

# 41<sup>st</sup> FONTERRA

## MANAWATU SCIENCE AND TECHNOLOGY FAIR 2015

### PRIZE LIST

A big thank you to our **Gold Sponsor Fonterra** for providing every student in the fair with a **Fonterra USB stick** and to our **Silver Sponsors Massey University** and **AgResearch** for providing the **lanyards** to attach it too.

### SCIENCE and TECHNOLOGY Prizes:

#### Highly Commended

##### Certificates

Rachel McCracken	Cornerstone Christian School	Wheelchair Weeded
Megan Chan	Cornerstone Christian School	The Tank Transformer
Jacob Aull, Issac Fonua, Michael Ioane, Joseph Mafi	PNBHS	Eco-cook
Zain Hussain	PNBHS	Slaters Adventure
Likhit Dukkupati	PNBHS	YEAST, YEAST, YEAST
Tamati Durie-McGrath, Thomas Warnock	PNINS	Prevent concussion

#### Distinction Prizes

**\$60 book voucher awarded by our Silver Sponsors Massey University and AgResearch**

Blake Rhodes-Robinson	PNINS	Get a Grip
Page Govender	PNINS	I Can't Always Grow
Hannah Taylor	PNINS	Teabag Frenzy
Caleb Rayner	PNINS	Limitless
Matthew King	Hadlow	Ouch

Connor Hall	Cornerstone Christian School	Back At Ya
Tessa Hiscox	Freyberg High School	Star Light Star Bright
Gabby Baan, Zoe Glentworth, Katie Liu, Hayley Yanko, PNGHS		FroYo to Go
Selena Ton, Lauren Gray	PNINS	A Worm's Life
Jessica Slimmin	PNINS	Perpetual Problem
Hawaiki Taonui	PNINS	Muka Muscles
Ciaran Carroll	PNINS	Sound of a Pitch
Annabele Chilcott	PNINS	Sure to Rise or Not
Abbie Bognuda	PNINS	Keep n Cool
Briony Milne	PNINS	To Bind or Not To Bind
Ruth Dean	PNINS	The Not So Sweet Truth
Tharushi Bowatte	PNGHS	Micro Magician and Plant Nutrition

### High Distinction Prizes

**\$100 cheque prize awarded by our Gold Sponsor Fonterra**

Hannah Sutherland-Smith	PNINS	Allelopathy in Native Trees
Nicoletta Nedev	Carncot	Lift Your Language
Chloe Hunt	PNINS	My Raspberry Pi-wildflower Surprise
Zoe Smith	Carncot	Sound Insulation Using Water
Jacob McLaughlin	PNINS	Walkie Talkie
Elizabeth Mackay	PNINS	Towards a Green Death
Maddy Kirk	Monrad Intermediate	Counter Strike
Zoe Woodfield	PNGHS	Resilient Ryegrass
Yun Wen Lim	PNGHS	Magical Mung Beans
Ajay Kumar	PNBHS	Peas vs Beans
Claire Shi	PNGHS	The impact of domestication on <i>Bombus terrestris</i> regarding <i>Kunzia laevis</i>
Olivia Brookie	Cornerstone Christian School	I Don't Give a Fig about Your Hard Cheese!
Christopher Patrick	PNINS	The Radar Hat

Olivia Hurnard	PNINS	Let's Make a Deal
Sarah Calkin	PNINS	Crazy Cavy Genetics
Madeleine Williams	Ross Intermediate	Going Bananas!
Daniel van der Spuy	PNINS	Get Sorted
Jayden Glentworth	PNINS	Fit Kit Palmy
Jack Nicholson	Cornerstone Christian School	Too Hot to Handle

## **JUNIOR SCIENCE and TECHNOLOGY Prizes**

**Gift Bags and Science Gadget Prizes sponsored by UCOL Marketing team and Fonterra**

### **Highly Commended –Certificate**

Room F1	Cornerstone Christian School	Farming Fun
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### **3<sup>rd</sup> Place (Science Gadget Gifts and UCOL Gift bag)**

