

0 7

A new dog food has been developed that does **not** contain meat from cows, sheep or chickens.

The new dog food contains insects.

The insects in the dog food factory are fed on waste vegetables.

0 7 . 1

Sketch the pyramid of biomass for the food chain that produces food for dogs from insects.

Label the pyramid.

[2 marks]**0 7 . 2**

Describe **two** reasons why the biomass of the insects eaten by dogs does **not** all become biomass of the dogs.

[2 marks]

1 _____

2 _____



0 7 . 3

Explain how making dog food from insects could improve **human** food security in the future.

[4 marks]

—
8

Turn over for the next question

Turn over ►



Question	Answers	Extra information	Mark	AO / Spec. Ref.
07.1	triangular pyramid with 3 levels		1	AO1 4.7.4.1 4.7.4.2
	correct labels: (waste) vegetables / plants; insect(s); dog(s)	do not accept additional incorrect labels	1	AO2 4.7.4.2
07.2	any two from: <ul style="list-style-type: none"> • carbon dioxide from respiration (from dog) • urea from excretion (from dog) • not all parts (of insects) are absorbed / digested (by dog) 	allow carbon dioxide breathed out (by dog) allow urea in urine (from dog) allow faeces from egestion (from dog) ignore references to loss of energy if no other mark awarded allow two factors without descriptions for 1 mark	2	AO1 4.7.4.3
07.3	less land required		1	AO2 4.7.5.1 4.7.3.5
	(so) more space for crops (for humans)	allow more meat (from cows etc) for humans	1	
	less methane (from animals) therefore less global warming	allow less methane from rotting vegetables in landfill	1	
	(therefore) less harmful effects of global warming on (human) food production	allow example such as less flooding of farmland allow may lead to the development of more foods for humans made from insects	1	
Total			8	