AN ANALYSIS OF CONSUMER BELIEFS AND ATTITUDES TOWARDS AGRICHEMICAL USE AND AGRICHEMICAL RESIDUES ON FRESH FRUIT AND VEGETABLES

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RUTH WILSON-SALT
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ABSTRACT

Agrichemicals have been extensively used to control pests on fresh fruit and vegetables since the Second World War and virtually since this time controversy has surrounded their use. Agrichemicals present an unknown hazard to consumers, one which consumers feel they have little control over.

Agrichemical use and residues are not confined to fresh fruit and vegetables, but this is one product where their use is prominent. Consumers are concerned about agrichemical use for many reasons. One such issue is the safety of the fresh fruit and vegetables they eat, in terms of their health. If a new product is introduced. which addresses this issue, and differs on only the characteristic of food safety, classical demand theory has little to say about the adoption of this new product. In classical demand theory a good is bought for itself.

Goods characteristics theory however considers the good as a bundle of characteristics. The price of a good represents the sum of the marginal values of the characteristics. Goods characteristics theory however, would consider that the consumer is perfectly informed about these characteristics. This study assumes this is not the case. The consumer has a subjective evaluation of the characteristics which is more or less close to the objective reality. This subjective evaluation can be ascertained by asking a consumer about their beliefs and attitudes (considered to be synonymous with the terms perception and concern) and using these variables as explanatory variables in a model of consumer choice.

Respondents to a mail survey in this study were asked if they would consider buying a new product, fresh fruit and vegetables which differed on only one characteristic from currently available fresh produce, the use of agrichemicals in their production. Respondents were asked about their attitude and beliefs about the use of agrichemicals and possible presence of agrichemical residues on fresh fruit and vegetables.

The attitude and belief variables were used as explanatory variables in a logistic regression, with the dependent variable indicating whether or not they would consider buying fresh fruit and vegetables grown using integrated pest management. Results from this study suggest that respondents can be divided into groups (three in this study) which have different probabilities of considering buying the new product at various levels of concern. These groups could be characterised reliably by demographic variables and variables which indicate the respondents level of knowledge or information.

Respondents were also asked if they would be willing to pay more for the new product. A logistic regression model was again used to estimate the probability that these respondents would be willing to pay at least 20% more for fresh produce grown using integrated pest management. The respondents can again be grouped on this basis and the groups characterised in terms of demographic variables and variables which indicate the respondents level of knowledge or information.

The results indicate that respondents who were employed, non-Maori, could recall information about agrichemical use or residues in the previous six months and who used agrichemicals to control pests and diseases around the outside of the home were more likely to consider buying integrated pest management produce and to consider paying at least 20% more for such produce.

As it is the underlying attitude and beliefs of consumers that explain the probability of considering buying the new product and paying more for it, producers may be interested in changing the beliefs of respondents in the groups with a low probability of considering buying such produce and paying at least 20% more for it, to the beliefs of groups with a higher probability of considering buying such produce and paying at least 20% more for it. Research has shown that people's beliefs are easier to influence than their attitudes. Since it is proposed that beliefs are a function of a person's information as well as demographic variables and this is supported by the research findings, the groups are investigated with regard to the information sources they consider reliable and the channels they obtain information through. For the groups who are least likely to considering buying such produce and to pay at least 20% more for it, the Department of Health, public interest groups, government research agencies and university scientists are considered to be the most reliable sources of information. Respondents were generally most likely to obtain information from television, newspapers and magazines.

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