Rosemary King, Meghan Macri and Loulou McNelly	Hadlow	Sweet Revenge
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### **2<sup>nd</sup> Place (Science Gadget Gifts and UCOL Gift bag)**

Ayja Taylor	Central Normal School	The Truth about Colours
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### **1<sup>st</sup> Place (Science Gadget Gifts and UCOL Gift bag)**

Lillirose Rogers	Hadlow	No Harm Lip Balm
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## **Youth Judged Prizes**

### **Encouragement prizes**

**\$30 Voucher and Gift Bag awarded by our Gold Sponsor Fonterra**

The Encouragement awards recognise students whose research has that certain spark and is a really good idea, but may not be fully researched or developed. It shows potential for excellence.

Rachel Hodgson	PNINS	A Sticky Question 2.0
Libby Dombroski	PNINS	aRound of Applause
Grace Kennett	Carncot	Up, Up and Away
Mitchell Webb	Cornerstone Christian School	Crayfish Clause
Sam Russell	PNINS	Eggstreme Strength
Sophie Roberts	PNINS	Grimy Grout
Devon Snedden	Cornerstone Christian School	House of Wonders
Julia Tait-Davis	PNINS	How Hot is your Roof
Molly Turnbull	PNINS	Midas Measuring
Evangeline Taylor-Maclean	Cornerstone Christian School	Okey Dokey Hokey Pokey
Amy Pinkney	Cornerstone Christian School	Sweet or Savoury
Dionne Madhuku	Cornerstone Christian School	The Truth about the Tiritea Stream
Tio Weavers	PNINS	Fire Fire!
Sebastian Cave	PNINS	A Bone a Day
William Morgan	PNINS	Germinator
Phoebe Macpherson	Carncot	Got Ya!
Emily Phillips, Hannah Rhee	PNINS	Naturally Nice
Dylan Vanuffelen	PNINS	Salt Water Aluminium Corrosion

### **Youth Judged Science and Technology Prizes**

**\$50 Voucher + Fonterra Gift Bag including a lab coat and safety glasses.**

The top projects as judged by our youth judges.

Claire Shi	PNGHS	The impact of domestication on <i>Bombus terrestris</i> regarding <i>Kunzinia laevis</i>
Liam Woodmass	Cornerstone Christian School	Wind Power
Ayja Taylor	Central Normal School	The Truth About Colours
Jacob McLaughlin	PNINS	Walkie Talkie
Tom McCreary	PNINS	Rocky Shore
Trent Burrows	Cornerstone Christian School	Flaming Fire Starter

Chloe Hunt	PNINS	My Raspberry Pi-wildflower surprise
Jayden Glentworth	PNINS	Fit Kit Palmy
Dominic Rankin	PNINS	A Spoonful of Medicine
Jasmin Burmeister	Cornerstone Christian School	Timata Te Ahi

## ***SPECIAL PRIZES***

**The following prizes are individually judged by the institution, business or community group**

### [Australian and New Zealand Council for the Care of Animals in Research and Teaching](#)

**For correct protocol through animal ethics committee, human care of the animals involved**

(\$100 voucher)

Sebastian Cave	PNINS	A bone a day
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### [Beta Solution Ltd Prizes](#)

**For the best projects of an electronics nature**

3<sup>rd</sup> place \$35.00 Jaycar voucher

Caleb Rayner	PNINS	Limitless
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2<sup>nd</sup> place \$65.00 Jaycar voucher

Jacob McLaughlin	PNINS	Walkie Talkie
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1<sup>st</sup> place \$100.00 Jaycar voucher

Christopher Patrick	PNINS	The Radar Hat
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### [Dr Heather Meikle Award](#)

**For a young woman, who has used creative problem solving and critical thinking in Science.**

(\$100 prize)

Sarah Calkin	PNINS	Crazy Cavy Genetics
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### [Education Perfect Prize](#)

**For the best projects with use of either online learning or use of computer technology**

(2 x \$250 vouchers)

Chloe Hunt	PNINS	My Raspberry Pi-wildflower Surprise
Jayden Glentworth	PNINS	Fit Kit Palmy

### **Institute of Professional Engineers of New Zealand (IPENZ) Manawatu Branch Prizes**

**Science or technology projects that illustrate how engineering is considered as the development of a concept right through to detailed design and construction.**

(\$50 voucher each) - 1st equal

Christopher Patrick	PNINS	The Radar Hat
Olivia Brookie	Cornerstone Christian School	I Don't Give a Fig about Your Hard Cheese!

