让我们一起堆肥！

UTV AG

生活垃圾进场

塑料瓶

纸及纸箱

塑料

RECYCLING

生物质燃料

作为燃料使用

戈尔生活垃圾处理系统

在一座好氧堆肥厂内“戈尔垃圾处理系统”是重要的工序，
根据项目的不同要求，对物料进行无害化，
稳定化以及干化处理。
“出料”经分选后可回收再生废物原料，
制造 RDF 及部分有机肥。通过这道工序，
可使进入填埋场的垃圾降低至约 30%。

机械分选

磁分选

分离有机物质

堆肥出料

生物处理

Residual waste processing using the GORE® Cover System

Within the scope of mechanical/biological waste processing, the GORE® Cover System assumes the critical step of pathogen kill, stabilisation and/or drying of the treated residual waste. Depending on the purpose or requirement, the process is controlled in the GORE® Cover System. The separation of recyclable residual materials, production of alternative fuels, stabilisation of the organic proportion for landfilling or production of „compost (CLO – Compost-like-Output)“ makes up the wide variety of tasks. The residual waste portion to be disposed of is reduced to approximately 30%.

Above all, the mechanical/biological waste treatment generates better added value from the different residual waste fractions.

Opposite is a flow chart illustrating a residual waste treatment possibility.

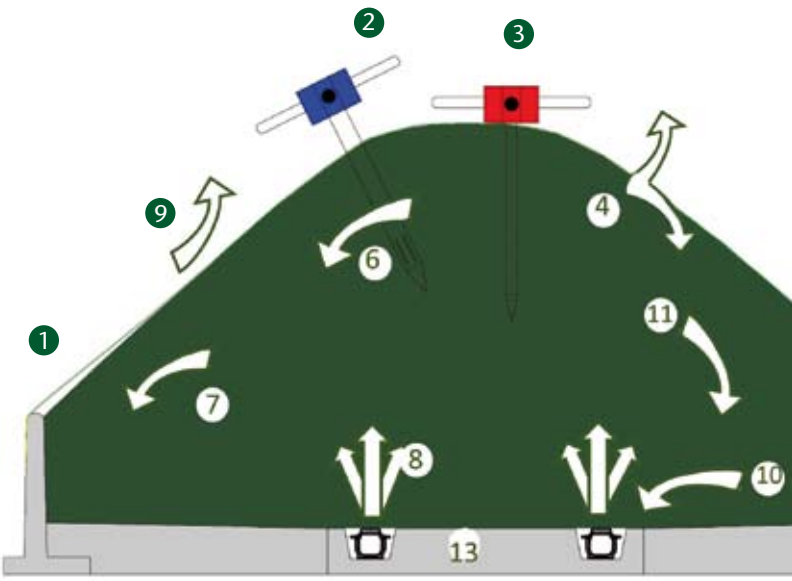
典型的戈尔处理系统需要8周时间，
分为3个周期。堆肥原料在第一周期内停留4周，
第二周期内停留2周，第3周期同样停留2周。
主要部件戈尔膜，
由于它的特殊结构使堆肥槽内有了合适的气候：

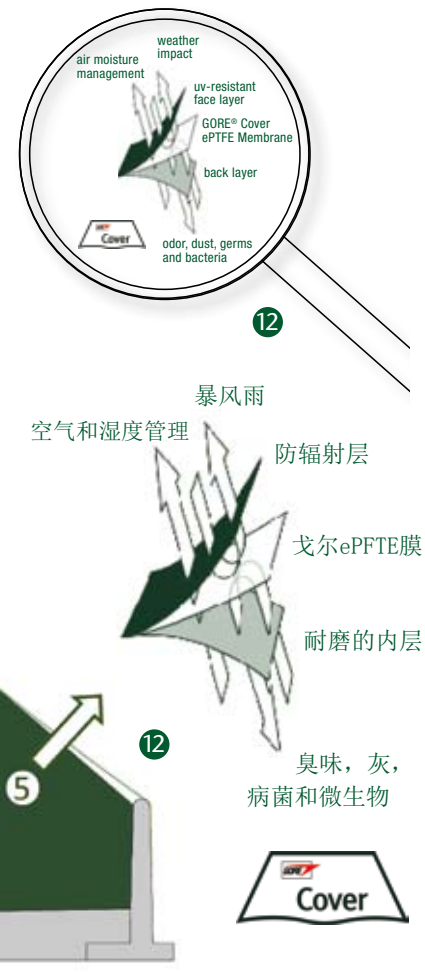
- 防水，防风，保护堆体所需湿度。
- 水蒸汽和空气有控制的透出， 致使堆体不会干燥
- 由于合理的供风， 堆体形成一个密闭的空气舱，
  保证堆体内温度均匀分布，
  达到了堆体全方位的无害化。

