

# ”GROWTH BY RECYCLING”

HONKAJOKI



# HONKAJOKI GROUP

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Refines its  
customers organic  
by-products  
according to agro-  
ecological  
principles

- **Honkajoki Oy, founded 1967**
  - Atria Oyj 50%
  - HK Scan 50%
- **Findest Protein Oy, founded 1995**
  - Honkajoki Oy 66,9%
  - Atria Oyj 33,1%
- **Remsoil Oy**
  - Honkajoki Oy 60%
  - Private owners 40%
- **HonkaLeather Oy, founded 2015**
  - Honkajoki Oy 45%
  - Family Halkola 55%

# ANIMAL BY-PRODUCTS PROCESSING

EUROPE AND FINLAND

HONKAJOKI



# ANIMAL BY-PRODUCTS PROCESSING WITHIN EUROPE

- Over 440 processing lines
- Employs approximately 14.800 people

17 Billion kilo of by-products

6 Billion kilo of valuable end products

# Rendering is a process that transforms meat industry by-products into a safe and useful form

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## HEALTH

Prevents diseases from spreading

## SAFETY

Strict traceability criteria through the industry

## SUSTAINABILITY

Decreases the amount of waste and supports circular economy

ADDS VALUE to  
meat production value  
chain

# ANIMAL BY-PRODUCTS

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MEAT OR OTHER TISSUES THAT ARE NOT USED AS FOOD

PRODUCTION ANIMALS DIED OR TERMINATED ON FARMS

DESTRUCTION RELATED TO EPIDEMICS

FORMER FOOD STUFFS

# ANIMAL BY-PRODUCTS IN FINLAND

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TOTAL AMOUNT 250.000 TONS

HONKAJOKI OY  
170.000 TONS (MARKET SHARE 68%)

PROTEIN MEALS  
42.500 TONS

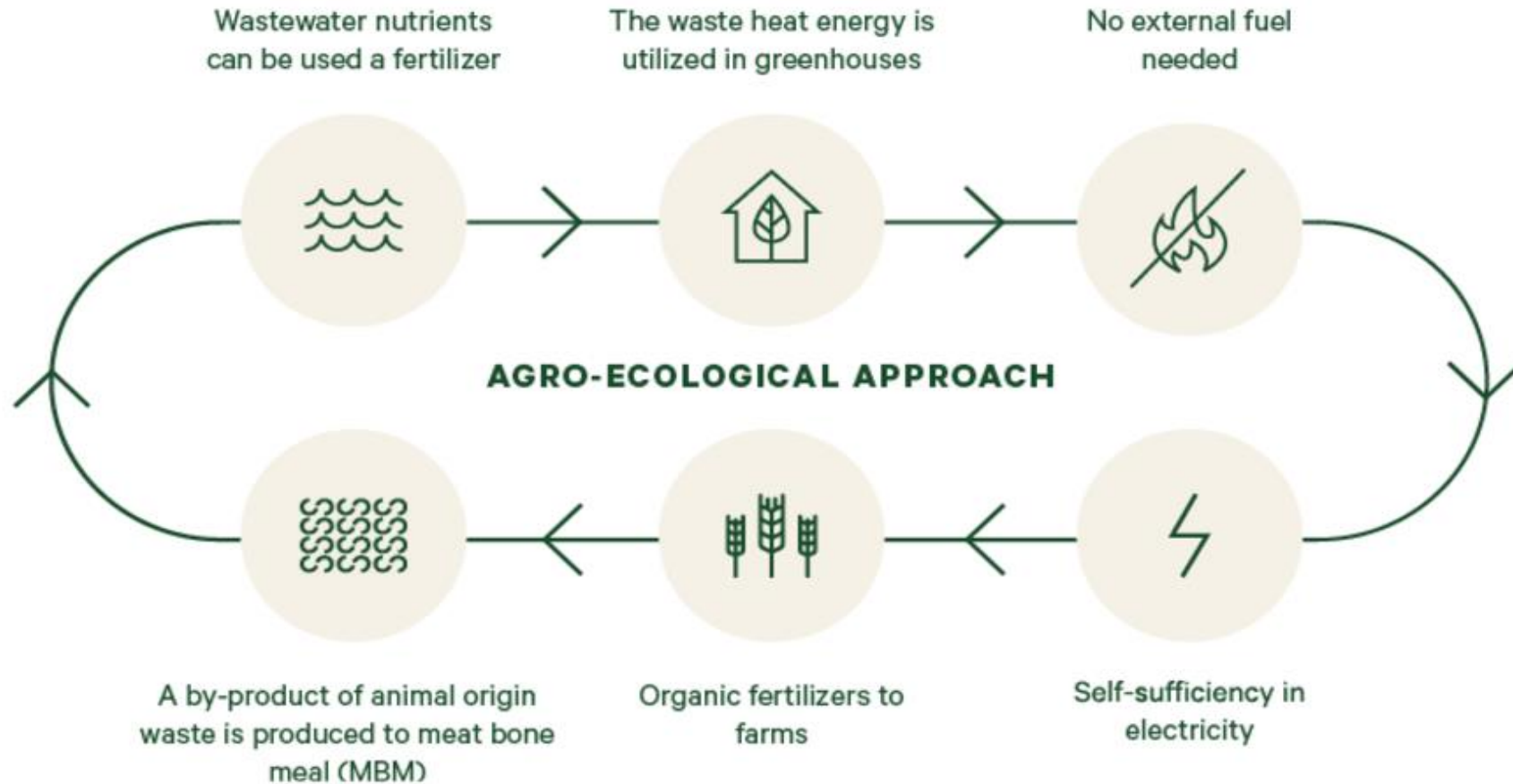
ANIMAL FAT  
FOR  
BIODIESEL  
PRODUCTION  
27.000 TONS

