

**FIELD AGRICULTURE, FORESTRY AND FISHERIES****Review of *Agrichemical Distribution, Aerial Agrichemical Application*, and review and change of ownership of, *Production Horticulture* and *Pest Control* unit standards**

This review report was first published in May 2005. Following a request from the Agriculture Industry Training Organisation the Accreditation Scope for expiring unit standard 5065 has been extended to include unit standard 21565.

Current Accreditation for			Accreditation extended to		
Nature of accreditation	Classification or Id	Level	Nature of accreditation	Classification or Id	Level
Subfield	Pest Management	3	Standard	21565	4
Domain	Pest Control	3			
Standard	5065	4			

**Date new version of report published August 2005**

The Accreditation Extension Table below has been updated to reflect this change.

Subfield	Domain	Id
Agriculture	Aerial Agrichemical Application	15592-15597
	Agrichemical Distribution	10891-10901, 14376
Horticulture	Production Horticulture	823, 824, 826, 827
Pest Management	Pest Control	5059-5066, 6540

The Agriculture Industry Training Organisation has completed the review of the unit standards listed above that were registered in June 1999 and June 2002.

**Date new versions published May 2005**

**New comments by date May 2009**

**Expiry date of new versions of the unit standards December 2010**

**Summary of review and consultation process**

The review of agrichemical related unit standards was initiated as they were due to expire, and also due to the requirement for compliance with regulations relating to the Hazardous Substances and New Organisms (HSNO) Act 1996, which require people who handle certain agrichemicals to be trained and certified as Approved Handlers, under delegated authority of the Environmental Risk Management Authority (ERMA). The review was also timed to occur concurrently with the review of NZS 8409:2004, *The management of agrichemicals*. The revised NZS 8409:2004 has been approved in part as a code of practice by ERMA to support the HSNO Act, legislation, and regulations.

The Horticulture Industry Training Organisation transferred responsibility for agrichemical unit standards: 823, 824, 826, 827 from domain Production Horticulture and 5059-5066 from domain Pest Control, to the Agriculture Industry Training Organisation. These unit standards were reviewed along with the Agriculture Industry Training Organisation agrichemical unit standards.

Initial meetings were convened with Industry Training Organisations, whose industries are involved in the use of agrichemicals for pest control to discuss the implications of the HSNO Act on their industries. Industry sector group meetings representing the domains aerial agrichemical application, agrichemical supply, pest control, and a working group concerned with Approved Handler requirements, were convened to consider their domain specific unit standards, and their future requirements for training in the use and management of agrichemicals and other pest control methods.

Extensive and ongoing consultation was conducted with key people from ERMA during the entire consultation process to ensure a clear and consistent link was maintained between Approved Handler requirements, industry needs, and associated unit standards.

New unit standards were drafted, and existing unit standards were amended, over successive meetings as well as by conference call. The needs of all sector groups, and stakeholders including industry training organisations, with an interest in agrichemicals were taken into consideration, and final versions of unit standards were drafted and approved, with final endorsement given by the Agriculture ITO, Services to Agriculture Committee.

There is significant demand for these unit standards due to the legislative requirements of people handling and managing agrichemicals. There is also a worldwide awareness of the effects of agrichemicals on the environment and on the people who use them, and therefore the theory and practical requirements around the safe use of agrichemicals is of paramount importance.

### **Main changes resulting from the review**

There was considerable overlap in unit standard content across the four domains. The review concentrated on reducing the overlaps and ensuring standards would meet the regulatory requirements. This has resulted in the development of new standards that have relationships with parts of standards, or several standards previously registered in more than one domain; in other cases there is a more straightforward replacement relationship.

The review has considered credits and levels and made adjustments to ensure the level matches the requirements of the standard, and increased the credit to reflect the time required to achieve competency and for assessment.

All unit standards now match current industry practices, and include the relevant legislation, codes of practice, and New Zealand standards.

