

The Government is nominating themes to indicate its view of high research relevance. Themes do not, however encompass everything that should be funded in an output and neither should themes be allowed to override the quality measure of individual research proposals.

Please ensure that this advice of science priorities is conveyed to potential research programme proposers so that is given maximum effect in the funding round.

Annex A: Indicative Funding Allocation by Output in the Public Good Science Pool

Output Class	1990/91 Funding (\$000)	1990/91 % of Total	Proposed % of Total for 1991/92	Outputs Allocated Entirely by FRST
01. Sheep production	16,571	6.49	6.36	
02. Beef production	1,419	0.56	0.56	
03. Dairy production	3,914	1.53	1.61	
04. Alternative animal species	5,156	2.02	2.06	
05. Generic animal research	11,649	4.56	4.65	
06. Forage plants	22,329	8.74	8.44	
07. Horticulture	30,890	12.09	11.85	*
08. Arable and other plants	13,005	5.09	5.09	
09. Plantation forestry	10,977	4.30	4.30	
10. Fisheries	1,414	0.55	0.56	*
11. Meat processing	2,215	0.87	0.95	*
12. Dairy processing	2,558	1.00	1.09	*
13. Other food processing	10,039	3.93	4.06	*
14. Fibre, textiles and skin processing	2,525	0.99	1.02	*
15. Wood and paper processing	7,004	2.74	2.93	*
16. Materials and industrial processing	13,027	5.10	5.10	*
17. Engineering	5,842	2.29	2.24	*
18. Electronics and instruments	7,509	2.94	2.94	*
19. Construction	2,672	1.05	1.03	*
20. Commercial and trade services	0	0.00	0.10	*
21. Energy	2,008	0.79	0.80	*
22. Transport services	725	0.28	0.38	*
23. Information and communication	983	0.38	0.38	*
24. Urban and rural planning	377	0.15	0.25	*
25. History, society and culture	333	0.13	0.17	*
26. Relationships and wellbeing	194	0.08	0.12	*
27. Political and economic relationships	365	0.14	0.20	*
28. Education, knowledge and training	172	0.07	0.15	*
29. Environmental protection	8,921	3.49	3.61	*
30. Geological structures and processes	19,305	7.56	7.18	*
31. Land use, flora and fauna	13,622	5.33	5.33	*
32. Marine and fresh waters	16,572	6.49	6.16	*
33. Climate and atmosphere	5,804	2.27	2.27	*
34. Space	429	0.17	0.17	*
35. Antarctica	6,237	2.44	2.43	*
36. Fundamental knowledge	2,628	1.03	1.03	*
37. Health	429	0.17	0.17	*
38. Defence	28	0.01	0.01	*
39. S&T education and training	0	0.00	0.08	*
40. S&T services	5,568	2.18	2.18	*
Total	255,414	100.00	100.00	

Annex B: Priority Research Themes for Public Good Science for Selected Output Classes

Output Class 1—Sheep and Sheep Production Systems

1. The physiological and genetic bases for, and manipulation of, wool fibre production; including the impacts of sheep nutrition.
2. The physiological and genetic bases for pest and disease prediction, prevention, resistance and management in sheep; emphasising genetic, biological and integrated control solutions, and aspects that may impact on New Zealand's overseas earnings.
3. The physiological and genetic bases for, and manipulation of, lamb growth; emphasising aspects that enhance New Zealand's overseas earnings through meeting the needs of

the processing sector and enhancing characteristics demanded by consumers.

4. Sheep reproduction and methods of manipulation that enhance the rate of genetic gain of animal productivity related traits.

Output Class 3—Dairy and Dairy Production Systems

1. The physiological and genetic bases for, and manipulation of, synthesis of milk constituents and their properties; including the impacts of dairy cattle nutrition.
2. The physiological and genetic bases for pest and disease prediction, prevention, resistance and management in dairy animals; emphasising genetic, biological and integrated control solutions, and aspects that may impact on New Zealand's overseas earnings.

3. Dairy cattle reproduction and methods of manipulation that enhance the rate of genetic gain of animal productivity related traits.

Output Class 7—Horticultural Crops and Management Practices

1. Product differentiation by development of fruit and vegetable products through genetic means, emphasising the needs of the fresh market and processing sectors, and enhancing quality characteristics demanded by customers.

2. The physiological and genetic bases for pre-harvest pest and disease prediction, prevention, resistance and management; emphasising genetic, biological and integrated control solutions, and aspects that may impact on New Zealand's overseas earnings.

3. Product diversification by the introduction, evaluation, production and market assessment of new and novel crops.

Output Class 9—Trees and Plantation Management Systems

1. The physiological and genetic bases for pest and disease prediction, prevention, resistance and management in plantation forestry; emphasising genetic, biological and integrated control solutions.

2. The impacts of plantation forestry on the on-site and off-site physical environment, including harvesting and sustainable land use.

3. The physiological and genetic bases for enhancement of desirable tree and wood product characteristics, including propagation and early tree growth.

4. The introduction and assessment of alternative tree species to *Pinus radiata* and special purpose species to meet aesthetic and market needs.

5. The understanding of the human and social factors that impact on the recruitment and retention of people into forestry, including the skill base and training requirements.

Output Class 12—Dairy Processing, Storage Techniques and Products

1. The properties of dairy milk components, their interactions in food systems and potential therapeutic effects.

2. The impacts on dairy products of existing and new dairy technologies and processes.

3. Dairy products in human health and nutrition, including food safety.

4. Management and monitoring of environmental effects on dairy products (e.g. microbial and chemical contamination) particularly those that may impact on New Zealand's overseas earnings; and management of the impacts of dairy processing on the environment.

Output Class 13—Fruit, Crops and Other Food and Beverage Processing, Storage Techniques and Products

1. Pre and post harvest physiological and genetic factors, and their manipulation, influencing ripening, senescence and quality of fresh fruit in storage and under transportation.