FERTILIZER  
6.000 T

FEED  
29.500 T

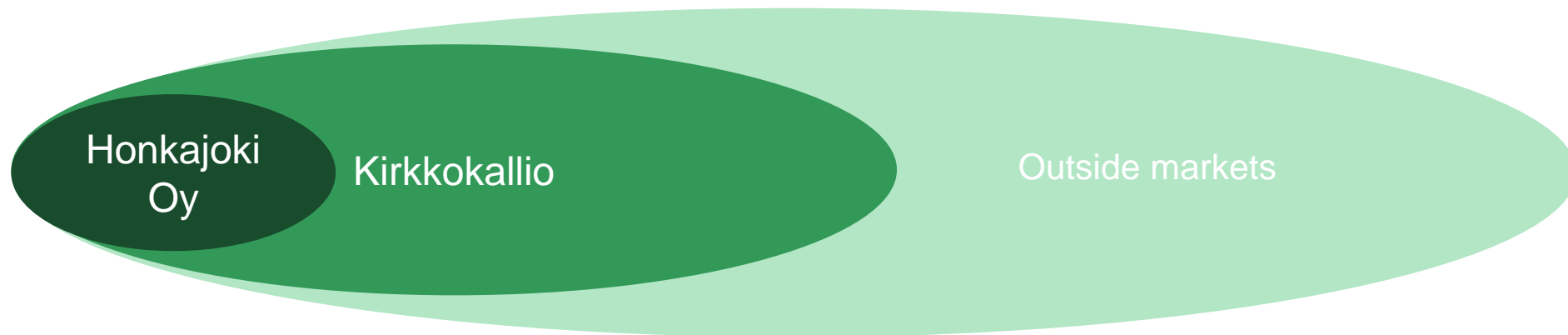
ENERGY  
7.000 T

# Honkajoki circular economy approach



# 3 Levels in Circular Economy

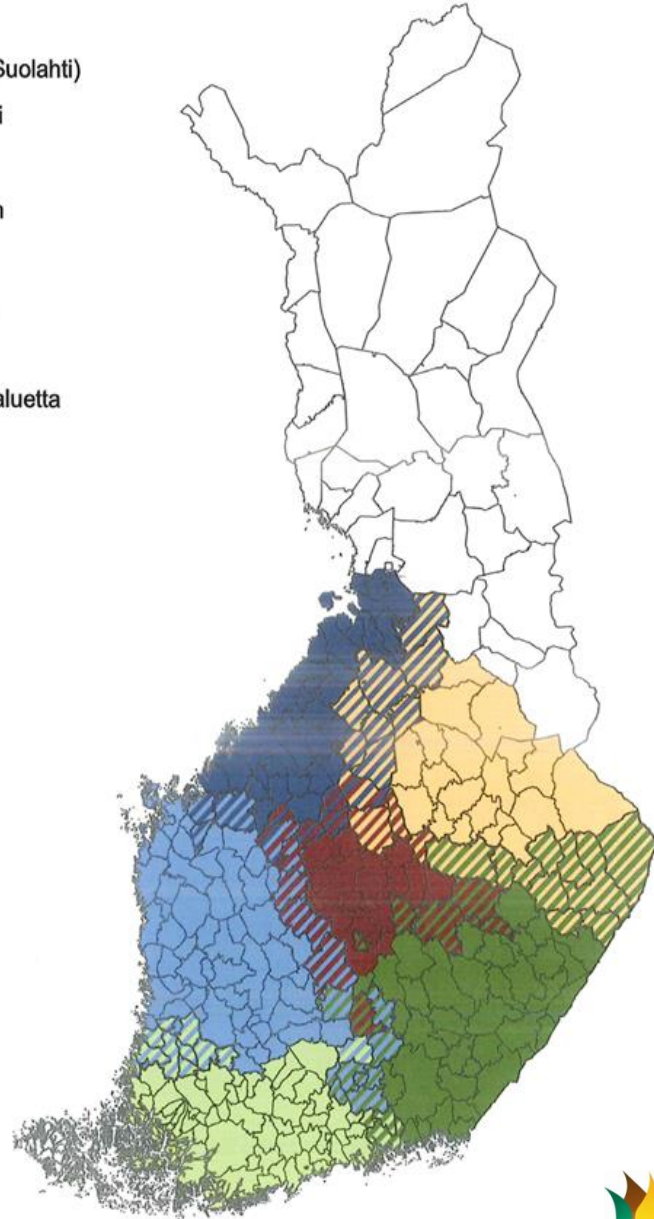
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# Honkajoki Oy:n keräilyalueet