Where unit standards have been allocated Review Category 'D', and replacements are required for a qualification, it is recommended that standard setters review their industry's requirements for skills and knowledge relating to agrichemicals, check the information provided with unit standards in the table below titled 'Summary of main changes to standards' ids, classification, titles, levels, and credits' for possible replacements, review the content of unit standards which may meet their requirements, and then select suitable replacements.

### **Aerial Agrichemical Application**

- Unit standard 15594 has been replaced by 21540, which includes the requirements for managing an aerial agrichemical application loading site. The level increased from 2 to 3 to reflect the level of complexity and responsibility, and the credits increased from 3 to 5 to reflect the time taken to achieve competency, and for assessment.
- Unit standard 15597 has been replaced by 21541, and the credits increased from 15 to 20 to reflect the time taken to achieve competency, and for assessment.
- Unit standards 15592, 15593, 15595 and 15596 are expiring and have some content relationship with the new standards 21558, 21562, 21563, and 21564 in the Pest Control domain.
- A new unit standard 21542 has been developed for people involved with configuration of aerial agrichemical application equipment.

### **Agrichemical Distribution**

- The unit standards have been reclassified in the new domain Agrichemical Supply.
- Unit standard 10891 credits for increased from 4 to 5.
- Unit standard 10892 has been replaced by 21551 and 21552.
- Unit standards 10893, 10894, 10897, 10898, 10899, 10900, and 10901 have been replaced by 21548, 21549, 21543, 21544, 21545, 21553, and 21550 respectively.
- Credits for 21548 increased from 5 to 6, and for 21553 and 21550 increased from 5 to 8 to reflect the time required to achieve competency and for assessment.
- Unit standards 10895, 10896, and 14376 have been replaced by unit standards 21546 and 21547.

### **Production Horticulture**

- Unit standards 823, 824 and 826 are expiring and have some content relationship with the new standards 21560, 21561, 21562, 21563, and 21564 in the Pest Control domain.
- Unit standard 827 is expiring, as it is no longer required by industry. It does not have a relationship with any of the new standards.

### **Pest Control**

- Unit standard 5059 has been replaced by 21554 and the level has increased from 1 to 2.
- Unit standards 5060, 5062, 5063, 5064, 5065, 5066, and 6450 are expiring and have some content relationship with the new standards 21555, 21556, 21557, 21558, 21559, and 21564.

- New unit standards 21563, 21564 and 21565 have been developed to meet the requirements of New Zealand Standard NZS 8409:2004, *The management of agrichemicals*. These new unit standards will provide the accepted industry standards for practical handling and management of agrichemicals in land based industries throughout New Zealand to meet the requirements for training as required by the HSNO Act 1996 and its associated regulations.

### Unit standards categorised as category C or D expire at the end of December 2006.

#### Impact on existing provider accreditations

Current Accreditation for			Accreditation extended to		
Nature of accreditation	Classification or Id	Level	Nature of accreditation	Classification or Id	Level
Subfield	Agriculture	2	Standards	21540, 21557, 21560, 21563, 21577, 21564	3
Domain	Agrichemical Distribution	4	Domain	Agrichemical Supply	4
Standard	10894	3	Standard	21549	3
Standard	10899	4	Standard	21545	4
Standard	14376	4	Standard	21546, 21547	4
Subfield	Horticulture	2	Standards	21554, 21555, 21556, 21561, 21562	2
Subfield	Horticulture	3+	Standards	21557, 21558, 21560, 21563, 21564	3
Domain	Production Horticulture	2	Standards	21554, 21555, 21556, 21561, 21562	2
Domain	Production Horticulture	3 and 4	Standards	21557, 21558, 21560, 21563, 21564	3
Standard	823	2	Standards	21560, 21563, 21564	3
Standard	824	2	Standards	21561, 21562	2
Standard	826	3	Standards	21560, 21563, 21564	3
Subfield	Pest Management	2	Standards	21557, 21563, 21564	3
Subfield	Pest Management	3	Standard	21565, 21559	4
Domain	Pest Control	1	Standard	21554	2
Domain	Pest Control	2	Standards	21557, 21563, 21564	3
Domain	Pest Control	3	Standard	21565, 21559	4
Standard	5059	1	Standard	21554	2
Standard	5060	2	Standards	21563, 21564	2
Standard	5061	2	Standards	21555, 21556	2
Standard	5062	2	Standard	21557	3
Standard	5063	3	Standard	21557	3
Standard	5064	3	Standards	21563, 21564	3
Standard	5065	4	Standards	21555	2
				21557	3
				21559	4
				21565	4
Standard	5066	4	Standard	21558	4
Standard	6540	3	Standard	21559	4

## Impact on Accreditation and Moderation Action Plan (AMAP)

The expiring Horticulture Industry Training Organisation standards have been removed from AMAP 0032.

