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<b>Title</b>	<b>Toilet Collecting Systems using Biodegradable Bags for Private and Municipal Composting – Examples from Germany and The Netherlands</b>
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### **Toilet Collecting Systems using Biodegradable Bags for Private and Municipal Composting – Examples from Germany and The Netherlands**

#### **1. Introduction**

Starch bags are in use in Germany since about 1980, when municipal collection and composting of organic waste from households were started. Different products were tested since then and a quality standard was established, to avoid plastic material in the end product. Since 1999, different dry toilet systems with and without urine separation are offered with starch bags for private composting on garden sites (Germany) as well as for municipal collection and composting together with organic waste (Netherlands).

#### **2. Methods**

A settlement of about 50 weekend houses for gardeners in Germany is introduced, using bucket toilets with starch bags and absorbing organic material for private composting. A dry toilet system for multi story houses in the Netherlands is shown, being connected to the municipal collection of organic waste recycling. Experiences and acceptance of the users are reported from both examples.

#### **3. Results**

Standards for private composting and the use of the end product are considered. The design of composting boxes for treating faeces and starch bags in an effective way are the basis for safe and hygienic private composting. In dense settlements, special containers for collection and transport offer high smell absorption and resistance against rodents.

#### **4. Conclusions**

Starch bags provide a clean and aesthetic way of handling and composting human faeces. Both examples show that acceptance of ecosan toilet systems rises, when the material can be handled like the user is used to handle waste. This solution shows high effects especially in dense settlements, when toilet waste has to be collected for transport.