戈尔膜特有的分子过滤微孔结构（孔径 0,2 μm，
不让细菌和臭味气溶胶通过；臭味排放大大减少，
环境质量优于封闭式厂房。
这将保证项目周边地区居民和项目运行与维修工人
的健康和安全；

1 槽边墙的密封
2 氧气传感器
3 温度传感器
4 湿度
5 CO_2
6 异味排放
7 温度
8 微压空气仓
9 暴风雨
10 渗滤液收集
11 微生物
12 戈尔膜
13 压力传感器

1 Contact with sidewall
2 Oxygen Sensor
3 Temperature Sensor
4 Moisture
5 CO_2
6 Odour
6 Heat
8 Aeration with fresh air
9 Weather impact
10 Leachate dewatering
11 Micro-Organismen
12 GORE® Cover
13 Pressure Sensor





The typical GORE® Cover process takes eight weeks, and comprises of three phases. The waste is held in phase I for four weeks, followed by phase II for two weeks and phase III for another two weeks.

The central component of the system is the GORE® cover laminate for the windrows. Thanks to the pore structure of the membrane, the laminate cover provides semi-permeable properties which ensure a consistent climate in the windrow:

- It is water- and wind-resistant and thus protects the waste material from wind and precipitation and consequently from unwanted fouling processes due to water logging.
- Its permeability to vapour and air regulates the escape of humidity and also ensures venting of gasses from rotting and simultaneously preventing drying of the waste material.
- Thanks to the positive aeration, an air insulation layer is achieved in well sealed systems, which causes uniform temperature distribution within the entire windrow and ensures homogeneous pathogen kill of the waste material.

At the same time, the cover acts as a barrier against odours and other gaseous substances escaping from the waste material. During the rotting period, a fine condensate film forms at the inside of the cover. In this film odours and other gaseous substances are dissolved and then drip back into the waste material where they are further decomposed by bacteria. With a pore size of approx. 0.2 µm it also acts as an efficient barrier against fungal spores and germs.

UTV AG

请比较！

- ☐ 耗能
- ☐ 维护成本
- ☐ 运行成本
- ☐ 卫生
- ☐ 许可证
- ☐ 质量
- ☐ 处理量
- ☐ 扩充
- ☐ 臭味

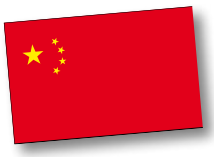
有问题？找我们！

联系方式...

上海古井路 165 号,
电话:0086 21 54777537,
邮箱: china@kompostanlagen.de

使用 Ecovio®垃圾袋，
有利于有机废物能提高生物废料收集，
可以生产更多有价值的肥料。
巴斯夫已在德国有机废弃物处理项目及其他国家成功运行。

When bin bags made of ecovio® are used, considerably more organic waste is collected separately and composting sites produce more higher quality compost. This was proved by BASF in several organic waste projects in Germany and abroad.



The compostable plastic materialecovio® made by BASF is biodegradable and decomposes completely in all conventional industrial compsting processes according to DIN Norm EN 13432, turning onto CO2, water and biomass.

巴斯夫 Ecovio®可降解塑料袋依据 DIN EN13432，
此塑料袋完全可降解为 CO2、水和生物质。

卫生
无臭味
清洁

如何提高厨余垃圾收集率？一些研究表明，居民想有一个可操作性的、卫生的垃圾分类收集方案，难闻的气味及虫害妨碍了至今对厨余垃圾的收集。

负责欧洲市场开发的 Peter Pfundtner 表示， “BASF生产高质量的ecovio性能高于标准要求， 材料分解速度更快。”。 Ecovio50％以上采用可再生原料，如植物油基聚乳酸（PLA），符合欧盟2012年颁发生物废料条例中相关的要求。

具有透气性能的 Ecovio 可降解塑料袋减缓了厌氧菌的生长速度

成功案例举例：

德国	Landkreis Bad Dürkheim, Baden-Baden,
加拿大	Norterra
中国	北京，广州

BASF
We create chemistry

在堆肥厂通过正确的操作工艺证实了 4 周后 ecovio-袋已基本消失。“关键是提高了堆肥质量，有助于居民分类及收集有机垃圾”

巴特迪克海姆政府议员Erhard Freunscht说，我们现在一直使用ecovio-袋。UTV执行董事史林先生说：实践证明ecovio-袋在堆肥第一周期就已经完全降解。

使用ecovio-袋不仅便于居民也给堆肥厂带来了很多优越性，减少臭味，减少厌氧霉菌。

Increasing the compost quality of organic waste by using organic waste bags made of ecovio®

Hygienic, odorless, clean

How can the collection rate of biological waste produced in households be increased? According to several studies, people mainly want clean solutions for collecting food left-overs and organic kitchen waste: Unpleasant odors or even insect infestation in the collection containers in the kitchen have previously put many off collecting biological waste.

