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Biological treatment of waste in the EU

Catherine Fischer, von der ISWA (International Solid Waste Association) und STRID (Abfallmanagement Agentur) führt ein Interview mit Dr. Enzo Favoino, dem Vize-Präsidenten der ISWA-Arbeitsgruppe für biologische Abfallbehandlung.

Catherine Fischer, ISWA (International Solid Waste Association)

Dr Enzo Favoino, as vice-chair of the ISWA working group on Biological Treatment of Waste, you have been following the recent developments in the EU regarding biowaste very closely. What are the most recent developments?

A sharp reduction of the biodegradable content of landfilled waste within the coming years is provided by the Directive 99/31/CE. Until the year 2010 the amount should be only 35% of the 1995 levels. Although this could be accomplished by increasing the thermal treatment of waste prior to landfilling, composting and anaerobic digestion of waste are likely to play a major role. Compliance with the recent Directive on Incineration will certainly increase the cost of thermal treatment and this should give an increased economic value to biological treatment.

A Directive on Biological Treatment of Biodegradable Waste is being discussed in the EU in these days. A deadline for its completion by 2004 has been set by the EC Communication on Soil Strategy. The Directive aims to:

- give priority to biological treatment over incineration to reduce the biodegradable content of landfilled waste
- fix recycling targets for biowaste
- define common limit values and conditions for the marketing and application of compost across Europe
- favour the development of high-quality compost-based soil improvers, to be used in organic farming and to fight desertification in Southern European Countries.
- define the role of Mechanical-Biological Treatment of residual waste (formerly MSW composting) in integrated waste management strategies, and set conditions for the restricted use (e.g. in land reclamation or on landfills) of the material thereby produced.

Source separation and separate collection also in big cities

Are there some interesting and novel provisions in this Draft?

One of the most important provisions of the current Draft is that source separation and separate collection should be encouraged not only in rural areas and small towns, but also in big cities (with the possible exception of inner cities only). Our studies of biowaste collection in Italy and Spain have shown that the purity of the waste collected depends more on the collection system, than on the population density – although the population density admittedly might influence what schemes are workable. Door-to-door schemes give much better results than roadside collection programs.

Are other EU policies, either in force or under discussion likely to influence the collection and treatment of biowaste?

The ongoing development in the following sectors will have important effects:

- the aforementioned EC Soil Strategy, which covers many issues related to the use of high-quality organic fertilisers: the fight against desertification and erosion, the need to promote carbon sinks in the soil (thereby fighting climate change), etc. All such issues are positively influenced by the use of organic fertilisers and compost is specifically mentioned in the strategy.

EC Soil Strategy and European Climate Change Programme

- the European Climate Change Programme (ECCP), which has been promoted by the EU as a consequence of its Kyoto protocols commitments, is now investigating the possibility of adopting provisions to credit the application of composted products. This approach has been boosted after the Bonn and Marrakech Conferences, which have highlighted the potential role of «sinks» for carbon in agriculture, including soil organic matter. Remarkably, such an approach has already been adopted by some Italian Regions under the scope of the Rural Development Plans (EC Regulation 1257 on Sustainable Agriculture), which are giving credits to farmers if they use composted products in areas with a low concentration of organic matter in the soil.

Concerning the recent food scares related to mad cow disease and GMOs: Have they influenced the attitude towards biowaste (including sewage sludge) and compost from biowaste? Have steps been taken in European countries or the EU to restrict the use of these materials?

I think that concerns on sludge should be kept separate from those regarding food waste. The suitability of sewage sludge for composting (and land application in general) has been recently addressed as a major issue in Switzerland, and is currently being investigated across Europe. On the one hand, we have to consider that the quality of sludge will be positively influenced by the

Catherine Fischer

ISWA Arbeitsgruppe beim meeting in Milan, Oktober 2002, v.l.n.r: Jane Gilbert, Jens Aage Hansen, Anette Meija, Jean Léglise

forthcoming revision of the sludge Directive. This Directive provides «Pollution Prevention Programmes», whereby the quality of sludge suited for land application should improve. This might constitute a driving force for the reduction of heavy metals in sewage. On the other hand, the issue of organic pollutants – that has been rather neglected so far – has to be considered more carefully and will lead to more comprehensive and tighter standards for sludge. Ongoing surveys commissioned by the EC are now highlighting the substances of concern and their occurrence in sewage and soils. Therefore the need to set threshold concentrations in sludge suited for land application, either composted, digested or otherwise treated (e.g. limed).

Regarding food waste, the concerns after the wide outbreak of the BSE in the UK have led to a ban (in the «Animal by-products order», the ABPO) on the application of compost from food waste including meat and fish scraps (or «catering waste») on farmlands in the recent past. This meant running the risk that such provisions would be mirrored in the animal by-products regulation, which is about to be approved by the European Union. Such provisions have been questioned as an unnecessary precaution, as diseases of concern for animals are in all likelihood eliminated during composting, thanks not only to the time-temperature effect, but also to microbial competition and change of biochemical conditions, that transforms compost into a humidified substance where pathogens cannot thrive. On the other hand, the ban on the marketing of hazardous animal parts should stop BSE prions from entering the foodstuff market, and therefore from ending up in food waste from households. Following these lines, the Commission has lately amended the text of the ABP regulation. Therefore it will still be possible to compost food waste according to country-specific regulations on sanitation during composting (e.g. 60°C / 1 week), pending the adoption of an EU regulation, which is likely to occur within the forthcoming Directive on Composting.