### **Manawatu Youth Engineering Scheme**

**For a project that identifies engineering principles, demonstrates ethical considerations and engineering competencies**

(3x\$50 vouchers)

Lillirose Rogers	Hadlow	No Harm Lip Balm
Jacob McLaughlin	PNINS	Walkie Talkie
Jasmine Glentworth	PNINS	Clean Streams

### **Landcare Research Environment Prize and Internship**

**For the best intermediate and secondary exhibit featuring an environmental aspect.**

**This exhibit uses both science and technology to develop a real solution to a real problem in the outdoors.**

(\$75 Cheque each and Internship)

Selena Ton, Lauren Gray	PNINS	A Worm's Life
Tharushi Bowatte	PNGHS	Micro Magician and Plant Nutrition

### **Massey University, Institute of Fundamental Sciences - Biology Prize**

**For the best exhibit relating to the understanding of biology**

(Highly Commended \$50 Cheque, 1st Place \$100 Cheque)

Highly Commended

Hannah Sutherland-Smith PNINS

Allelopathy in Native Trees

1st Place

Claire Shi

PNGHS

The impact of domestication on  
*Bombus terrestris* regarding *Kunzia laevis*

### Massey University, Institute of Fundamental Sciences – Chemistry Prize

**For the best exhibit involving chemistry**

(1st Place \$150 Cheque)

Flynn Wilson

Ross Intermediate

Plants versus Pollution

### Massey University, Institute of Fundamental Sciences–Physics and Biophysics Prize

**For the best exhibit relating to the understanding of the principles of Physics**

(Highly Commended \$50 Cheque, 1st Place \$100 Cheque)

Highly Commended

Ben Rauzi

Cornerstone Christian School

Hockey-Ball Launcher

1st Place

George Ambridge

PNINS

Lego Sift Sorter

### Massey University, Institute of Fundamental Sciences - Statistics Prize

**For the best exhibit relating to the understanding of the principles of Statistics**

(Highly Commended \$50 Cheque, 1st Place \$100 Cheque)

Highly Commended

Jayden Glentworth

PNINS

Fit Kit Palmy

1st Place

Claire Shi

PNGHS

The impact of domestication on  
*Bombus terrestris* regarding *Kunzia laevis*

### Statistics NZ Prize

**For a project involving statistics**

(Commended Certificate, 2nd Place \$20 Voucher, 1st Place \$20 Voucher)

Commended

Likhit Dukkhipati                      PNBHS    YEAST, YEAST, YEAST

2nd Place

Thomas Sun                              PNINS    Blades of Glory

1st Place

Lillirose Rogers                      Hadlow    No Harm Lip Balm

### New Zealand Statistical Association Prizes

**For the best application of statistical methods and reasoning**

(Commended Certificate, 2nd Place \$20, 1st Place \$40)

Commended

Hannah Sutherland-Smith      PNINS    Allelopathy in Native Trees

2nd Place

Chloe Hunt                              PNINS    My Raspberry Pi-wildflower Surprise

1st Place

Olivia Hurnard                      PNINS    Let's make a Deal

### Massey University, Institute of Agriculture and Environment - Ecology Group Prizes

**For the best exhibits promoting conservation and native biodiversity**

(\$75 Cheque each and Book)

Jasmine Glentworth                      PNINS    Clean Streams

Rachel Hodgson                      PNINS    A Sticky Question 2.0

### Massey University, Institute of Agriculture and Environment - Land Based Industries Prizes

**For the best intermediate and secondary soil, plant, animal exhibits**

(\$75 Cheque each)