An option for hygienic collection of organic kitchen waste are bin bags made of the compostable plastic material ecovio® by BASF. „Our ecovio even exceeds the provisions of the standard because the material decomposes significantly faster and thus complies with the requirements of the composting industry“ explains Peter Pfundtner, responsible for European market development at BASF. Moreover, ecovio comprises of renewable raw materials such as plant-based poly-lactic acid (PLA) to more than 50% and thus complies with the requirements of the amended ordinance on biological waste of 2012.

Since ecovio is permeable to oxygen, molding of the contained waste is delayed.

Wide use of such biological waste bags leads to good results, which has been successfully proven by BASF in several projects, for example in the German districts of Bad Dürkheim and Baden-Baden, in Norterra (Canada), in Beijing (China) and in Guanghzhou (China). Analysis of the projects revealed that a significantly higher amount of organic waste was separately collected. Moreover, the participating composting plants confirmed that the ecovio bags had almost completely decomposed as quickly as four weeks, leaving hardly any residues.

„The decisive criterion for us was the high quality of the resulting compost and that the bags made it easier for people to separate and collect the organic waste. Therefore, we will grant continuous permanent use of ecovio® bags“ says Erhard Freunscht, district councilor of the Bad Dürkheim district. Thomas Schlien, CEO of UTV: „Experiments have shown that the organic waste bags made of ecovio® were decomposed during the first intensive decomposition phase virtually by 100 percent.“

世界各地客户 – 20 余年

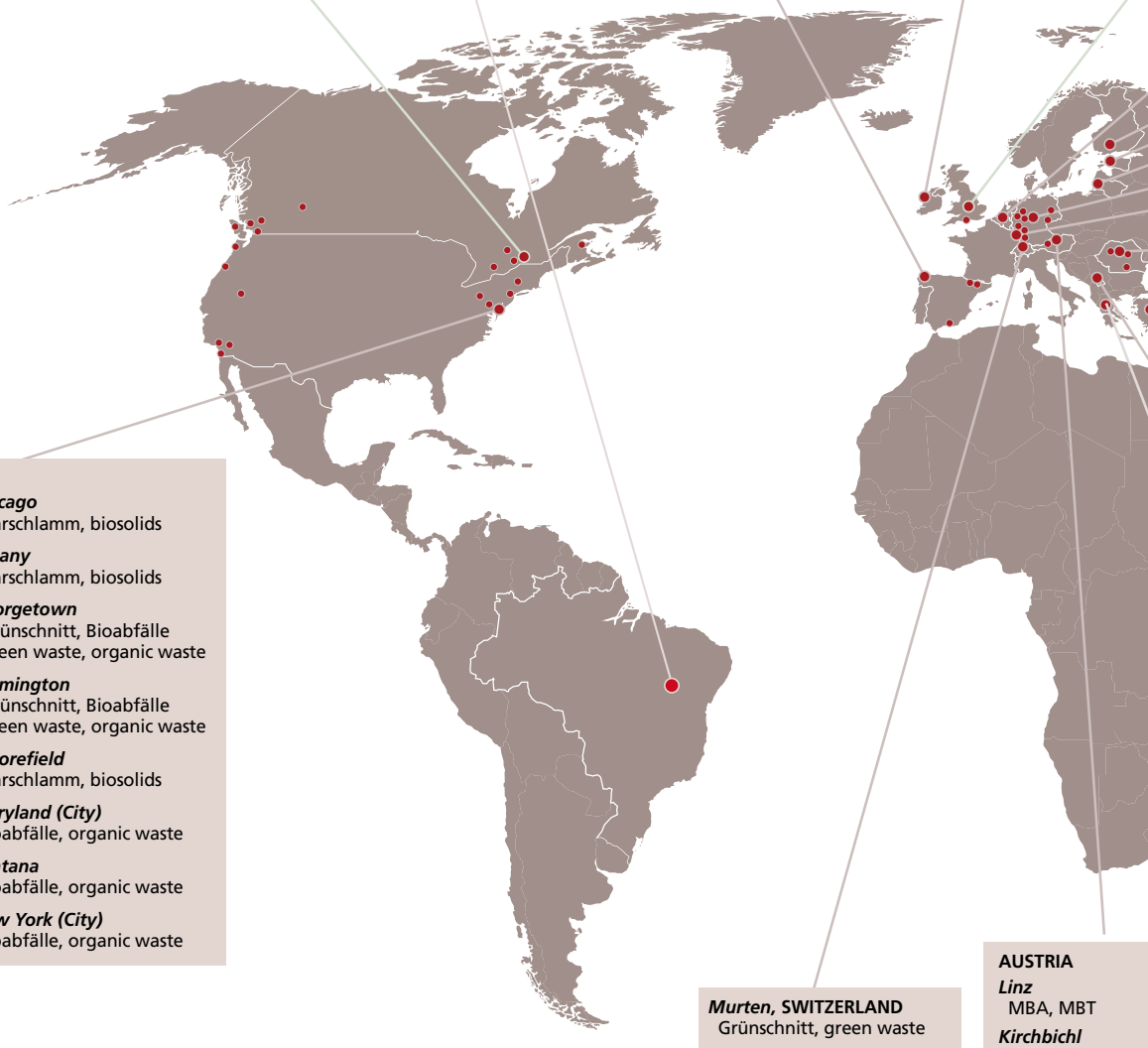
CANADA
Thorold
Grünschnitt, Bioabfälle
green waste, organic waste
Caledon
Grünschnitt, Bioabfälle
green waste, organic waste
Arthur
Grünschnitt, Bioabfälle
green waste, organic waste
Kingston
Grünschnitt, Bioabfälle
green waste, organic waste
Whistler
Bioabfälle, organic waste
Abbotsford
Bioabfälle, organic waste
Sechelt
Klärschlamm, biosolids
Moncton
Klärschlamm, biosolids
Edmonton
Klärschlamm, biosolids
Vancouver Island
Klärschlamm, biosolids

