



Community Attitudes to the use management of biosolids

PHASE 2 : FINAL REPORT

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Executive Summary

This report is the second phase of research undertaken by the Australian and New Zealand Biosolids Partnership (ANZBP) on community attitudes to the use and management of biosolids. It details findings from a survey completed in Australia and New Zealand in March 2010. This report gives an overview of the survey methodology and the key findings from the survey analysis. It also highlights some of the implications for the ANZBP that arise from these findings.

Survey context

An important element of the ANZBP is the development of communication tools that members can use to present factual, unbiased information about the use of biosolids to communities that might have contact with biosolids treatment, transport, use or disposal in some way.

Due to the nature of the industry there has been limited broader consultation with the community about attitudes and content of communications messages. The ANZBP has undertaken this project to establish broader community attitudes to aid in the development of materials providing objective and factual information on biosolids to interested members of the community. The results will also enable the ANZBP to manage risk more effectively.

The main purpose therefore of conducting the survey was to ascertain community attitudes to the use and disposal of biosolids to aid in the development of materials aimed at providing objective and factual information on biosolids based on the issues of most concern to the community.

The findings from the literature review and stakeholder consultations also helped to identify a number of areas for exploration in the survey including:

- ascertaining the differences in attitudes and perceptions of rural and urban communities
- ascertaining different cultural perceptions to the use of biosolids in relation to people of different ethnic backgrounds
- determining the amount of trust placed in the media
- determining the level of trust placed in the big Australian food retailers in relation to food produced on land to which biosolids have been applied
- ascertaining awareness of, and attitudes towards, Freshcare Australia's Code of Practice (and similar organisations in other Australian states)
- establishing whether the knowledge that there are rigorous regulations and guidelines for the use of biosolids increases confidence
- exploring the notion that out-of-sight is out-of-mind, namely in situations where there isn't a problem, whether communities need/want to know more about biosolids
- determining community attitudes towards recycling, energy saving, and the effects on the environment as a trustworthy platform to communicate the benefits of biosolids
- the extent to which the source of information affects the credibility of the message

The survey used a range of techniques to identify community attitudes, knowledge and priorities with regard to the objectives and focus areas identified.

Survey sample

A total of 1,221 surveys were completed with members of the community - 1,020 in Australia and 201 in New Zealand. The sample size in Australia has a margin of error of plus or minus 3% at a 95 percent level of confidence and was sufficient to analyse sub-groups within the data. In New Zealand, the smaller sample size has a margin of error of plus or minus 7% at a 95 percent level of confidence with sub-group analysis restricted to the 'affected' and 'general' community sample groups.

In each country, half the interviews were conducted with the ‘affected’ community – defined as people who live near a facility producing biosolids, or land on which biosolids have been applied – and the other half with the ‘general’ community – defined as people who live further away from points of production or application, and who are therefore less likely to be affected.

In New Zealand, each city and town was defined as an ‘affected’ community if it had its own sewage treatment plant (STP). The ‘general’ community was defined as those areas in Auckland, Wellington and Christchurch that were not in close proximity (less than 10 kilometres) to a STP.

A mixed survey methodology was utilised for this project that included both telephone interviews and online surveys. Due to the geographical distribution of the ‘affected’ community, a telephone survey was utilised to collect data from this sample group. A combination of telephone and online surveys were conducted with the ‘general’ community.

Survey response

A definition of the term ‘biosolids’ was provided in the survey so that respondents had sufficient understanding of what was being discussed in order to answer the questions. Only 33% of survey respondents had heard of the term biosolids and of these, even fewer were able to describe the product accurately. This means that the remainder relied on the definition provided and general knowledge to respond to the questions being asked in the survey.

The following provides a summary of the key findings from the survey:

Awareness and understanding of biosolids

One third of all survey respondents had heard of the term biosolids, the majority of whom reside in ‘affected’ areas. Of those that had heard of the term, many could not define it, misunderstood the definition or focussed on end use.

The number of respondents from the ‘affected’ community who had heard of biosolids was twice that of ‘general’ community. This lent confidence that the delineation of ‘affected’ communities was correct.

