

# Reed harvesting and latest machinery development in Estonia

Example from Kirsioja farm, Läänemaa, Estonia

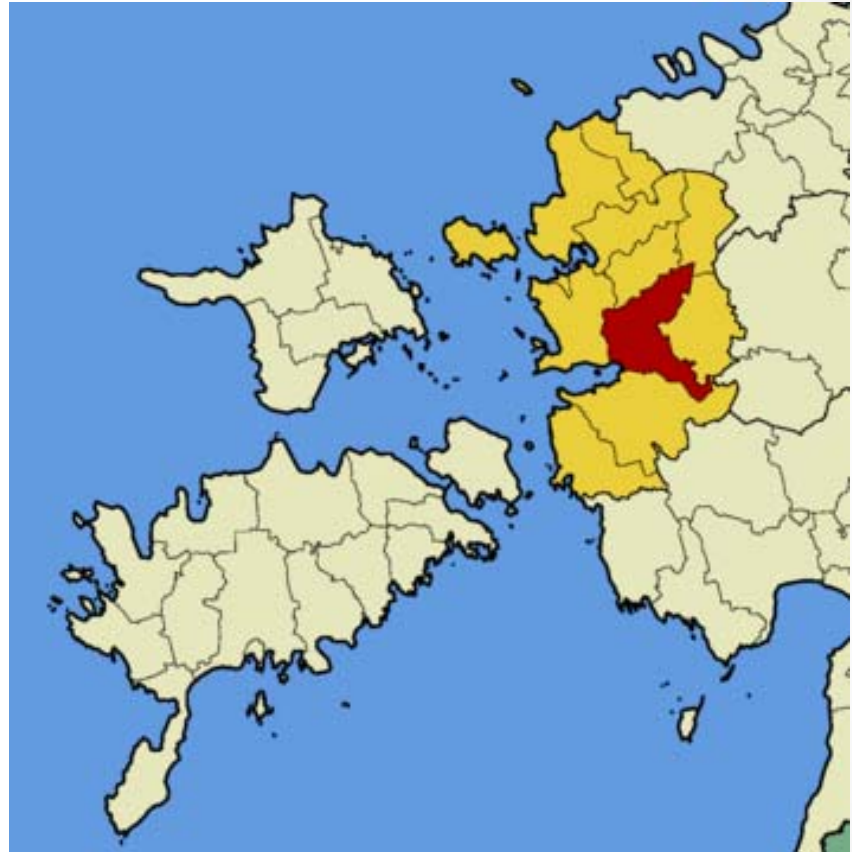
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# Where we are

Kirsioja farm is situated in Martna parish close to the Matsalu Natural Park;

Reed cutting areas;

1. Matsalu;
2. Silma Nature Reserve;
3. Noarootsi.



# Conditions

- Muddy sea shore;
- River deltas;
- Old, shallow lakes with thick vegetation;
- Water depth around 1 m.

## Conditions that build requirements for the machinery:

- Water (salty, fresh);
- **Mud, clay**, sand;
- Frozen reed combined with ice; (danger to inflatable tyre and boots);
- Cork ice (lasagne - like), sometimes up to 1 m thick;
- All kinds of building material brought to the shore, etc.



<http://bio.edu.ee/taimed/oistaim/proog.htm>

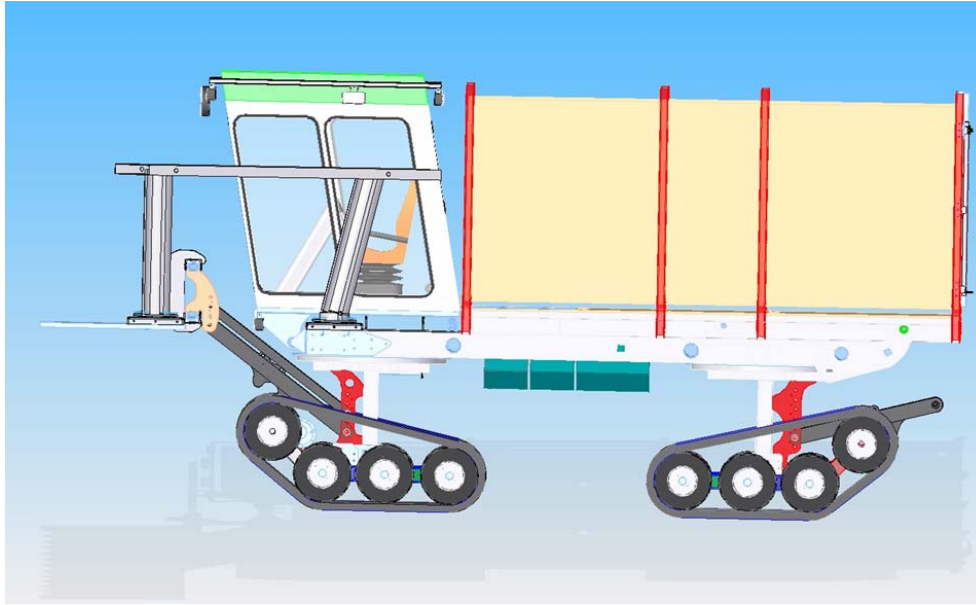
# Machine characteristics

- Should not break soil while turning (no two tracked machines);
- Good visibility for driver (seated high enough);
- Good to drive in at least 1 m water;
- Tilting platform for transporting reed and other materials;
- Rigid frame (not articulated);
- Should be able to use for many other purposes (for cleaning river deltas, for vegetation crushing, etc.);
- Good sealing of greased points and hydraulics;