***Belleville,* CANADA**
im Bau
under construction

BRASILIA
Jundiaí
Versuchanlage, demo unit

SPAIN
Manlleu
Klärschlamm, biosolids
Cospeito
Klärschlamm, biosolids
Sant Martí d'Albars
Klärschlamm, biosolids
Granada
Klärschlamm, biosolids

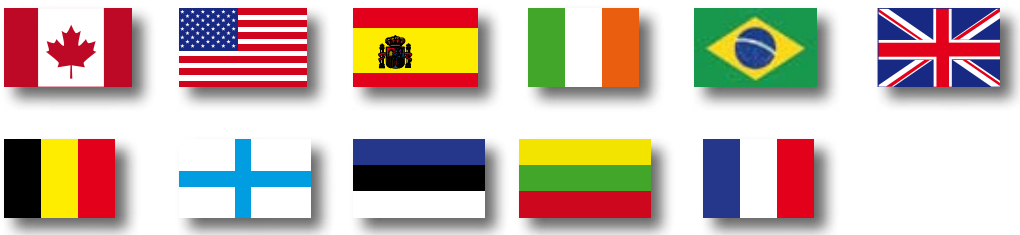
***Pettigoe,* IRELAND**
Grünschnitt, Bioabfälle
green waste, organic waste
Fischabfälle, fish waste



USA
Maple Valley
Grünschnitt, Bioabfälle
green waste, organic waste
Salt Lake City
Klärschlamm, biosolids
Los Angeles
Klärschlamm, biosolids
Lynden
Grünschnitt, Bioabfälle
green waste, organic waste
Everett
Grünschnitt, Bioabfälle
green waste, organic waste
Fresno
Grünschnitt, Bioabfälle
green waste, organic waste
Florence
Klärschlamm, biosolids
Chicago
Klärschlamm, biosolids
Albany
Klärschlamm, biosolids
Georgetown
Grünschnitt, Bioabfälle
green waste, organic waste
Wilmington
Grünschnitt, Bioabfälle
green waste, organic waste
Moorefield
Klärschlamm, biosolids
Maryland (City)
Bioabfälle, organic waste
Fontana
Bioabfälle, organic waste
New York (City)
Bioabfälle, organic waste

***Murten,* SWITZERLAND**
Grünschnitt, green waste
St. Gallen
Grünschnitt, green waste

AUSTRIA
Linz
MBA, MBT
Kirchbichl
Klärschlamm, bio
Essensreste, food



Satisfied customers worldwide – for over 20 years!