Selena Ton, Lauren Gray      PNINS    A Worms Life

Zoe Woodfield                      PNGHS    Resilient Ryegrass

### Massey University, School of Engineering and Advanced Technology Prize

**For an outstanding intermediate and secondary exhibit demonstrating engineering**



**principles**

(\$100 Dick Smith voucher each)

Liam Woodmass	Cornerstone Christian School	Wind Power
Maddison McQueen-Davies	PNGHS	Fun on the Run

**Massey University, School of Food and Nutrition – Nutritional Science Prize**

**The project that best exemplifies a methodical approach in the application of scientific principles to the science of nutrition**

(Highly Commended Certificate, 1<sup>st</sup> Place \$75 Cheque)

Highly commended:

Rosemary King, Meghan Macri, Loulou McNelly	Hadlow	Sweet Revenge
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1st Place

Ruth Dean	PNINS	The Not So Sweet Truth
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**Massey University, School of Food and Nutrition – Food Technology Prize**

**The project that best exemplifies a methodical approach in the application of scientific principles to the science or technology of food**

(Highly Commended Certificate, 1st Place \$75 Cheque)

Highly commended

Emma Stein	Carncot	Munching For Memory
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1st Place

Olivia Brookie	Cornerstone Christian School	I Don't Give a Fig about Your Hard Cheese!
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**Massey University Internship.**

For projects that show excellence in their research, science understanding and exceptional promise for a career in the Sciences.

Emily Phillips, Hannah Rhee	PNINS	Naturally Nice
Ruth Dean	PNINS	The Not So Sweet Truth

Christopher Patrick	PNINS	The Radar Hat
Madeleine Williams	Ross Intermediate	Going Bananas
Polly Williams	PNGHS	Light Scaber, examining the effects of light intensity on the taxis of <i>Porcellio scaber</i>
Tamati Durie-McGrath, Thomas Warnock	PNINS	Prevent Concussion
Ciaran Carroll	PNINS	Sound of A Pitch

### Mina McKenzie Indigenous Science Prize

**For the best investigation of some aspect of science related to indigenous culture**

(\$100 book voucher)

Jasmin Burmeister	Cornerstone Christian School	Timata te Ahi
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### Central Association of Science Educators Prizes

**For a student who creates a project that has educational applications**

(\$100 cheque each)

Tom McCreary	PNINS	Rocky Shore
Sarah Calkin	PNINS	Crazy Cavy Genetics

### MSTF Approval prize

**For a project that has shown thoroughness while adhering to the correct ethical and safety protocols**

(\$50 book voucher)

Rosemary King, Meghan Macri, Loulou McNelly	Hadlow	Sweet Revenge
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### New Zealand Institute of Agricultural and Horticultural Science Prizes

**Science investigation and/or technology project that relate to:**

**(1) Agricultural Science, (2) Horticulture, (3) Animal Science and (4) Soil Science**

(\$50 book voucher each)

(1)	Tharushi Bowatte	PNGHS	Micro Magician & Plant Nutrition
(2)	Matthew Cao	Carncot	I've Been Rotating
(3)	Sarah Calkin	PNINS	Crazy Cavy Genetics

(4) Thomas Sun PNINS Blades of Glory

### New Zealand Institute of Physics Prize

**For a project that shows a good understanding of physics principles**

(\$100 Cheque)

Ben Clark Monrad Intermediate Lazy Rej

### Soroptimist Dame Ella Campbell Award

**For a project involving plant science**

(\$100 Cheque)

Hannah Sutherland-Smith PNINS Allelopathy in Native  
Trees

### New Zealand Institute of Food Science and Technology Prize

**The projects that best exemplify a methodical approach in the application of scientific principles to the science or technology of food.**

Highly Commended - \$50 Cheque each

Annabelle Smith	Hadlow	Does colour change the taste?
Madeleine Williams	Ross Intermediate	Going Bananas
Emily Phillips, Hannah Rhee	PNINS	Naturally Nice
Gabby Baan, Zoe Glentworth, Katie Liu, Hayley Yanko	PNGHS	FroYo to Go

