 2003/2003</li> </ul>
	Sodium chloride:	<ul style="list-style-type: none"> <li>• <i>Approved for use on beet</i></li> <li>• All other uses must be approved by OF&amp;G before use</li> <li>• Only mined salt</li> </ul>
	Stone meal - including Adularia shale, ground basalt magnesium oxide (talc), diatomaceous earth:	<ul style="list-style-type: none"> <li>• <i>Non-water-soluble ground rock flour only</i></li> </ul>



## 7.17 Handling and Storage of Crops

### Harvesting and handling

7.17.01	Effective steps must be taken to protect organically grown crops from contamination during harvesting, storage and transportation and in this regard cleaning routines and control procedures must be established and maintained to ensure that harvesting equipment, including vehicles and containers used for transporting the produce are clean, free from non-organic crop residues and any other materials which may contaminate the produce.
7.17.02	From harvesting through to dispatch from the unit, produce must be clearly and legibly identified with the organic, in-conversion or non-organic status of the crop, the variety and field(s) of origin.
7.17.03	The use of ionising radiation and synthetic chemical treatments as an aid to preservation is not permitted.

### Storage of Grain and Arable Crops

7.17.04	(Article 35 (4) (889/2008)) In cases where operators handle both non-organic products and organic products and the latter are stored in storage facilities in which also other agricultural products or foodstuffs are stored: <ul style="list-style-type: none"> <li>(a) The organic products shall be kept separate from the other agricultural products and/or foodstuffs;</li> <li>(b) Every measure shall be taken to ensure identification of consignments and to avoid mixtures or exchanges with non-organic products;</li> <li>(c) Suitable cleaning measures, the effectiveness of which has been checked, have been carried out before the storage of organic products; operators shall record these operations.</li> </ul>
7.17.05	The following requirements, taken from the Assured Combinable Crops Scheme, the Defra Code of Practice for the Control of Salmonella and the HGCA's 'Grain Storage Guide', are to be considered best practice and must be adopted by all operators storing grain.
7.17.06	Buildings used for the storage of grain must: <ul style="list-style-type: none"> <li>(a) Be weatherproof and all roof leaks, broken sheeting, guttering etc. must be repaired prior to storage of grain. Long term stores should ideally be dedicated to grain storage although multi-purpose stores are acceptable;</li> <li>(b) Have suitable floors of solid construction to prevent contamination of grain with earth, stones, debris etc. and walls and dividing walls constructed of a suitable material to prevent contamination;</li> <li>(c) Have doors, which fit and close properly to prevent ingress of water, rodents and birds. They can be constructed of close meshed netting or similar material if fit for the purpose.</li> </ul>
7.17.07	Action must be taken to prevent bird, rodent and domestic animal entry to all grain storage. Entry points around gutters, eaves, doors, loading pipes etc should be secured. Doors should be kept shut and stores kept as dark as possible. Where multi-purpose stores cannot be kept dark for reasons of safety, this is acceptable.
7.17.08	All light bulbs, lamps, windows and other glass material in temporary and long term stores and grain movement areas must be protected or constructed to avoid broken glass contaminating the grain. Shatter resistant bulbs and tubes or polycarbonate or plastic covers are acceptable. Toughened glass light covers are not acceptable.

7.17.09	In the case of grain stores, where the grain is stored on the floor, the hard outside loading areas must be maintained in a clean and well drained condition, in line with the Defra Code of Practice for the Control of Salmonella, during the storage, handling and transport of raw materials.
7.17.10	If drying is needed this should be carried out as soon as possible to avoid damage to the grain through heating, mould or smell. As appropriate, the crops may be dried by indirect heated air or by other suitable means. They must not be contaminated by the combustion products of the fuel used.
7.17.11	Grain drying equipment must be regularly maintained in line with the manufacturer's instructions and the dates recorded.
7.17.12	Where longer-term grain storage is undertaken, the temperature and condition of the grain should be monitored weekly until the temperature has stabilised, after which a longer interval is acceptable. Appropriate action must be taken to remedy temperature rises, water ingress, bird and rodent activity. Records must be kept of the dates of all checks and the follow up action where applicable.
7.17.13	Apart from the temporary storage of grain, all operators are required to have a moisture meter and temperature probe. These should be calibrated annually and the results recorded.