## Keräilyalue

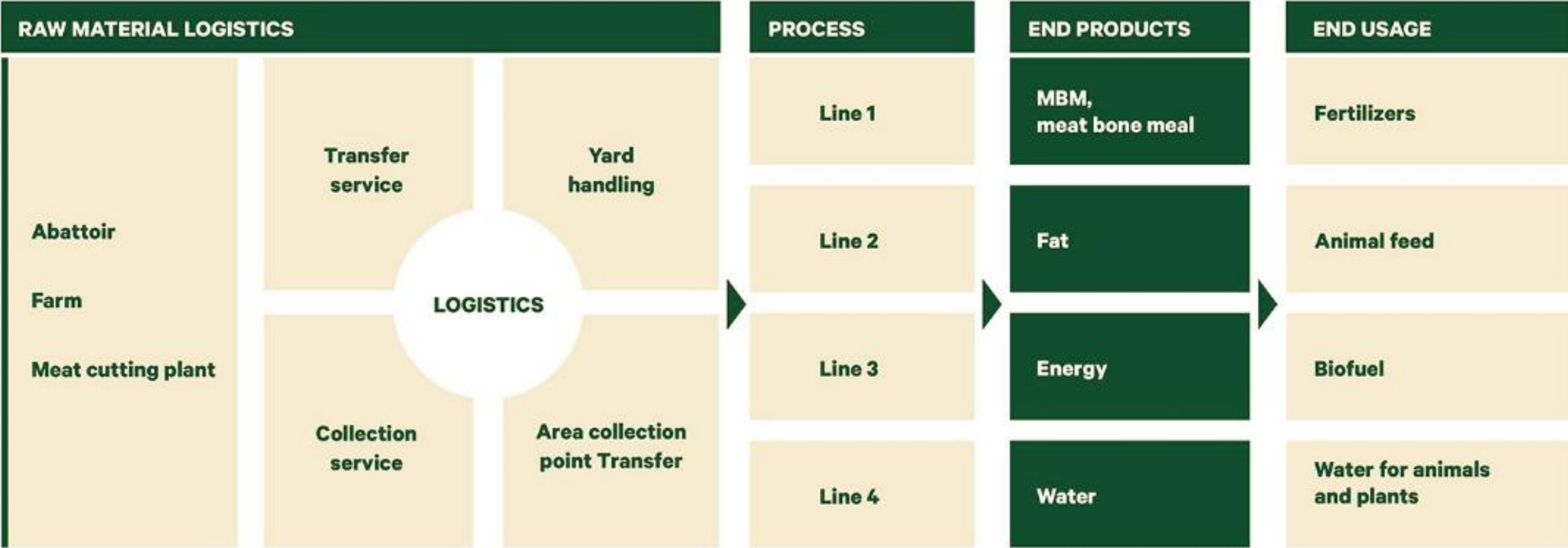
- Central (Suolahti)
- Honkajoki
- Iisalmi
- Kaustinen
- Mikkeli
- Vampula
- ei keräilyaluetta



