



# QUALITY OF VERMICOMPOST FROM PAPER MILL SLUDGE AND VEGETABLE WASTES TO BE USED FOR POTTING MEDIA IN THE NETHERLANDS

Authors:

M. Sc. Lilián Campos Mota, lilian@colpos.mx

M. Sc. Chris Blok, Chris.Blok@wur.nl

## Introduction

vermicompost



By product  
The Netherlands



Paper mill  
sludge + Black  
Peat



Apple and  
vegetable juice waste



Uses:

Amendment of garden soil



Potting media



Dendrobaena veneta



Problem  
Poor quality

## Objectives



(1) Basal respiration, total organic matter, C/N ratio  
(2) Dissolved organic carbon and pH expressing the phytotoxicity of the organic substances

## Materials and Methods

### Treatments

- 2 and 4 kg worms per square meter (67 and 133 g per liter of food)
- 3 food mixes without peat against commercial food.



### Sampling

13 and 30th Week After Inoculation

### Lab analysis

Organic Matter  
Available and Total N  
Total C, pH, EC  
Dissolved Organic Matter



## Results

A higher Population of Earthworms

Microbial Activity  
Mineralization

Prevents Volatilization of Organic Matter  
Keep more Dissolved Organic Carbon



The Feed Mix Without Peat Enriches Available Nitrogen

FOOD	Nitrate (mg kg <sup>-1</sup> )	Ammonium (mg kg <sup>-1</sup> )	Total Nitrogen (%)
Commercial	1215	16	0.80
Mixes	1606	11	0.93

Vermicompost had Neutral pH  
High Content of Nitrate  
and Normal Nutrient Content

## Conclusions

**Higher earthworm biomass accelerates the stabilization and maturity**

**The vermicompost may be suitable for potting media**

### Acknowledgment

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