Barriers to adoption of ventilated system of collecting organic and biodegradable mulch films.

Recycled organics.

Landfill costs
Relatively low costs of landfill compared with Europe make composting (and other solutions) relatively expensive. It's cheaper to bury the organics despite the problems created by landfill which include:

- Birds
- Vermin
- Methane production (10 times more global warming potential than CO2
- Leachate issues

Added to that, the advantages of using food organics together with green organics to produce high value compost are lost. The advantages include

- Compost improves soil structure
- Compost considerably reduces water usage as moisture is kept in the upper layers of the soil.
- Ends contamination of ground water by fertilizer
- Reduced pesticide use and less groundwater contamination

The above lists illustrate that the costs of failing to recover organics are not fully accounted for, as many of the costs do not fall upon the polluter. The above factors need a policy shift to ensure that the polluter pays.

Compost Market place
Traditionally, because most organics are produced in the cities, compost products have been sold to the urban markets as mulches and soil conditioners. Increased supply of organics means that new markets must be developed with products suitable for farmers, horticulturalists and wine growers. Recently these issues were addressed in detail by the Compost Supply Chain Road Map produced by Compost Australia.
http://www.wmaa.asn.au/roadmap/CSCR.pdf

Infrastructure
Many composters use open windrow composting as their feedstock is generally 'green organics' – yard trimmings etc. This limits the ability to process food organics. This is because open windrow composting is generally considered a risk by EPAs and unwelcome in urban areas for fear of attracting birds and vermin. In practice a well controlled process will not create these problems but there is unlikely to be a change in policy given the difficulties of regulation and likely opposition from neighbours. In some regions the risks of fruit fly would rule out open windrow composting of organics without a stabilisation process.

There are solutions. One is the use of in-vessel composting to stabilize the food organics, a process that may take 7 days before the material is transferred to open windrow. This requires investment which may not be forthcoming without compost market development. Another solution is to build an in-vessel composting plant as at Coffs Harbour.

Quality is the key to developing agricultural markets. This requires good processing and a clean stream of feedstock. Contamination is a major issue in collection of organics – and what our system is designed to achieve. Removing contaminants, such as plastic bags is an expensive process.

It is our belief that there is a market for quality compost. Our soils are among the poorest in the world. We live in the driest continent. A realization of the benefits of compost can be generated. At least one composter, Jeffries in SA, is using innovative ideas such as producing fertilizer compost mixes as a means of weaning farmers from dependence on chemical fertilisers.

Big ticket treatment processes such as AWT plants appear to offer the solution by dealing with all the waste in one plant. Unfortunately the process does not produce good compost as contaminants enter the end product. This is inevitable unless organics are separated at source. Contamination in recycled organics from AWT has been the experience in the US and Europe and is being repeated in Australia.

Agricultural Mulch Films

The barriers are developing experience of the product in Australian conditions and increased cost over PE films. Although the films can be made thinner than conventional PE films and there is no cost of lifting the film and disposal after use

Polyethylene films, usually pigmented black, are used in horticulture and vegetable farming to suppress weeds. These films create major waste disposal issues as the film is contaminated with soil rendering it unfit for recycling. Further the material often has to be transported long distances for disposal. This can lead to illegal dumping or burning.

When lifting the film pieces inevitably break off contaminating the soil. This eventually leads to sterile soils. This has happened in Southern Spain in areas used for intensive production of salad crops. I have been told that some problems are emerging in the Bundaberg area.[1] Italy is banning the use of PE films because of the environmental problems created.

We are about to market cornstarch based films that will biodegrade over the growing season leaving nothing but biomass behind. Our ability to develop the market is limited by the need to test the films in the many differing climates in Australia and to adapt to the much higher UV values in Australia compared with Europe. We are working on this and would welcome cooperation with state primary industry and environmental agencies.

[1] I have not yet had the opportunity to check the truth of this statement