## Fallen stock collection

- 5 areas
- 5 collection centers

# DELIVERY CHAIN



**Efficient logistics guarantees the quality of raw materials**

**Process lines according to raw materials and demand**

**Growth by Recycling**

## FINDEST PROTEIN OY

- Category 3 plant
- 20.000 t/a
- Personnel 15
- Turnover 3,7 M

## HONKAJOKI OY

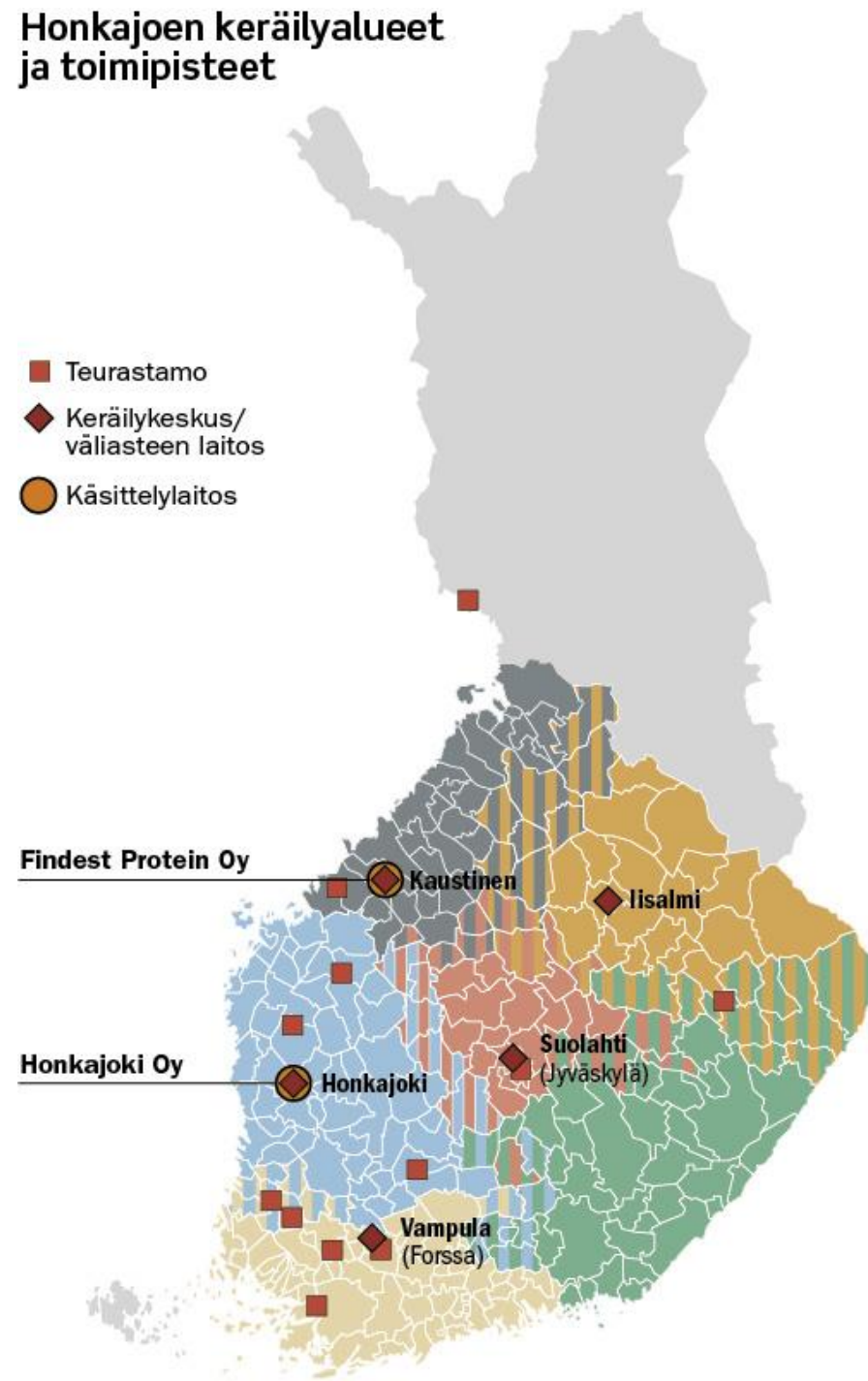
- Category 3 PAP, poultry 68 000 t/a (start 11/2017)
- Category 1 plant 28.000 t/a
- Category 2 plant 56.000 t/a
- Category 3 Ruminant PAP, 16.000t/a (start 11/2017)
- Personnel 60
- Turnover 33 M€ (Budget 2018 42 M€)

## Honkajoen keräilyalueet ja toimipisteet

- Teurastamo
- ◆ Keräilykeskus/  
väliasteen laitos
- Käsittelylaitos

Findest Protein Oy

Honkajoki Oy



## Category 1 (Highest risk)

- Specified risk material related to TSE or Scrapie
- Died or terminated bovines
- Bovine spinal cord or brain
- Any material that has been in contact with category 1 material