AMAP 0052 has been updated to reflect other changes and registration of new standards and the reclassification of Agrichemical Distribution standards in the Agrichemical Supply domain.

### Impact on existing qualifications

Qualifications that contain the reviewed standards or classifications are tabled below.

<b>Affected</b>	The qualification lists a reviewed classification (domain or subfield) in an elective set The qualification lists a standard that has changes to level or credits The qualification lists a C or D category standard
<b>Not materially affected</b>	The qualification lists a standard that has a new title The qualification lists a standard that has a new classification

The following Agriculture Industry Training Organisation qualification is affected by the outcome of this review. Review of this qualification is currently underway.

Qualification title	Classification or standard in the qualification
National Certificate in Agrichemical Distribution (Level 3) with strands in Animal Health Products and Plant Health Products [Ref: 0325]	10891, 10892, 10893, 10894, 10895, 10896, 10897, 10898, 10899, 10900, 10901, Agrichemical Distribution

The following Agriculture Industry Training Organisation qualifications are also affected. The review of qualifications 0329 and 0330 is currently underway. The remainder will be revised during 2005.

Qualification title	Classification or standard in the qualification
National Certificate in Agribusiness Management with strands in Production Management, Business Planning, Physical Resource Management, Taxation and Risk Management, Capital Management, and Financial Planning [Ref: 0500]	Production Horticulture
National Certificate in Agriculture (Level 2) [Ref: 0984]	Production Horticulture
National Certificate in Agriculture (Level 3) with strands in Arable Farming, Cattle Farming, Dairy Farming, Deer Farming, and Sheep Farming [Ref: 0985]	6540
National Certificate in Agriculture (Level 4) with strands in Arable Farming, Cattle Farming, Dairy Farming, Deer Farming, and Sheep Farming [Ref: 0986]	6540
National Certificate in Apiculture (Level 2) [Ref: 1036]	5059, 5060
National Certificate in Farming Skills (Farm Safety) (Level 2) [Ref: 0963]	5059, 5060
National Certificate in Fencing (Introduction to Fencing) [Ref: 0291]	Horticulture
National Certificate in Pork Production (Stockperson) with strands Indoor Operation, and Outdoor Operation [Ref: 0097]	5059, 5060, 5064
National Certificate in Poultry Hatchery (Operations) [Ref: 0329]	5059

Qualification title	Classification or standard in the qualification
National Certificate in Poultry Husbandry with strands in Breeding Operations, Table Egg Production, and Poultry Meat Production [Ref: 0330]	5059, 5060, 5064
National Certificate in Rural Servicing (Grain and Seed) [Ref: 0757]	10891, 10892, 10895, 10896, 10897, 10898, 10899, 10900
National Certificate in Rural Servicing, with strands in Animal Retail, and Plant Retail, and an optional strand in Advanced Fertiliser [Ref: 0757]	10891, 10892, 10893, 10894, 10895, 10896, 10897, 10898, 10899, 10900, 10901
National Certificate in Seed Dressing (Level 3) [Ref: 0818]	5059, 5060, 5064
National Certificate in Seed Dressing (Level 4) [Ref: 0819]	5059, 5060, 5064
National Diploma in Agribusiness Management [Ref: 0647]	Horticulture

The following qualifications are also affected by the outcome of this review. The standard setting bodies (SSBs) have been advised that they require revision.

