



ENVIRONMENTAL CONCEPTS EXCHANGE ASSOCIATION

PRESS EXTRUSION - ORGANIC SEPARATOR WASTE TREATMENT TECHNOLOGY



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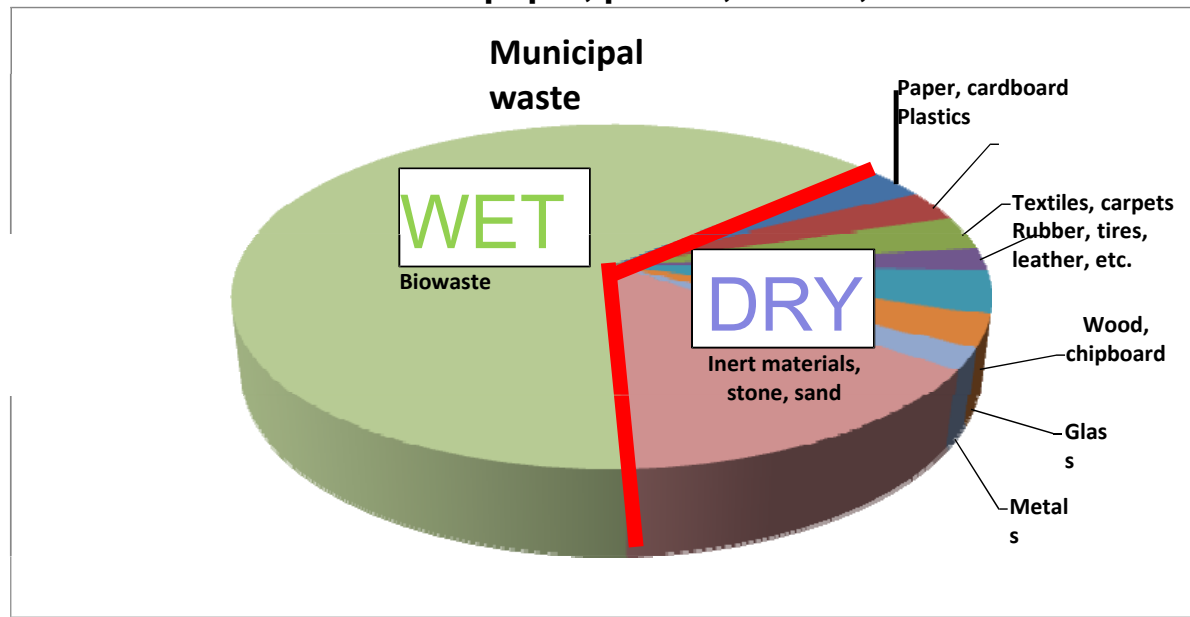
MUNICIPAL WASTE IN INDIA

Production of waste 0,5 - 0,7 kg/person and day, increasing

55-70% more than half is organic, biodegradable waste

10-15% high water content by weight
is recyclable and/or combustible

15-20% small amount of paper, plastic, rubber, textiles



THE APPROACH

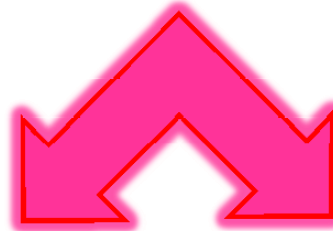
Municipal mixed waste has to be separated



WET
Biowaste,
Water



DRY
Recyclables,
Inerts





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VM PRESS EXTRUSION - AN ORGANIC SEPARATOR

The heart of the process is the extruder press or organic separator INTERGEO uses a process to separate **WET and DRY**

with **95% efficiency** in one step to produce



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THE EXTRUDER PRESS – ORGANIC SEPARATOR

The pressure extrusion process consists of high-pressure (600–1000 bar) treatment of Municipal Solid Waste.

The waste is squeezed in special extrusion chambers fitted with holes in the external surface. As a result of the high pressure the organic part of the waste is extracted through the holes and physically separated from the dry one.



1. DRY Inorganic fraction –
more than >95% inorganics - RDF

2. WET organic fraction -
more than >95% organics - COMPOST

THE PRESS EXTRUDER OR ORGANIC SEPARATOR

- The MSW is loaded into a chamber
- The material is compressed at extremely high pressure
- Cellular organic materials behave similar to a liquid and are pressed from the waste, which is a perfect start for digestion
- What remains is a dry waste fraction with a higher caloric value



