

BEFORE THE HEARING COMMISSIONERS

IN THE MATTER of the Resource Management Act 1991
("the Act")

AND

IN THE MATTER of the Resource Management Act 1991
and the Environment Canterbury
(Temporary Commissioners and
Improved Water Management) Act 2010

AND

IN THE MATTER of the Proposed Canterbury Air Regional
Plan

**STATEMENT OF REBUTTAL EVIDENCE BY JOHN-PAUL PRAAT
FOR NEW ZEALAND AGRICULTURAL AVIATION ASSOCIATION**

9 OCTOBER 2015

CONTENTS

1. SUMMARY STATEMENT.....	2
2. QUALIFICATIONS AND EXPERIENCE	2
3. IMPORTANCE OF TRAINING FOR AGRICHEMICAL USE.....	3
4. CONCLUDING COMMENTS.....	6

1. SUMMARY STATEMENT

- 1.1 In this statement of evidence I provide information to support the further submissions made by New Zealand Agricultural Aviation Association in relation to discharges of Agrichemicals, in particular the further submissions supporting the position of Horticulture NZ on Rule 7.72.
- 1.2 It is the position of Horticulture NZ that training requirements should be included in the Plan, and in particular GROWSAFE®, as set out in the Evidence in Chief of Ms Lynette Wharfe and Mr Matthew Dolan for Horticulture NZ

2. QUALIFICATIONS AND EXPERIENCE

- 2.1 My name is John-Paul Praat, I have a Bachelor of Agricultural Science (Hons) and PhD in Agricultural Engineering from Massey University and over 30 years experience in the primary industries (agriculture, horticulture and forestry), in New Zealand.
- 2.2 I was brought up working in a commercial vegetable and fruit growing operation and hold a certificate in Advanced Sustainable Nutrient Management from Massey University.
- 2.3 My career has been in both applied science and farm management with roles in cropping, contracting and dairy operations and I have been involved in technology transfer.
- 2.4 I am currently a Director of Groundtruth Ltd and work as senior consultant to primary industries, mainly focused on sustainable land management including Technical Consultant to the New Zealand Agrichemical Education Trust, a role I have been in for seven years.
- 2.5 My applied research career has included field trials over a period of 20 years in testing agrichemical application equipment (sprayers) for spray coverage and off-target spray drift.
- 2.6 Precision Agriculture and agricultural information management systems have also been a focus of my work. Our company provides technology solutions in this space utilising geospatial information systems and global positioning systems (GIS/GPS).
- 2.7 I am providing this evidence in relation to the submissions by Horticulture NZ that support the inclusion of the references to

the New Zealand Standard Management of Agrichemicals (NZS8409:2004) and GROWSAFE®.

- 2.8 Evidence on this matter has also been provided by Ms Wharfe.
- 2.9 I have been provided with a copy of the Code of Conduct for Expert Witnesses from Statutes of New Zealand r9.43. I have read and agree to comply with that Code.

3. IMPORTANCE OF TRAINING FOR AGRICHEMICAL USE

- 3.1 This evidence will set out why training is essential to provide agrichemical users with the skills to apply agrichemicals safely, responsibly and effectively.
- 3.2 In New Zealand the application of agrichemicals (pesticides) is a discharge under the Resource Management Act 1991 (RMA) and is generally provided in Regional Plans as a permitted activity as long as certain practices are followed.
- 3.3 We are very fortunate in New Zealand to have a New Zealand Standard 'NZS8409:2004 Management of Agrichemicals' (NZS8409) which spells out best practise using a risk based approach. It was written as a consensus of 21 groups representing the industry ranging from Vegetable Growers to Environmental Risk Management Authority (now Environmental Protection Authority, EPA) and agricultural aviators.
- 3.4 The 195 page document has legal standing and it is right and proper that Regional Plans refer to this as the reference for safe, responsible and effective use of agrichemicals and, in particular, for managing the potential risk associated with adverse effects from off target spray drift.
- 3.5 However, as a result of this recognition in law the language is not necessarily appropriate for users. Therefore a training programme was set up to 25 years ago, based on NZS8409, which provides the knowledge and skills to enable agrichemical users to operate according to the standard. The programme is known as "GROWSAFE®". Many Regional Councils have used NZS8409 and GROWSAFE® training courses as mechanisms in plans for managing agrichemical use and ensuring the competency of agrichemical users.
- 3.6 A good example of why training is required can be shown in reference to the Drift hazard guidance chart – Table G1, Appendix G, pg 104, NZS8409:2004. Eleven factors which influence the hazard spray drift may pose are listed here and

the training describes the technical basis for these risk factors and discusses how they may be managed when applying agrichemicals.