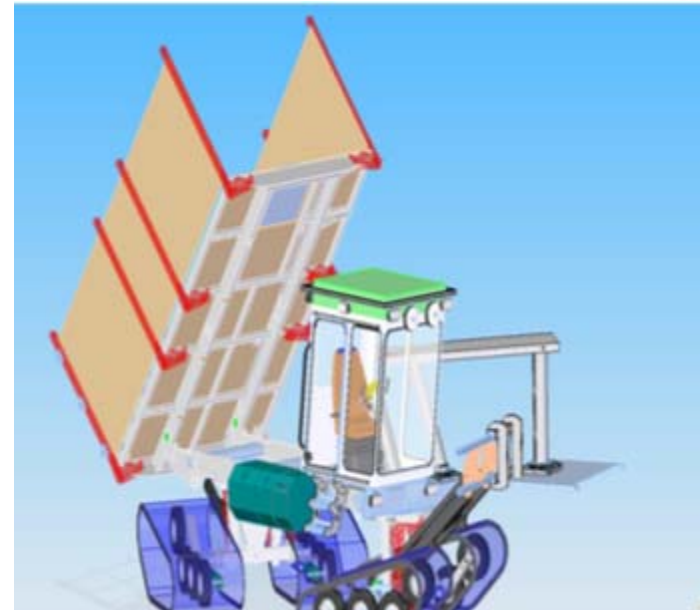


**Multi purpose four tracked crawler machine**

# MülkaMeister



- Four tracks, two work in pairs;
- Track pairs can be steered separately, also “dogrun”;
- Rigid frame;
- Good to drive in 1,2 m water;
- Tilting platform;
- Three-point fastenings front and back.



# Technical characteristics

## Dimensions:

Length: 5300 mm;  
Width of undecarriage with 900 mm tracks 2500 mm;  
without 1700 mm;

Max. height 3000 mm.  
Track width 900 mm up to 1500 mm

## Weight:

1700 kg, incl. 120 l hydraulic oil and 120 l diesel;

## Ground pressure:

Empty: 52 g/cm<sup>2</sup>  
Fully loaded: 92 g/cm<sup>2</sup>

## Travelling speed:

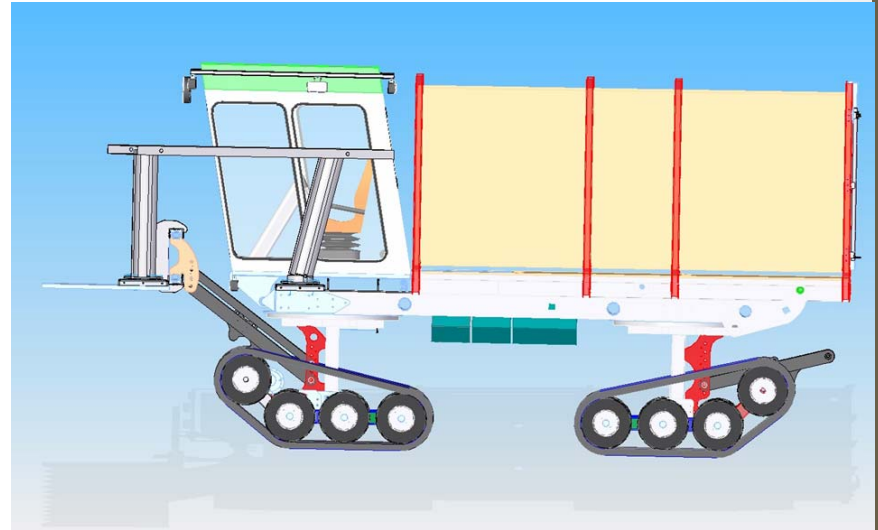
F - B: 25-0-25 km/h, stepless

## Engine:

Mercedez-Benz 2,2 CDI 105 kW (140 hp) diesel,  
Fuel consumption up to 15 l/h,  
Water cooled.

## Hydraulics:

Main pump SauerSundstrand 0-90 cm<sup>3</sup>/p, hydrostatic, closed loop.  
Pump NS 50, for extras;  
Pump NS 32, Steering, platform tilting.



# Extras and possible use

- 3.0 m header for reed cutting + conveyor;
- 3.0 m vegetation (brushwood) crusher, combined with collecting system if needed;
- Snow blade, tilting;
- Grapple and digger;
- Mud pump;
- Log lift;
- Preheater for engine and hydraulic oil;
- “Dogrun” for diagonal driving.
- Can be used for working in fields and forest where soft soil does not allow wheeled or two tracked machines.
- Customer based special features can be designed.

# Thank you!

## Questions?

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