Qualification title	Classification or standard in the qualification	SSB Name
National Certificate in Gas Industry (Gas Transmission) (Level 3) [Ref: 0978]	823, 5059, 5060	Extractive Industries Training Organisation
National Certificate in Forestry (Establishment and Silviculture) (Level 3) [Ref: 0702]	823, 826, 5059, 5060, 5061, 5062, 5063, 5065, 5066, 6540, 14376	Forest Industry Training
National Certificate in Forestry (Forest Establishment) [Ref: 0829]	826, 5059, 5060, 5061, 5062, 5063, 5065, 5066, 6540, 14376	
National Certificate in Horticulture (Advanced) (Level 4) with strands in Amenity Horticulture, Floristry, Fruit Production, Landscape, Nursery Production, Organic Horticulture, and Viticulture [Ref: 1014]	Horticulture	Horticulture Industry Training Organisation
National Certificate in Horticulture (Arboriculture) with strands in Ground Worker, Consultant Climber, Transplant Worker, Basic Climber, Advanced Climber, and Utility [Ref: 0896]	5059, 5060	
National Certificate in Horticulture (Floriculture) (Level 4) [Ref: 0087]	5059, 5060, 5061, 5062, 5063, 5064, 5065, Horticulture	
National Certificate in Horticulture (Forest Nursery Production) (Level 4) [Ref: 0425]	823, 5059, 5061, 5062, 5065, Horticulture	
National Certificate in Horticulture (Introductory) (Level 2) [Ref: 1013]	Horticulture	
National Certificate in Horticulture (Level 4) with optional strands in Amenity Horticulture, Floristry, Fruit Production, Landscape, Nursery Production, Organic Horticulture, and Viticulture [Ref: 1014]	Horticulture	
National Certificate in Horticulture (Plant and Garden Supply Retailing) (Level 4) [Ref: 0085]	5059, Horticulture	
National Certificate in Horticulture (Vegetable Production) (Level 4) [Ref: 0089]	5059-5066, Horticulture	

Qualification title	Classification or standard in the qualification	SSB Name
National Diploma in Horticulture (Level 6) [Ref: 0292]	Horticulture	
National Certificate in Agrichemical Application with strands in External Parasites, Total Vegetation Control, Aquatic, Broadacre, and Management [Ref: 0229]	823, 5059, 5060	InfraTrain New Zealand
National Certificate in Rural Contracting (Introductory Skills) [Ref: 0228]	823, 5059, 5060, 5061, 5062	
National Certificate in Compliance and Regulatory Control (Pest Plant Control) (Level 4) [Ref: 0529]	10898, 14376	Local Government Industry Training Organisation
National Certificate in Amenity Turf Maintenance (Level 3) [Ref: 1078]	823, 5069, 5060, 5064, 5066	New Zealand Sports Turf Industry Training Organisation
National Certificate in Sports Turf (Introduction to Turf Care) (Level 3) [Ref: 0700]	5059, 5060	
National Certificate in Sports Turf Management (Level 4) [Ref: 0203]	823, 5059, 5060, 5062, 5064, 14376, Horticulture, Pest Management	
National Certificate in Equine (Racecourse Maintenance) (Level 3) [Ref: 0367]	5059, 5060	NZ Equine Industry Training Organisation
National Certificate in Conservation (Ranger) [Ref: 0797]	5059, 5060	Public Sector Training Organisation
National Certificate in Conservation (Trainee Ranger) [Ref: 0642]	5059, 5060	
National Certificate in Youth Development Programmes (Conservation Corps and Youth Service Corps [Ref: 0907]	5060, 5063, 5064	
National Certificate in Community Recreation (Level 4) with strands in Community Arts, Countryside Parks, and Urban parks [Ref: 0451]	5059, 5061, Horticulture	Sport, Fitness, and Recreation Industry Training Organisation

### Summary of main changes to standards' Ids, classification, titles, levels, and credits

The following summary shows the changes made to the standards as a result of the review. All changes are in **bold**.