- 3.7 NZS8409 is administered by the New Zealand Agrichemical Education Trust (NZAET) on behalf of industry stakeholders which includes Local Government NZ.
- 3.8 Internationally it is recognised that training, testing and certification of those who actually operate pesticide application equipment is key to improving pesticide safety. For example, the Food and Agriculture Organisation (FAO) provide guidelines on such training. Their reasoning is that: “Even the most well-designed and maintained applicators (equipment) can do immeasurable damage in the hands of an unskilled operator and the importance of this (training) guideline should not be under-estimated”¹
- 3.9 A fundamental requirement is that the substances to be used, in this case agrichemical products, are approved under the Hazardous Substances and New Organisms Act 1996 (HSNO) and the use and discharge of the substance is in accordance with all conditions of the approval.
- 3.10 A condition may require personal qualification or certification and the user becoming an Approved Handler (AH). However, as this is only required for 65% of agrichemical products sold in the NZ market, no personal certification or qualification from training is required by the EPA for the other 35% of products.
- 3.11 In practice the situation is worse because most (estimated 50%), of the agrichemical used in NZ is glyphosate based and less than 5% of those products require the user to be an Approved Handler.
- 3.12 Therefore it is simply not good enough to rely on EPA approvals and requirements as they will not cover approximately 50% of all discharges. On the other hand GROWSAFE® makes no distinction as the training covers all agrichemical products on the NZ market.
- 3.13 Further, reliance on AH to provide evidence of competency is flawed because the standards for training and competency defined for Approved Handler certification have been set at an unacceptably low level. Essentially there is no 3rd party

¹ Guidelines on organization and operation of training schemes and certification procedures for operators of pesticide application equipment, published by Food and Agriculture Organization of the United Nations Rome, 2001.

assessment required. A test certifier can issue an AH certificate by simply asking an employer or associate to sign a form that the applicant is competent: i.e. no formal training is required by law.

- 3.14 Also the low cost and effort required to retain and renew an Approved Handler certificate every five years (as little as \$50 and sign a form) means that agrichemical users have developed a false sense that the risks and hazards associated with agrichemicals are managed by test certifiers on their behalf and they are not incentivised to seek further knowledge, or improve their competence.
- 3.15 The knowledge required to obtain Approved Handler is set out in the HSNO Personnel Qualification Regulations. When compared with the knowledge required to obtain a GROWSAFE[®] certificate there are a number of short comings for AH. Most notably that there is no requirement to provide a copy of the relevant Regional Plan for the candidates to understand the rules on discharges to air. As a result spray drift management and notification does not necessarily receive any attention in the approval for an AH. In contrast these are covered by GROWSAFE[®] training.
- 3.16 In my experience the AH certification requirement, pertaining to agrichemical use put in place by EPA has been a backward step in improving agrichemical safety to people, the environment and food in New Zealand because it has created uncertainty in this space.
- 3.17 For example for some agrichemical products an AH is only required if the use is wide and dispersive and / or over water. When purchasing a product the user does not necessarily know the destiny of that product as in most cases more is purchased than is needed for the immediate job at hand. So do they require an AH or not? It depends on the intended use so clearly there is room for discretion which results in uncertainty which is not helpful to the implementation of the RMA.
- 3.18 The Proposed plan requires compliance with NZS8409. Training is required to comply with NZS8409 so it is important that the regional plan specifies such a requirement, for example GROWSAFE certification.
- 3.19 Because of the added risk from aerial application, I support the requirement that aerial application companies have an independently audited QA Programme that assures compliance with NZS8409:2004. This would provide

assurance to council that aerial applications are undertaken using best practice to minimise the potential for spray drift and adverse effects from applying agrichemicals from the air.

4. CONCLUDING COMMENTS

- 4.1 As with a number of other primary industry sectors NZAAA is a strong supporter and promoter of GROWSAFE® as it results in best practice agrichemical management for the benefit of both people and communities and the environment.
- 4.2 Given that aerial application has added risk associated with height of release and rate of application, I support the requirement that aerial application companies have an independently audited Quality Assurance Programme that assures compliance with NZS8409:2004.

John-Paul Praat

9 October 2015