Half the respondents in the ‘affected’ communities were aware of a sewage treatment plant in their local area.

General attitudes about biosolids

A large majority of respondents (71%) of the community were positively disposed toward the use of biosolids for the purposes described in the biosolids definition. Very few (9%) said that they were against the use of biosolids for the purposes described.

Again 71% of the community held a generally positive attitude towards a neighbour applying biosolids to their garden or farm, and an even greater number thought that applying biosolids to farmland for reconditioning the soil was better than applying cow or chicken manure.

Over 50% of community members said that they would be very likely or somewhat likely to use biosolids products in their own garden or farm, with members of the ‘affected’ community more likely to use biosolids for such purposes than ‘unaffected’ community members (68% versus 57%).

Amongst the ‘general’ community in Australia, respondents in Queensland (48%) are the least likely to use biosolids. Respondents in South Australia (69%) are the most likely.

Biosolids and the environment

Attitudes towards using biosolids to improve the environment were generally positive. When asked how they felt about biosolids being used as part of a process of recycling and preservation,

respondents' attitudes were generally positive. They were however less positive about the notions that biosolids could reduce soil erosion and improve water quality.

Attitudes in Australia were generally more positive than those in New Zealand with a strong geographical divergence between cities in the latter.

Biosolids and health

Respondents see the potential for the use of biosolids to affect family health as more of a concern than the impact on the environment. This held true for both Australia and New Zealand. There were however significant differences in attitudes within the 'general' community in the various Australian States and the major cities in New Zealand. There were also significant differences in attitudes between respondents in Australian rural and urban areas. Any regulation or education needs to respect the significant sensitivities in the health area and particularly in relation to impacts on family health.

Biosolids and food

Attitudes towards the purchase of foodstuffs grown on land where biosolids had been applied were generally positive. This trend was evident for 'affected' and 'general' communities. The exception was with regard to the purchase of fruit and vegetables, 'affected' communities being more likely to purchase these products than 'general' communities.

Respondents in rural areas are more likely to purchase foodstuffs grown on land where biosolids had been applied than respondents from urban areas.

Biosolids regulation and guidance

The community generally felt comfortable in the knowledge that biosolids use is controlled and regulated, but a large number of respondents were ambivalent when presented with this information. This may reflect either a lack of product and industry knowledge among the community or comfortableness about biosolids and their application.

When the affected community were asked who they thought to be most knowledgeable or most trusted on biosolids, sewage and water treatment plant operators were considered one of the least knowledgeable and least trusted. This may mean that regulation, guidance or education from the industry is less likely to be trusted by the community.

Federal research organisations were identified as the most suitable for administering biosolids control and regulation, based on the perception that they were the most knowledgeable and the most trustworthy source of biosolids information.

Biosolids and risks

Two thirds of the community did not feel confident in the statement that most scientists believe there is a negligible risk associated with biosolids production or use. This should be viewed against the fact that the survey data suggests that there is a lack of understanding of the risks that biosolids may pose to the community, and what the biosolids industry does.

The community is most concerned with the effect that local biosolids production can have on property prices, the proximity of sewage treatment plants and potential odours. The 'general' community expressed less concern about the application of biosolids in its local area.

The 'affected' community showed less concern than the 'general' community when asked to consider how respondents would feel about biosolids production and use occurring locally.

When the affected community were asked for a verbatim response on what they would need to know in order to be more comfortable with biosolids being used in their local community, "biosolids being safe to use", or similar derivatives, was the most common response. This was followed by "being

tested” and “meets safety standards”; “that information about biosolids is available”, and “that it was treated properly”. It is important to note that the top six verbatim responses were generally aligned with health and safety concerns.

Conclusions

The most significant finding in the report was that a significant majority (71%) of the community were positively disposed toward the use of biosolids for the purposes described in the biosolids definition and that very few (9%) said that they were against the use of biosolids for the purposes described. This needs to be considered in light of a strong current of concern identified around the potential health and safety concerns within the community which has the potential to undermine the positive attitude within the community.