

## Appendix EC.9

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### SAFE APPLICATIONS TO LAND

This appendix provides guidance on making applications to land. All applications to land must be carried out in accordance with legislation. Environmental Permits or exemptions must be held where applicable. If your farm is in an NVZ you must also follow NVZ rules.

**Note:** Producers should always check with buyers to ensure that any applications of sludge, compost, digestate and other materials originating outside the farm are acceptable to customers.

#### Sewage Sludge (biosolids)

For further information, including the Biosolids Assurance Scheme (BAS) Standard, refer to:

<https://assuredbiosolids.co.uk/>

Evidence of BAS Certified Biosolids should be provided by your biosolids supplier and can be verified in the certification section of the BAS website.

Two types of biosolid are permitted by the scheme:

1. Conventionally treated – has been treated to defined treatment processes and standards that ensure at least 99% of pathogens have been destroyed. The most common form of treatment is anaerobic digestion.
2. Enhanced treated – will be free from Salmonella and will have been treated so as to ensure that 99.9999% of pathogens present in the original sludge have been destroyed.

**Note 1:** Spreading of untreated sludge on agricultural land is not permitted within the UK. While the sewage sludge in agriculture: code of practice for England, Wales and Northern Ireland does make provision for use of untreated sewage where this is injected or worked into the soil, this is not permitted within Red Tractor Fresh Produce. Where untreated sewage sludge has been used previously, a 5-year withholding period shall be applied.

**Note 2:** Treatment processes for sewage sludge and withholding periods are primarily designed to manage microbiological risks to food safety. Red Tractor members' risk assessments should also give due consideration of other risks – including heavy metals and chemical residues – that could be present and may not be mitigated by treatment processes.

#### Farmyard Manure (FYM) and Slurry – Fresh, Stored or Treated

Batch storage of solid manures and slurries for at least 6 months (that is with no additions of fresh manure made to the store during this period) or 'active' treatment, are effective methods of killing pathogens. Composting of solid manures is a particularly effective method of controlling microbial pathogens, but for best results the process needs to be actively managed. The manure should be treated as a batch and turned regularly (at least twice within the first 7 days) either with a front-end loader or preferably with a purpose-built compost turner. This should generate high temperatures over a period of time (e.g. above 55°C for 3 days) which are effective in killing pathogens and this temperature should be monitored. Allow the compost to mature as part of the treatment process. The whole process should last at least 3 months.

Lime treatment of slurry (addition of quick lime or slaked lime to raise the pH to 12 for at least 2 hours) is an effective method of inactivating bacterial pathogens. Allow the slurry to mature as part of the batch treatment process for at least 3 months prior to land spreading.

Although pathogens can be killed by exposure to sunlight, you should incorporate manures into the soil as soon as is practicable. This will reduce the potential for direct crop contamination as well as reduce odour and ammonia emissions.

#### Compost, Digestates and other Recycled Materials

It is recommended that digestates and composts sourced from external contractors for application to land have been produced to the relevant PAS specification (PAS 110 for digestate, PAS 100 for compost) and are applied following the associated quality protocol. The specifications and quality protocols provide safeguards on the feedstock materials, the processing stages and end product quality.

For all fruit and vegetable crops, information about the feedstock should be built into your risk assessment. Hazards might include potential foreign bodies arising from contamination of feedstocks with glass, metal or hard plastic – especially when the material is used on land for the growing of root vegetables, alliums and potatoes.

#### Biostimulants

Some biostimulant products are derived from mammalian tissue by-products, including pork and beef material. It is essential to check the acceptability of their use with your trade customers or buyers.

SAFE APPLICATIONS TO LAND

Safe Applications to Land Matrix

	Anaerobic Digestate (PAS 110 and pasteurised);	Anaerobic Digestate (PAS 110, not pasteurised) Anaerobic Digestate (not assured) Raw manure/ slurry	Composts (including PAS100 and non-assured; green and green/food) Treated manure/ slurry	Conventional treated sewage sludge	Enhanced treated sewage sludge	Land where immediate previous use has been as grazing land
Fresh produce	Category 1 Must be applied before drilling/ planting	Not within 12 months of drilling/planting	Any time before drilling/ planting <sup>1</sup>	Not within 30 months of harvest	Not within 10 months of harvest	Not within 12 months of drilling/planting
	Category 2 Must be applied before drilling/ planting	Not within 12 months of harvest and at least 6 months before drilling/planting	Any time before drilling/planting <sup>1,2</sup>	Not within 30 months of harvest	Not within 10 months of harvest	<b>Ovine grazing:</b> at least 3 months before harvest <sup>3</sup> <b>Other species:</b> not within 12 months of harvest and at least 6 months before drilling/ planting
	Category 3 Must be applied before drilling/ planting	Any time before drilling/planting	Any time before drilling/ planting	Not within 12 months of harvest	Not within 10 months of harvest	Any time before drilling/planting

**NB. The Safe Application to Land Matrix isn't applicable to Category 0 crop practices**

**Notes**

1. Target of zero and absolute limit of <0.1% (m/m dry weight) glass must be achieved
2. Green compost (PAS100 assured) may be applied as mulch
3. Where ovine grazing occurs between 3 and 12 months prior to harvest of category 2 crops, faeces must be incorporated into soil and no livestock is permitted on fields after drilling/planting.