

91294



NEW ZEALAND QUALIFICATIONS AUTHORITY  
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QUALIFY FOR THE FUTURE WORLD  
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SUPERVISOR'S USE ONLY

# Level 2 Agricultural and Horticultural Science, 2017

## 91294 Demonstrate understanding of how NZ commercial management practices influence livestock growth and development

9.30 a.m. Wednesday 29 November 2017  
Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of how management practices influence livestock growth and development in commercial production in New Zealand.	Demonstrate in-depth understanding of how management practices influence livestock growth and development in commercial production in New Zealand.	Demonstrate comprehensive understanding of how management practices influence livestock growth and development in commercial production in New Zealand.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

**You should attempt ALL the questions in this booklet.**

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–10 in the correct order and that none of these pages is blank.

**YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.**

TOTAL

ASSESSOR'S USE ONLY

**QUESTION ONE: FEEDING PIGS**

Pig nuts are pellets produced from high quality grains. They are given to pigs in unlimited quantities, from 17 weeks of age until slaughter.

<b>*Pig nuts typical analysis (as fed)</b>	
<b>Nutritional value</b>	
Protein	14%
Fat (minimum)	1.5%
Fibre (maximum)	5%
Salt	0.3%
*Pig nuts also contain vitamins and minerals	

- (a) Explain how pig feed such as pig nuts improves pig growth and development after 17 weeks of age until slaughter.

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**QUESTION TWO: FACIAL ECZEMA**

Facial eczema is caused by a poison produced by the spores of a fungus that grows in warm, moist conditions in the dead leaf material found at the base of pastures. When the spores are eaten, they damage the animal's liver, causing a blood disorder. This blood disorder increases sensitivity to sunlight, leading to inflammation and the peeling of exposed skin. Facial eczema can occur in animals such as cattle, sheep, goats, deer, and alpacas.

One way to prevent facial eczema is to treat livestock with zinc.



- (a) Describe how one technique of zinc dosing to prevent facial eczema is carried out.

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- (b) Explain how zinc dosing to prevent facial eczema improves livestock growth and development.

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- (c) Evaluate how the effectiveness of treating animals with zinc is dependent on timing, and how this affects the economics of production.

**QUESTION THREE: SHELTER BELTS**

New Zealand farmers provide shelter belts to protect their grazing livestock from the prevailing wind, rain or snow – especially at times in the production cycle when livestock are most vulnerable.



(a) Explain how shelter belts improve the growth and development of livestock.

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## Acknowledgements

Material from the following sources has been adapted for use in this examination.

Page	Sources
2	(photo) <a href="http://www.marriagefeeds.co.uk/pig-feeds">www.marriagefeeds.co.uk/pig-feeds</a> (text) <a href="https://www.farmlands.co.nz/Documents/ProductsServices/Reliance/Pig/Pig_Nuts.pdf">https://www.farmlands.co.nz/Documents/ProductsServices/Reliance/Pig/Pig_Nuts.pdf</a>
4	(photo) <a href="http://www.teara.govt.nz/en/photograph/19678/facial-eczema">http://www.teara.govt.nz/en/photograph/19678/facial-eczema</a>
6	(photo) <a href="http://www.teara.govt.nz/en/photograph/19692/pine-shelterbelt">http://www.teara.govt.nz/en/photograph/19692/pine-shelterbelt</a>



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