#### Hygiene Measures in Stores

7.17.14	All equipment used for the harvesting, transportation, handling and conveying of grain must be thoroughly cleaned prior to use. The cleaning of plant and equipment should be carried out by brushing, scraping, vacuum cleaning, air cleaning and washing with potable water or by steam cleaning.
7.17.15	Before use, storage areas used for organic produce must be clean and free from non-organic crop residues and other materials that may contaminate the produce. Storage areas should remain empty for an appropriate period of time prior to use to act as a disease and insect break.
7.17.16	Where necessary appropriate disinfectants and/or detergents may be used for cleaning buildings, plant and equipment (see Section 7.12.09). Where wet disinfectants are used, all contact surfaces must be washed with potable water before organic products are handled. Cleaning materials must be properly labelled and stored.
7.17.17	Where equipment has been used for the movement of animal manures, they must be pressure-washed and treated with a food-grade sanitiser, followed by a final wash with potable water.
7.17.18	Buildings previously used for livestock and intended for the temporary storage of grain must be thoroughly cleaned, pressure washed and treated with a food grade sanitiser at least 5 weeks prior to storage, followed by a final wash with potable water.
7.17.19	Hygiene practices on holdings must conform to the requirements of Section 11.7 of this Manual.
7.17.20	Hygiene and cleaning materials must be properly labelled and stored safely to avoid contamination.

#### Pest Control Measures in Stores

7.17.21	Pesticides must not be applied to stores or non-organic products in stores that also contain organic or in-conversion crops.
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7.17.22	Pest infestations in stored crops must be controlled by: <ul style="list-style-type: none"> <li>(a) A combination of good hygiene practices, drying and agitation;</li> <li>(b) The practices permitted in Section 11.8 of this Manual.</li> <li>(c) Static bait traps using licensed poisons are permitted for rodent control in locations where there is no risk to other animals or other wildlife.</li> </ul>
7.17.23	Care must be taken to avoid the contamination of stored grain with rodent bait. Bait for rodent control must be in tamper evident bait stations. Baiting stations within the store should be secured to floor/wall joints or be kept well away from the stored grain where there is no risk of contamination. Baited grain must not be used in areas of floor storage.
7.17.24	Pest control practices must conform to the requirements of Section 11.8 of this Manual.

#### Packaging Materials

7.17.25	The use and storage of packaging materials must be compliant with the requirements of Section 11 of this Manual.
7.17.26	If sacks are used for storage or delivery of produce to customers, they must be of food grade quality, clean and free from contamination.

#### Transport

7.17.27	The transport of materials must comply with the requirements of Section 11 of this Manual.
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#### On-Farm Processing

7.17.28	Processing, packaging and/or marketing may take place on the production unit.
7.17.29	OF&G must be informed of any on-farm processing activities. A separate inspection and or licence may be required. (See Section 5 of this Manual)
7.17.30	All on-farm processing must conform to the requirements of Sections 10 to 14 of this Manual.

### 7.18 Specialist Crops - Mushroom Production

7.18.01	<p>(Article 6 (889/2008))</p> <p>For the production of mushrooms, substrates may be used if they are composed only of the following components:</p> <ul style="list-style-type: none"> <li>(i) Farmyard manure and animal excrements, including the products referred to in the list of materials in Section 7.14.04 (farmyard manure to liquid animal excrements) of this Manual: <ul style="list-style-type: none"> <li>(a) Either from holdings producing according to the organic production method;</li> <li>(b) Or satisfying the requirements referred to in Section 7.14.04 (farmyard manure to liquid animal excrements) of this Manual, only up to 25% and only when the product in a) above is not available.</li> </ul> <p>This percentage is calculated on weight of total components of the substrate excluding the covering material and any added water before composting.</p> </li> <li>(ii) Products of agricultural origin, other than those covered under Section 7.18.01 i) above (e.g. straw), from holdings producing according to organic production method;</li> <li>(iii) Peat not chemically treated;</li> </ul>
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7.19.10 cont.	<ul style="list-style-type: none"> <li>(v) Hygiene procedures to ensure that all equipment is clean;</li> <li>(vi) Procedures for taking samples and storing them;</li> <li>(vii) Comprehensive record keeping for the harvest including the species, collectors, quantities etc.</li> </ul>
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#### Inspection requirements

7.19.11	<p><i>The responsible operator shall be subject to the same inspection and certification procedures as any other certified party.</i></p> <p><i>The operator and the facilities shall be inspected at least once per year and shall include:</i></p> <ul style="list-style-type: none"> <li><i>(i) Interviews with the collectors;</i></li> <li><i>(ii) Visit to an appropriate proportion of the certified area;</i></li> <li><i>(iii) Visits to and interviews of any middlemen;</i></li> <li><i>(iv) The gathering of relevant information about the area of collection from interviews of landowners and other parties such as environmental agencies etc.</i></li> </ul>
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