Best Exhibit - NZIFST Trophy and \$100 cheque

Maddison McQueen-Davies PNGHS Fun on the Run

### New Zealand Baking Industry Research Trust Prizes

**The project that best exemplifies the application of scientific principles to the science or technology of a baked product, preferably incorporating flour, heat and a rising agent**

(Merit Certificate, 1st Place \$50 + Baking Book)

Merit

Rosemary King, Megan Macri, Loulou McNelly	Hadlow	Sweet Revenge
1st Place		
Paris Taylor	PNINS	Expensive
Tastes		

### Soil Science Prize

**For the best soil related project**

(Book)

Tharushi Bowatte	PNGHS	Micro Magician & Plant Nutrition
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### The Science Centre Inc. Prize

**Science investigation and/or technology project that best displays the curiosity and ingenuity of the young investigator**

(\$100 Cheque)

Maddison McQueen-Davies	PNGHS	Fun On The Run
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### New Zealand Institute of Chemistry - Education Trust Prize

**For the best exhibit relating to chemical principles**

(\$150 Cheque)

Ritson Galloway, Keiren Churchouse, Jared Laing	Bunnythorpe	Chemical Rust
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### The S+Art Trust Award

**For a project that involves or shows potential for the combination of Science, Technology and Art**

(\$100 Cheque)

William Leong	PNINS	What's that Rhythm?
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### UCOL Prizes

(\$25 cheque each)

**UCOL National Diploma in Science prize for the best laboratory techniques demonstrated.**

Polly Williams PNGHS Light Scaber, examining the effects of light intensity on the taxis of *Porcellio scaber*

**UCOL National Diploma in Science prize for the best graphical display of results.**

Jasmine Glentworth PNINS Clean Streams

**UCOL Diploma in Vet Nursing prize for the best project involving care of animals.**

Sebastian Cave PNINS A Bone a Day

**UCOL Diploma in Vet Nursing prize for the best project involving animal behaviour, physiology or anatomy.**

Amy Pereira PNINS Let Them Eat Peas

**UCOL Certificate in Science and Health prize for the best project involving health.**

Jayden Glentworth PNINS Fit Kit Palmy

**UCOL Certificate in Science and Health prize for the best project for applying science to everyday life.**

Maddison McQueen-Davies PNGHS Fun On The Run

**UCOL Trades and Technology prize for the best project involving carpentry or wood construction.**

George Ambridge PNINS Lego Sift Sorter

**UCOL Trades and Technology prize for the best electrical project.**

Jacob McLaughlin PNINS Walkie Talkie

**UCOL Trades and Technology prize for the best propulsion project**

Ben Rauzi Cornerstone Christian School Hockey Ball Launcher

**UCOL Trades and Technology prize for the best project involving furniture**

Joshua Tamblyn Cornerstone Christian School How Low Can You Go

**UCOL Trades and Technology prize for the best project involving welding or soldering**

Caleb Rayner

PNINS

Limitless

**UCOL Trades and Technology prize for the project involving farming**

Shanese Sproull

Cornerstone Christian School

Worm Life

## **Memorial Prizes**

**Dr Gregor Yeates Memorial Prize - in memory of Dr Gregor Yeates, FRSNZ**

**For an investigation relating to Soil Biota**

(\$100 Voucher)

Polly Williams

PNGHS

Light Scaber, examining the effects of light intensity on the taxis of *Porcellio scaber*

**Langley Memorial Prize – in memory of Keryn and Callum**

**For creativity, passion and commitment in Science or Technology.**

(\$75 book voucher + Trophy)

Tom McCreary

PNINS

Rocky Shore

## **Cultural Heritage Awards**

**Te Reo Māori Me Te Pūtaiao Prize - He Kupenga Hao I Te Reo Māori**

**For an exhibit presented and interviewed in Te Reo Māori at all levels**

(\$100 Cheque each)

Kali Edwards

Bunnythorpe School

He Karaihe Kakariki

Jennifer Moeahu

Bunnythorpe School

Panana Power

**Vaka Science Excellence Awards – Ministry of Pacific Island Affairs**

**These prizes are for a student of Pacific Island nationality with a quality project in one of the following four different categories: Science, Engineering, Environment and Technology.**

Highly Commended (\$50), 3<sup>rd</sup> (\$100), 2<sup>nd</sup> (\$150) and 1<sup>st</sup> (\$250).