#### Key to review category

- A** Dates changed, but no other changes are made - the replacement standard carries the same Id and a new version number
- B** Changes made, but the overall outcome remains the same - the replacement standard carries the same Id and a new version number
- C** Major changes that necessitate the registration of a replacement standard with a new Id
- D** Standard will expire and not be replaced

Subfield Agriculture  
Domain Aerial Agrichemical Application

<b>Id</b>	<b>Title</b>	<b>Level</b>	<b>Credit</b>	<b>Review Category</b>
15592*	Demonstrate knowledge of plant health labels and agricultural chemicals for aerial application	2	2	D
15593*	Demonstrate knowledge of selecting and calibrating aerial agrichemical application equipment	3	3	D
15594	Demonstrate knowledge of safety equipment and planning for aerial agrichemical application	2	3	C
<b>21540</b>	<b>Prepare agrichemicals and equipment for aerial application, and manage a loading site</b>	<b>3</b>	<b>5</b>	
15595*	Demonstrate knowledge of hazards, drift, and the aerial application of agrichemicals	2	3	D
15596*	Demonstrate knowledge of the environmental aspects of agrichemical application	4	5	D
15597	Plan, prepare to apply, and apply agrichemicals by aircraft	4	15	C
<b>21541</b>		<b>4</b>	<b>20</b>	
<b>21542</b>	<b>Describe the configuration of aerial agrichemical application equipment</b>	<b>4</b>	<b>5</b>	<b>NEW</b>

\*see new related standards 21558, 21562, 21563, and 21564 in Pest Control domain

Domain Agrichemical Distribution  
**Agrichemical Supply**

<b>Id</b>	<b>Title</b>	<b>Level</b>	<b>Credit</b>	<b>Review Category</b>
10891	Demonstrate knowledge of plant health labels and product formulations for agrichemical distribution <b>Demonstrate knowledge of plant protection product labels and product information sources</b>	3	4 <b>5</b>	B
10892	Demonstrate knowledge of pest management in food and fibre production for agrichemical distribution	3	4	C
<b>21551 and 21552</b>	<b>Demonstrate knowledge of integrated pest management (IPM) for agrichemical supply</b> <b>Demonstrate knowledge plant protection product development for agrichemical supply</b>	<b>3</b> <b>3</b>	<b>3</b> <b>2</b>	
10893	Demonstrate knowledge of the use of animal health products for agrichemical distribution	3	5	C
<b>21548</b>	<b>Demonstrate knowledge of the use of animal health products for agrichemical supply</b>	<b>3</b>	<b>6</b>	
10894	Demonstrate knowledge of animal health product labels and formulations for agrichemical distribution	3	4	C
<b>21549</b>	<b>Demonstrate knowledge of animal health product labels and product information sources</b>	<b>3</b>	<b>4</b>	

<b>Id</b>	<b>Title</b>	<b>Level</b>	<b>Credit</b>	<b>Review Category</b>
10895 and 10896 and 14376	Demonstrate knowledge of plant and animal health products classified as hazardous for transport	4	4	C
	Demonstrate knowledge of the storage of plant and animal health products for distribution	4	6	C
	Describe and manage the transportation, storage and disposal requirements for agrichemicals	4	10	C
<b>21546 and 21547</b>	<b>Describe the transportation requirements of agrichemicals for supply</b>	<b>4</b>	<b>6</b>	
	<b>Describe the storage and disposal requirements of agrichemicals for supply</b>	<b>4</b>	<b>6</b>	
10897  <b>21543</b>	Demonstrate knowledge of first aid in relation to agrichemical distribution	4	5	C
	<b>Demonstrate knowledge of safety and first aid in relation to agrichemical supply</b>	<b>4</b>	<b>5</b>	
10898  <b>21544</b>	Demonstrate knowledge of the environmental aspects of agrichemical distribution	4	6	C
	<b>Demonstrate knowledge of the environmental aspects of agrichemical use</b>	<b>4</b>	<b>6</b>	
10899  <b>21545</b>	Demonstrate knowledge of emergency response procedures for agrichemical distribution	4	6	C
	<b>Demonstrate knowledge of emergency response procedures for agrichemicals in storage</b>	<b>4</b>	<b>6</b>	
10900  <b>21553</b>	Provide advice on plant health products to agrichemical users when distributing agrichemicals	4	5	C
	<b>Provide advice on plant protection products to agrichemical users</b>	<b>4</b>	<b>8</b>	
10901  <b>21550</b>	Provide advice on animal health products to agrichemical users when distributing agrichemicals	4	5	C
	<b>Provide advice on over the counter (OTC) animal health products to agrichemical users</b>	<b>4</b>	<b>8</b>	