The UK Ministry of Environment undertook a risk-assessment study, which, unsurprisingly, came to the conclusion that «The composting route for catering waste potentially presents lower risks to grazing animals than disposal through landfill». Therefore, the Ministry of Environment is now setting new regulations allowing to include food waste in composting.

As for GMOs, they are likely to influence only the use of composted products in organic farming, where GMO-free production is mandatory. Unfortunately, no scheme for source separation can guarantee GMO-free biowaste, due to the structure of the international foodstuff market. Composting is not to blame for that, but may suffer from such a situation.

What role can the ISWA Working group play? Has it or have some of its members taken an active part in the work on these new directives?

The ISWA WGBT has promoted a comprehensive debate among its members. As it includes various technical and scientific profiles, this

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Catherine Fischer ist auch Mitglied in der ISWA (International Solid Waste Association) und Koordinatorin des Forums für Biologische Abfallbehandlung der ISWA-Schweiz. Sie wird in unseren Publikationen laufend über aktuelle Entwicklungen in der EU informieren. Den Auftakt bildet ein Interview mit Dr. Enzo Favoino, dem Vize-Präsidenten der ISWA-Arbeitsgruppe für Biologische Abfallbehandlung.
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helps to develop a far-reaching strategy, which has for instance been mirrored in the contribution of the WG to the ISWA «10 years position paper». Backed by the cross-information, which normally occurs among members of the WG, many of them have also widely contributed to the debate in other Associations such as FEAD, EEB, or the recently constituted ECN (European Compost Network). In all such cases, members of the WG have played an outstanding role in the definition of a scientifically sound, consistent strategy for biowaste, composting and biological treatment. The participation and the central role of some members to the aforementioned recent discussion on animal by-products has been one of most remarkable contributions resulting from the internal debate among the members of the WGBT. I remain trustful that the ISWA WGBT will keep this reliable and central profile in the strategy for biological treatment.

ISWA

ist eine unabhängige Non-Profit-Organisation mit dem Ziel, nachhaltige Abfallbewirtschaftung weltweit zu fördern. Die meisten fachlichen Aktivitäten von ISWA werden von ISWA-Arbeitsgruppen ausgeführt. Organisationen oder nationale Mitglieder können direkt Teilnehmer in diese Arbeitsgruppen entsenden.

Further information:

www.iswa.org
www.iswa.ch
EU working documents on biowaste and related topics: http://europa.eu.int/comm/environment/waste/facts_en.htm
Working Group on Composting and Integrated Waste Management, Scuola Agraria del Parco di Monza, Viale Cavriga 3, I-20052 Monza (MI) ITALY

Abkürzungen

ISWA: International Solid Waste Association
ECCP: European Climate Change Programme
GMO: Genetically manipulated Organism
ABPO: Animal by-products order
WGBT: ISWA Working Group on Biological Treatment
WG: Working group
FEAD: European Federation of Waste Management and Environmental services (the European Federation which represents the European waste management industry, www.fead.be http://www.fead.be)
EEB: European Environmental Bureau (www.eeb.org http://www.eeb.org)
ECN: European Compost Network

Konsens und Dissens

Im Oktober 2002 traf sich die Begleitgruppe Kompost des BUWAL zum zweiten Mal, um Neuigkeiten betreffend Kompost auszutauschen, zu diskutieren und ein koordiniertes Vorgehen zu ermöglichen.

Brigitte Bartha-Pichler

Klärschlamm

Die Änderung der Stoffverordnung ist so gut wie beschlossen. Das Ausbringen von Klärschlamm als Dünger auf landwirtschaftlichen Flächen wird in Zukunft nicht mehr erlaubt sein. Auch für Kompost, Gärgut und Presswasser wurden neue Richtwerte bezüglich PAK (polyzyklische aromatische Kohlenwasserstoffe) und Dioxin festgelegt. Kompost, Gärgut und Presswasser gelten ab nun als «Recyclingdünger» und nicht mehr als Abfalldünger, um das positive Image zu gewährleisten.

Forschung

BUWAL, BLW, FAL, EPFL, FiBL, VKS, einzelne Kantone und eventuell BFE werden in den nächsten drei Jahren zwei Grossprojekte durchführen. «Organische Schadstoffe im Kompost» und «Nutzen von Kompost» sind die Themen dieser modular aufgebauten Forschungsprojekte. Wenn alle Module wie geplant realisiert werden können, werden etwa 1,6 Mio. Franken in diese Projekte investiert. Ein Lenkungsausschuss, in dem die genannten Organisationen vertreten sind, hat die strategische Leitung beider Projekte inne. Wir berichten mehr darüber im Artikel «Kompost - Schaden oder Nutzen für unsere Umwelt».