

## **Chief Health Officer's Expert Advisory Panel on the Human Health Risks Associated with the Use of Biosolids as Fertiliser**

### **Issue**

The NSW Chief Health Officer, Dr Kerry Chant, convened an expert advisory panel to consider the human health risks from the use of biosolids from Sydney Water in response to reports in the media that these products were causing gastrointestinal disease in Sydney residents, due to infection with the parasites *Blastocystis hominis* and *Dientamoeba fragilis*. The panel consisted of a parasitologist, clinical microbiologists, infectious diseases doctors, public health experts and environmental health experts.

### **Background**

Since the mid 1990s, biosolids have been used in agriculture in NSW. Biosolids are the solid residue that remains following the treatment of human sewage. Sewage is treated through a number of scientifically established processes that remove organic matter and reduce pathogens.

In 1997, the Environment Protection Authority developed guidelines, consistent with best international practice, for the processing and use of biosolids in agriculture. Two grades of biosolids are permitted for use in agriculture. Stabilisation Grade A is a maximally treated product that undergoes both a heat (pasteurisation) treatment and/or an alkalizing treatment. These products are used when there is likelihood that people will be exposed to the product, for example, compost or potting mix. Grade A products are required to be tested for the presence of bacterial indicators and pathogens. Grade B products, which are mainly used in agriculture, for example promoting the growth of feed in paddocks for cattle consumption, undergo less stringent processing but require onsite management practices to be instituted, such as, the exclusion of stock for a period of time.

It is estimated that these products are used on less than 5% of properties in NSW. The Office of Environment and Heritage has a role in auditing the use of biosolids.

The composition of biosolids should be considered in the context of other fertilisers. Compost and potting mix contain a number of microorganisms whether from human or animal origin. Exposure to microorganisms is an everyday occurrence.

### **Findings**

Members of the expert advisory group considered that the risk to human health from Grade A and Grade B biosolids from Sydney Water was negligible if the recommended treatment and use followed the EPA guidelines.