
Appendix A:

Residue Levels in Certified Products, Water, Soil and Composts

A1 Introduction

The BioGro trademarks and logos are a guarantee that the product has been produced according to the requirements of the BioGro Standards. It is not a guarantee that the product is free of all environmental pollution residues, as background contamination is now so widespread that such an assurance could be misleading.

A2 Environmental pollution

Contamination by chemical residues is not acceptable in a certified product, unless the reason is general environmental contamination and residue levels do not exceed those specified in this Appendix.

Contamination may preclude a property or product from certification. BioGro may require any licensee, at the licensee's expense, to provide analytical data, including residue levels, on soils, water, produce or product.

A3 Testing requirements

If, due to previous and/or current practices on the property and/or practices on neighbouring properties, BioGro has concerns over potential residue or contamination levels in produce, then BioGro may require analyses of soil, water and produce to determine their acceptability. This requirement is at BioGro's sole discretion and will be at the applicant or licensee's expense. The licensee must, at all times, provide BioGro access to the operation to take samples.

A4 Residues and contamination

A4.1 Pesticide residue levels in soil

Maximum acceptable levels of pesticide residues in soils are based on 10 percent of the maximum residue levels for food listed in the *New Zealand (Maximum Residue Limits of Agricultural Compounds) Food Standards*. These tests are used as a guide to determine whether tests are required of the products from that property.

Where a property's soil residue levels fail to meet the BioGro Standards, products from that property may still be able to be certified where the products meet BioGro's Standard for food. Product tests will be required for those products most likely to contain residues, e.g. meat and dairy products for DDT residues.

Maximum residue levels of organochlorines in soil accepted by BioGro as background contamination are shown in the Table A1 below.

Table A1: Maximum permitted levels for organochlorines in soil

Chemical	BioGro Standard for soil (mg/kg)
Total DDT (including all metabolites and isomers)	0.2
Lindane	2.0

A4.2 Pesticide residue and heavy metal levels in food products and water

The maximum permissible level of pesticide residues in food products certified by BioGro is based on 10 percent of the maximum residue level listed in the *New Zealand (Maximum Residue Limits of Agricultural Compounds) Food Standards*. The maximum permitted level of heavy metals in food products certified by BioGro is based on 10 percent of the maximum level permitted under the *Australia New Zealand Food Standards Code*. Maximum permissible background contamination/residue levels for some pesticides and heavy metals in food products are specified in Table A2 below. The granting of certification of any food products containing detectable residues is at the sole discretion of BioGro.

Table A2: Maximum permitted pesticide residue and heavy metal levels in food and water

At the time of printing, the following are examples of some pesticide residue and heavy metal levels in food and water that may be accepted by BioGro as background contamination:

Chemical	New Zealand (Maximum Residue Limits of Agricultural Compounds) Food Standard and the Australia New Zealand Food Standards Code (mg/kg)	BioGro Standard for food and water (mg/kg)
Arsenic (total) in grains	1.0	0.1
Azinphos-methyl, in fruit	2.0	0.20
Benomyl, in avocados	0.5	0.05
Benomyl, in cereals	0.2	0.02
Cadmium, in vegetables and fruit	1.0	0.1
Carbaryl, in fruit/vegetables	3.0	0.30
Lead, in fruit and vegetables	0.2	0.02
Lindane, in any food	2.0	0.20
Tebufenozide, in kiwifruit	0.5	0.05
Total DDT (including all metabolites and isomers)	Meat fat 5.0 Milkfat 1.25 Eggs 0.5	Meat fat 0.5 Milkfat 0.125 Eggs 0.05
Note: Where a food residue or contaminant is not stated in the <i>New Zealand (Maximum Residue Limits of Agricultural Compounds) Food Standard</i> and the <i>Australia New Zealand Food Standards Code</i> then, the default MRL for the residue is 0.1 mg/kg (therefore 0.01 mg/kg for the BioGro Standard).		

A4.3 Heavy metal levels in soils and composts

Heavy metals and other potentially toxic elements can be essential to plants and animals in trace amounts, e.g. zinc, selenium and copper. However, some elements, such as cadmium, mercury and lead, can be toxic at higher concentrations.

An essential trace element deficiency may be corrected by the application of permitted or restricted materials approved by BioGro at specified amounts. The potential annual addition of heavy metals to the soil through inputs is also subject to certain limits.

Management practices must be recorded and must ensure that any accumulation of toxic elements in soils is minimised.

Any analyses required will be at the expense of the applicant or licensee.

The maximum levels of heavy metals in soil and composts accepted by BioGro are shown in the Table A3 below.

Table A3: Limits for heavy metals in soils and composts

Metal	BioGro Standard for soil (mg/kg dry weight soil)	BioGro Standard for compost – ingredients other than household waste (mg/kg dry weight compost)	BioGro Standard for compost – ingredients including household waste (mg/kg dry weight compost)
Arsenic	20	20	20
Cadmium	2	1	0.7
Chromium (total)	150	150	70
Chromium (VI)	1	1	0 detectable
Copper	60	60	70
Lead	100	250	45
Mercury	1	1	0.4
Nickel	35	60	25
Zinc	300	300	200

Any product found to have residues of a prohibited substance in excess of 5% of the USA EPA (Environmental Protection Agency) tolerance for that substance, can not be exported to the USA with either the USDA Seal or the label “organic” or the BioGro trademark or logo.

A5 Residue levels in brought-in materials

Licensees must ensure that any brought-in materials comply with all the requirements of these Standards. Documentation declaring that prohibited materials have not been used on brought-in materials must be obtained from suppliers.