***Isle of Wight,* UK**
Tomatenabfälle
tomato waste
Pferdemist, horse manure

***London,* UK**
Planungsphase
design phase

BELGIUM
Moen
Grünschnitt, green waste
Farciennes
Grünschnitt, green waste

***Anjalankoski,* FINLAND**
Bioabfälle
organic waste

***Tallinn,* ESTONIA**
Hühnerfedern
chicken feather

***Vilnius,* LATVIA**
Grünschnitt, Bioabfälle
green waste, organic waste

FRANCE
Niedermodern
Grünschnitt, green waste
Bischwiller
Grünschnitt, green waste

ROMANIA
Salaij
MBA, MBT
Chianjna
MBA, MBT
Bacau
MBA, MBT
Mures
MBA, MBT
Mihai Bravu
MBA, MBT

CHINA
Shanghai
Klärschlamm, biosolids
Bejing
Pferdemist, Grünschnitt
horse manure, green waste
Quinhai
Rindermist, cow manure
Lu Liang
MBA, MBT
Guangzhou
Bioabfälle, organic waste
Hei Longjiang
Rindermist, cow manure

***As Salamiyah,* SYRIA**
Grünschnitt, Bioabfälle
green waste, organic waste

GERMANY
Saarbrücken
Grünschnitt, Bioabfälle
green waste, organic waste
Soest
Grünschnitt, Bioabfälle
green waste, organic waste
Borchen
Gärreste, digestate
Karlsruhe
Rechengut, screenings
Freiburg
Grünschnitt, green waste
Herbsleben
Grünschnitt, Bioabfälle
green waste, organic waste
Berlin
MBA, MBT
Baden-Baden
Grünschnitt, green waste
Simmozheim
Grünschnitt, green waste
Waghäusel
Grünschnitt, green waste
Lichtenau
Grünschnitt, green waste
MEG, Marburg
Gärreste, digestate
Zwönitz
Gärreste, digestate
Stausebach
Gärreste, digestate
Breisach
Rechengut, screenings

AUSTRALIA
Wodonga
Grünschnitt, green waste
Tyabb
Grünschnitt, green waste
Moree
Grünschnitt, green waste
Mildora
Grünschnitt, green waste

***Auckland,* New Zealand**
Grünschnitt
green waste

solids
waste

Griechenland
Thiva
Essensreste, food waste

Kosovo
US Army
Bioafälle, organic waste

TURKEY
Kula
MBA, MBT

***Pearth,* AUSTRALIA**
Planungsphase
design phase

***Timaru,* New Zealand**
Grünschnitt,
green waste

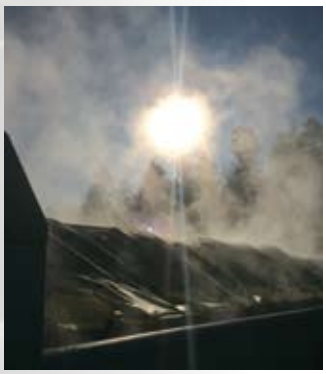
Cover Winder PWF 10

Ulrich Hanselmann,
Johannes Schlien,
Uwe Wohlgemuth
and Michael Durban.
The UTV Team at the
installation of the sidewalls.

卡尔夫市固废管理中心的堆肥实验

2013 年 11 月底，应卡尔夫市 AWG Calw 固废管理中心的邀请, 在西莫茨海姆 Simmozheim 进行了园林垃圾堆肥实验。实验目的：尽可能快的达到卫生化，出料便于筛分及最大程度的降解。卫生化在一周后已经达到。六周后取得了降解级 5 (Rottegrad 5 德国最高降解等级)。成功的实验，促成了该堆肥厂的建立。

Green waste composting experiment at AWG Calw



At the end of November 2013, a green waste composting experiment was started at the Recycling Centre Simmozheim in cooperation with AWG Calw. The objective of the experiment was fastest possible pathogen kill, obtaining of sievable material, and a highest possible degree of rotting after completion of the experiment. Pathogen kill was achieved after one week and after as little as six weeks of composting, rotting degree 5 was achieved. The successful outcome of the experiment resulted in commissioning of the complete system.

The successful outcome of the experiment resulted in an order for a complete system.

有机原料

~~难题~~

Organic ~~problem~~ Raw Material

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电话:0086 21 54777537,
邮箱: china@kompostanlagen.de

让我们一起堆肥!