## Category 2

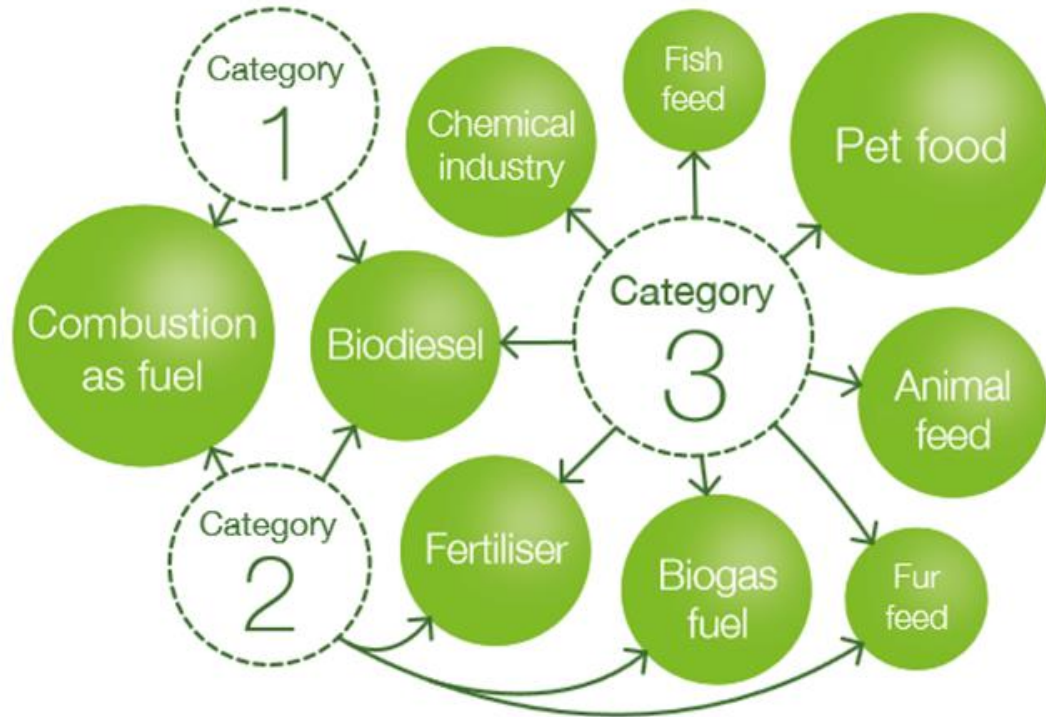
- Animal products that are not suitable for human consumption
- Died or terminated animals other than bovines.

## Category 3 (Low risk)

- Ante and post mortem inspection accepted material such as bones, hoofs, hides, intestines, organs, fat tissue etc.
- Animal by-products without any specific disease risk (hair, horns, feathers, egg shells)
- Former food stuff, food waste

# The products of rendering

Rendering produces two main products, fat (known as tallow) and protein, how this material is further used depends on the risk category:



## Combustion as fuel

Solid fuel for power stations and cement kilns – equivalent to 1 million tonnes of coal but with a much lower carbon footprint.



## Biodiesel

Rendered fat is blended into the diesel sold at fuel stations across the EU



## Pet food

PAP is a key component of dry pet foods and is a substitute for vegetable proteins like soya beans which we import from outside the EU.



## Fish feed

PAP is an ingredient of aquafeed – particularly for commercially grown carnivorous fish like salmon. PAP has better nutritional properties than vegetable proteins for fish and can also substitute for wild-caught fish in feed rations.



## Chemical industry

Rendered fat is the raw material for oleochemicals (fats and lipids). We use these as ingredients for a range of household goods such as cosmetics, lubricants and cleaning products.



## Animal feed

Processed Animal Protein can form part of the feed rations of omnivorous and carnivorous animals – as long as there is no intra-species consumption. Category 3 fat is a feed ingredient because of its binding, preservative and nutritional properties.



## Fertiliser

Animal by-products make fertiliser that is rich in phosphorous – a vital element for plant growth and photosynthesis, it contains good quantities of nitrogen and various micro-nutrients.