Subfield Horticulture  
Domain Production Horticulture

<b>Id</b>	<b>Title</b>	<b>Level</b>	<b>Credit</b>	<b>Review Category</b>
823*	Demonstrate knowledge of agrichemicals	2	5	D
824*	Use, maintain, and store safety equipment for use with agrichemicals	2	2	D
826*	Demonstrate knowledge of principles involved in agrichemical use	3	3	D
827	Use, maintain, and calibrate dusting and misting systems for applying agrichemicals	3	4	D

\*see new related standards 21560, 21561, 21562, 21563 and 21564 in Pest Control domain

Subfield      Pest Management  
Domain        Pest Control

<b>Id</b>	<b>Title</b>	<b>Level</b>	<b>Credit</b>	<b>Review Category</b>
5059	Demonstrate understanding of safety with agrichemicals	1	1	C
<b>21554</b>	<b>Demonstrate knowledge of safety with agrichemicals</b>	<b>2</b>	<b>3</b>	
5060	Apply an agrichemical using a non-motorised applicator	2	3	D
5061	Identify and control weeds	2	3	D
5062	Demonstrate knowledge of plant pests, diseases, disorders, and their control	2	1	D
5063	Identify plant pests, diseases, and disorders, and describe control measures	3	3	D
5064	Apply an agrichemical using a motorised applicator	3	4	D
5065	Control weeds	4	3	D
5066	Calibrate agrichemical application equipment	4	3	D
6540	Plan and organise the control of weeds	3	3	D
<b>21555</b>	<b>Demonstrate knowledge of weeds and their control</b> <i>Related to: 5061, 5065</i>	<b>2</b>	<b>4</b>	<b>NEW</b>
<b>21556</b>	<b>Control weeds under supervision</b> <i>Related to: 5061</i>	<b>2</b>	<b>2</b>	<b>NEW</b>
<b>21557</b>	<b>Identify plant pests, diseases, disorders, and describe control measures</b> <i>Related to: 5062, 5063, 5065</i>	<b>3</b>	<b>4</b>	<b>NEW</b>
<b>21558</b>	<b>Describe calibration, and calibrate agrichemical application equipment</b> <i>Related to: 5066, 15593</i>	<b>3</b>	<b>3</b>	<b>NEW</b>
<b>21559</b>	<b>Describe, plan, and manage a weed control programme</b> <i>Related to: 5065, 6540</i>	<b>4</b>	<b>5</b>	<b>NEW</b>
<b>21560</b>	<b>Demonstrate knowledge of agrichemicals</b> <i>Related to: 823, 826</i>	<b>3</b>	<b>6</b>	<b>NEW</b>
<b>21561</b>	<b>Use, maintain, and store agrichemical application safety equipment</b> <i>Related to: 824</i>	<b>2</b>	<b>2</b>	<b>NEW</b>
<b>21562</b>	<b>Identify and interpret agrichemical product information</b> <i>Related to: 824, 15592</i>	<b>2</b>	<b>2</b>	<b>NEW</b>
<b>21563</b>	<b>Demonstrate knowledge of the HSNO Act, and NZS 8409:2004 for the use of agrichemicals</b> <i>Related to: 823, 826, 15595, 15596</i>	<b>3</b>	<b>5</b>	<b>NEW</b>
<b>21564</b>	<b>Prepare to apply, and apply, agrichemicals</b> <i>Related to: 823, 826, 5060, 5064, 15597</i>	<b>3</b>	<b>5</b>	<b>NEW</b>
<b>21565</b>	<b>Manage agrichemicals in accordance with NZS 8409:2004</b> <i>Related to: 5065</i>	<b>4</b>	<b>10</b>	<b>NEW</b>