Science (Biology and Chemistry)

3rd Place

Unnaleese Makuru-Groom                      PNINS                      Baking Soda vs Baking Powder

2nd Place

Tekela Matakaiongo                      Cornerstone Christian School                      Wandering Waterboatmen

1st Place

Ajay Kumar    PNBHS    Peas vs Beans

Engineering (Physics and Maths)

Highly Commended: (\$50)

Siobhan McIlhatton, Ishani Chand, Maiah Knight Bunnythorpe                      Floating Up Sinking Down

2nd Place

Mark Ah Koy    PNINS    Magnetic Force

Environment

Highly commended

Suliana Eaton-Bray    PNINS    Eggsperiment

1st Place

Lueni Havea    PNGHS    Rising Sea Levels

Technology

3rd Place

Jacob Aull, Issac Fonua, Michael Ioane, Joseph Mafi                      PNBHS                      Eco-cook

2nd Place

Emmanuel Tuisaua                      Cornerstone Christian School                      The Science of Basketball

1st Place

Celestial Brown                      Cornerstone Christian School                      The Doodle Deleter

### Primary Science Award

(\$100 Cheque)

**A special award, this project was presented by a Pasifika student & her partner on behalf of their class.**

Room F1

Cornerstone Christian School

Farming Fun

### Royal Society of New Zealand - Manawatu Branch Inc. Prizes

**For an outstanding exhibit that demonstrates strong potential for the student's future in science or technology**

(\$100 Cheque each)

Hannah Sutherland-Smith

PNINS

Alleopathy in Native Trees

Madeline Williams

Ross Int

Going Bananas!

George Ambridge

PNINS

Lego Sift Sorter

### AqResearch Prizes

**For research thoroughness and understanding of a topic relating to Agriculture**

(4 x \$200 and day internships)

Jasmine Glentworth

PNINS

Clean Streams

Zoe Woodfield

PNGHS

Resilient Ryegrass

Thomas Sun

PNINS

Blades of Glory

Elizabeth Mackay

PNINS

Towards a Green Death

### DairyNZ Prizes

**These prizes are awarded for projects related to a field of interest to the Agricultural sector**

High Distinction -\$100 cheque each

Thomas Sun

PNINS

Blades of Glory

Olivia Brookie

Cornerstone Christian School

I don't give a fig about your hard

cheese!

### **Runner Up (\$200 Cheque)**

Jasmine Glentworth

PNINS

Clean Streams



**First Prize (\$400 Cheque)**

Zoe Woodfield

PNGHS

Resilient Ryegrass

## **FONTERRA PREMIER AWARDS**

The following students also receive as part of their Premier Award a Fonterra Internship Prize, in which they will spend time at Fonterra, being shown about and experiencing life as a Fonterra scientist.

### **Fonterra Science –RUNNER UP Prize (\$250 each)**

Polly Williams PNGHS

Light Scaber, examining the effects of light intensity on the taxis of *Porcellio scaber*. Her project aim was to investigate the effects of changing light intensity on the phototactic response of *Porcellio scaber*.

### **Fonterra BEST EXHIBIT IN FAIR – PREMIER Prize: (\$500 each)**

#### **Technology 1st Equal:**

**Sarah Grant Cornerstone Christian School**

#### **It's Just Child's Play**

**To create a learning and developmental toy that a child with SOX2 syndrome can use.**

**Maddison McQueen-Davies PNGHS**

#### **Fun on the Run**

**To develop a convenient, eat on the run, balanced meal that contains the recommended percentage of nutrients required for a healthy meal.**

**The product should be targeted at teenagers and be fun to eat.**

**Fonterra BEST EXHIBIT IN FAIR – PREMIER Prize: (\$500 each)**

**Science**

**Jasmine Glentworth PNINS**

**Clean Streams**

**Testing the effect of riparian planting**