## Biogas

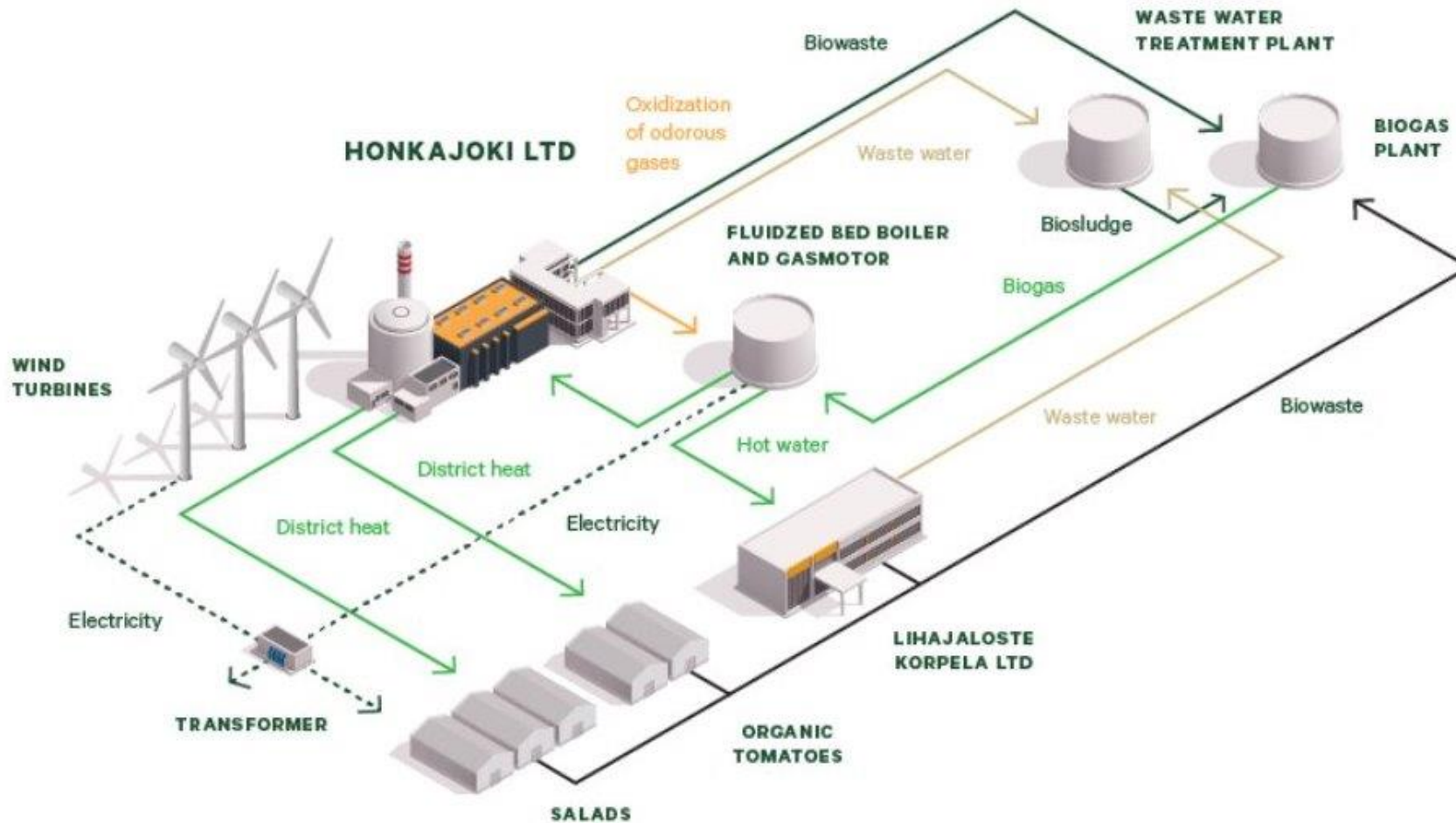
This fuel can substitute for fossil gas used for heating and electricity generation.