Mixed waste



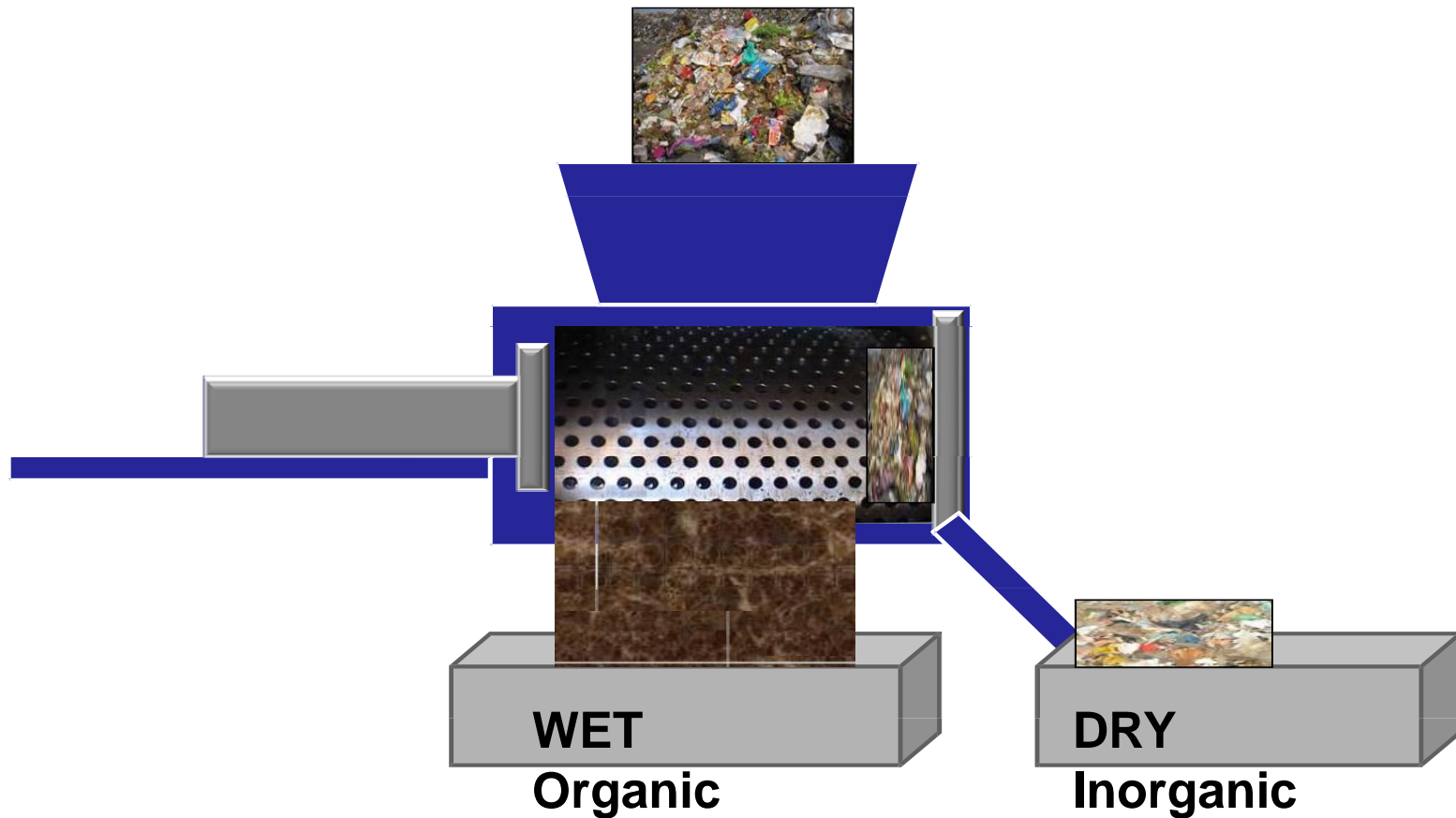
press matrix



separated organic fraction



PROCESS





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ORGANIC SEPARATOR - ADVANTAGES

95% separation of the WET-DRY fraction in one step

- Simple but sophisticated technology
- Highest availability with low maintenance time
- Perfect for mixed waste with high organic and low recyclables content



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THE WET FRACTION

The **WET** fraction squeezed out from the extrusion chambers is suitable to be utilized directly for composting as well as biogas production.

The main characteristics are:

> 95% organic content

< 5% disturbing material (inorganic)

Humidity: 55-70 %

Perfect structure for further composting



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DRY FRACTION

The DRY fraction from the extruder press can be transferred into RDF.

It is composed by plastic, cardboard, wood together with the powdered inerts

The main characteristics are:

- **> 95% inorganics**
- **< 25 % humidity (very low)**
- **Inert content approx. 25 %**
- **Good basis to make RDF**
- **Heating value: 10.000 – 11.000 kJ/kg**
- **Density: 0,5-0,8 t/m³**



DRY FRACTION INTO HIGH QUALITY RDF

Due to the very efficient separation of the WET fraction it is possible to produce high quality RDF from the press-extruded DRY fraction in a very easy way adding only 2 additional screening steps.

DRY – fraction	Separated	RDF
Ballistic sifter	heavy material	

