

Details of Technology

Name of Technology	Recycle of food industrial wastes and development of animal food supplements Elucidation of functions of cell growth factors derived from earthworms and invention of multifunctional carbonized products derived from earthworm cast	Agriculture, Forestry and Fisheries
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Key words	cell growth factors derived from earthworms, animal supplements, carbonized products of cast	

What kind of technology is this?

Outline

- **Proposal of the technology for utilizing food industrial wastes as recycling resources**
- **Proposal of "Slow-recycle"**
- **Development of supplements for stimulating the immune system in industry animals (calf, pig, hen, etc.) as well as pets.**

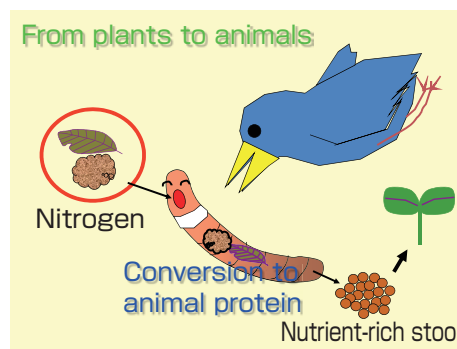
【Research output contents】

Purpose: We develop the utilizing method of earthworms and their casts increased by recycling. Earthworms themselves are good-quality protein and can be utilized for foods for birds and exotic animals as well as fishing bait. Right now, aiming at the functionality of earthworms, we are collecting data for developing the food supplements for domestic animals and pets. Cast from earthworms has a deodorizing ability, so the waste treatment without foul odor can be performed by keeping the appropriate balance of the amount between wastes and earthworms. In this project, we aim to create a high-value added product by the carbonization processing in addition to the utilization as the materials for home gardening.

Main output: We are now developing animal supplements and examining the effects of the possibly beneficial substances.

Iwate: Slow food and local production for local consumption

↓
"Slow recycle"



What are its applications?

- Recovery of valuable materials from industrial wastes (reutilization of recycling resources)
- The development of food supplements for production animals as well as pets may contribute to the breeding management such as the enhancement of disease resistance.

Related patents	Patent application No. 2006-138308
Related materials	INS (Iwate Earthworm Research Society) AFR (Animal Food Supplements Research Society)

