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## 5 ALTERNATIVES TO THE USE OF PESTICIDES

### 5.1 Avoiding pesticide use

A number of submissions and public hearing evidence received by the Standing Committee questioned the need to use pesticides at all in the urban or agricultural landscape. Concerns largely stemmed from a lack of information available regarding the toxicity and impacts that pesticides have on the environment, persons or property. Issue was raised with the failure to adopt the “precautionary principle”. The precautionary principle has been incorporated into a number of international conventions operated by the United Nations Conference on Environment and Development including:

- The Rio Declaration on Environment and Development;
- Convention on Biological Diversity; and
- Framework Convention on Climate Change.

The precautionary principle as defined in The Rio Declaration on Environment and Development states:

In order to protect the environment, the precautionary principle approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.<sup>1</sup>

Ms Jillian Cranny, representative of the National Toxics Network and North Coast Environment Council raised the notion of ecologically sustainable development principles and the precautionary principle in evidence to the Standing Committee:

...through a lack of political will to set reduction targets is why innovations in organic and integrated pest management have been starved of support and funding. I call on this Committee to uphold those ESD principles and specifically the precautionary principle and inter-generational equity.<sup>2</sup>

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<sup>1</sup> “United Nations Conference on Environment and Development: The Rio Declaration on Environment and Development”, *International Legal Materials* – American Society of International Law, USA, v31, No.4, July 1992.

<sup>2</sup> Evidence of Ms Cranny, National Toxics Network, North Coast Environment Council, 5 August 1999, p.410.

### 5.1.1 Organic farming techniques

A number of industry groups in public hearing evidence before the Standing Committee expressed a desire to reduce pesticide use or avoid pesticide application altogether, as a means of:

- promoting “clean green” industries and products;
- avoiding risk to the environment and personal health; and
- reducing the financial burden of purchasing pesticides.

Industry groups, in outlining reasons for not selecting alternative products for pesticide control such as neem or garlic, indicated that these products did not work in isolation as effectively as pesticides.

Mr Neil Treverrow, Technical Specialist Tropical Fruit, NSW Agriculture stated in evidence to the Standing Committee his understanding of the effectiveness of the current alternatives to pesticides.

In terms of looking at some of the alternative treatments in various projects on integrated best management that the industry has funded and investigated, there are compounds like neem that use that. A recently concluded nematode management project went through a suite of what are seen as potentially organic style treatments. Those opportunities have been looked at; they have not been ignored. In general, they have not been highly effective either. I think that, rather, the direction that the industry is heading in is towards a more holistic approach to the growing of the crop and minimising the current use of pesticides. I have not found any of these alternatives which can stand alone.<sup>3</sup>

Alternatively, the Standing Committee heard evidence of the successful production and sale of organic agricultural commodities for domestic and export markets as part of its inquiry into the international competitiveness of agriculture in New South Wales. These primary producers had received accreditation through industry representative bodies such as National Association for Sustainable Agriculture Australia (NASAA), or the Biological Farmers of Australia (BFA).

The Standing Committee heard evidence from Mr Denis O’Leary, a primary producer who detailed his experiences with respect to developing organic wheat and beef cattle for domestic and export markets. Mr O’Leary outlined a number of various approaches that he undertook to eliminate the use of pesticides. The following extract outlines Mr O’Leary’s perspective on weed management:

Weeds are really telling you that you have got a sick soil. If you can balance the soil, that is a solution. For example, nutgrass was a problem. We found out that if you just put dolomite lime on that

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<sup>3</sup> Evidence of Mr Treverrow, NSW Agriculture, 4 August 1999, p.329.

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country, the calcium stops the nutgrass from growing. There are so many answers that are so simple that people just overlook them.<sup>4</sup>

Mr Howard Rubin, President, Organic Herb Growers Association discussed with the Standing Committee, during its inquiry into the international competitiveness of agriculture in New South Wales, the ease of herb production the advantages of organic production.

...the beauty of herbs are that most of them I used to grow organically and that is why organic herbs have really been able to take off quicker than some of your brassica crops or your other broad acre crops which are very much prone to insects. Herbs are actual natural insect repellents so they do not really attract the bugs...<sup>5</sup>

...one of the things about an organic production system is that you do not really have any monocultures. So whenever we tell our growers what they should be putting out we would always have them growing at least six different varieties, therefore they have some protection about fluctuations in the market. Perhaps one year they are not going to sell their echinacea crops but they will sell their skull-cap, or they will not sell their rosemaries, but they will sell their basils, or even from week to week there will be fluctuations in that market. So we build that in for both organic growing techniques and as well for market protection.<sup>6</sup>

The Standing Committee recognises the benefits that may be achievable in non pesticide approaches to the control of pests presently being examined through research. Of note is a CSIRO research program, documented in July 1999 by ABC TV News, that is investigating the use of a naturally occurring fungus to control termites and locusts. Contact by termites and locusts with the fungus allow spores to establish an infection inside the pest causing death. This has potential to control termites and locusts without use of pesticides.<sup>7</sup> The Standing Committee understands that the release of this product is subject to further testing over the next few years.

#### **Recommendation 48**

**The Standing Committee recommends that NSW Agriculture support research with increased funding into alternative methods to control and eradicate pests, plant disease and weeds other than by pesticide application.**

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<sup>4</sup> Evidence of Mr O'Leary, 12 June 1998, p.114 (Inquiry into the international competitiveness of agriculture in New South Wales).

<sup>5</sup> Evidence of Mr Rubin, Organic Herb Growers Association, 19 October 1998, p.433, (Inquiry into the international competitiveness of agriculture in New South Wales).

<sup>6</sup> Evidence of Mr Rubin, Organic Herb Growers Association, 19 October 1998, p.434, (Inquiry into the international competitiveness of agriculture in New South Wales).

<sup>7</sup> ABC TV News, 13 July 1999, reporter Ms Kennedy.

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