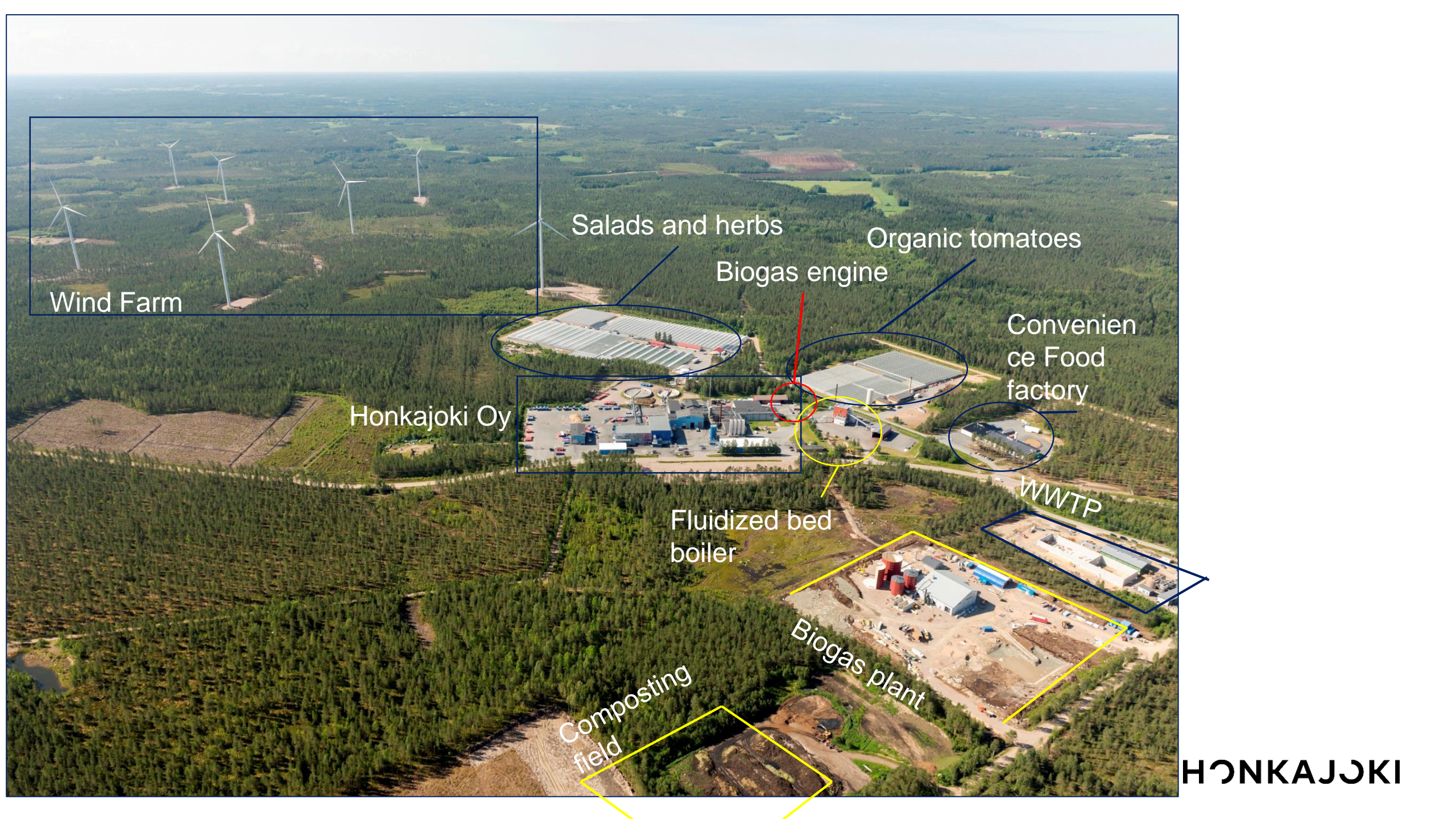


## Fur feed

Food for the fur production industry. When the by-products of fur animals are processed they are category 1 for long-term disease management.

# Kirkkokallio agro-ecology





Wind Farm

Salads and herbs  
Biogas engine  
Organic tomatoes

Convenience Food factory

Honkajoki Oy

Fluidized bed boiler

WWTP

Biogas plant

Composting field

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# Kirkkokallio site -companies

Honkajoki Oy	- Rendering Plant
Honkatarhat Oy	- Greenhouse
KKK-Vihannes Oy	- Greenhouse
Taalerin tehdas	- Windmill Park
Gasum Oy	- Biogas Plant
Honkajoki Oy	- Waste Water Treatment Plant
Vatajankosken Sähkö Oy	- Power Station (steam)
Korpela Oy	- Meat Processing Plant

**THANK YOU!**

**HONKAJOKI**

