

Finishing grass and spreading nutrient fiber -experiment on Mustiala research and teaching farm in 2020-2021

1. Cultivation procedures on field Lamminranta. Field can be found from: <https://mustialanluomutila.fi/en/block-3-lamminranta/>

The following cultivation procedures were made on field Lamminranta in 2020-2021:

- 3.8.2020 Soil improvement fiber Soilfood 40 tn/ha (1.8 ha area)
- 4.8.2020 Disc harrowing twice for whole area
- 14.8.2020 Disc harrowing once for whole area
- 1.9.2020 Disc harrowing once for whole area
- 1.-2.9.2020 Plowing, west side
- 2.9.2020 Sowing cultivation
- 2.9.2020 Sowing winter wheat

- 16.5.2021 Fertilizer, slurry cow manure 20 tn/ha (38-10-64/ha)
- 25.5.2021 Harrowing weeds and sowing cover crop, white clover 2,5 kg/ha
- 24.7.2021 Threshing, yield 16 600 kg, 3739 kg/ha
- 7.8.2021 Collecting straws

Figure 1 shows the fiber spreading area (the lower part of the field), which was done in the fall of 2020, as well as the plowing and disc harrowing areas in the fall of 2020. The disc harrowing was done with the cultivator in picture 2.



Figure 1: Different management techniques on the map.



Figure 2: Disc harrowing in Autumn 2020

2. Observation and conclusions

In figure 3, the winter wheat growth after sprouting. Photo was taken from the west on October 2, 2020. The fiber application area is to the right of the black line. The spreading of the fiber was not visible in the growth in autumn. The boundary between plowed and disk-cultivated can be seen in the middle of the block as a transverse boundary between a dark and a lighter area.



Image 3: Drone picture 2.10.2020

In the middle of figure 4 is the border of disc harrowed and plowed as photographed on May 25, 2021. In the plowed area, to the right of the post, there are significantly fewer dandelions.



Figure 4. Boundary of different management techniques. Plowed area on the right and disc harrowed area on the left.

In Figure 5, the block photographed with a drone on July 15, 2021. In the harvest year, scentless chamomile was abundant in the area, figure 6. The fiber did not seem to have an effect on the presence of scentless chamomile.



Figure 5: Drone picture 15.7.2021.



Image 6. Winter wheat growth before threshing.

Figure 7 shows the winter wheat crop map for the fall of 2021. The white stripe in the upper left part of the block is the test area. As an extension of the white area on the right is the area where no sludge was applied. ***The application of fiber did not seem to have an effect on the yield level of winter wheat.***

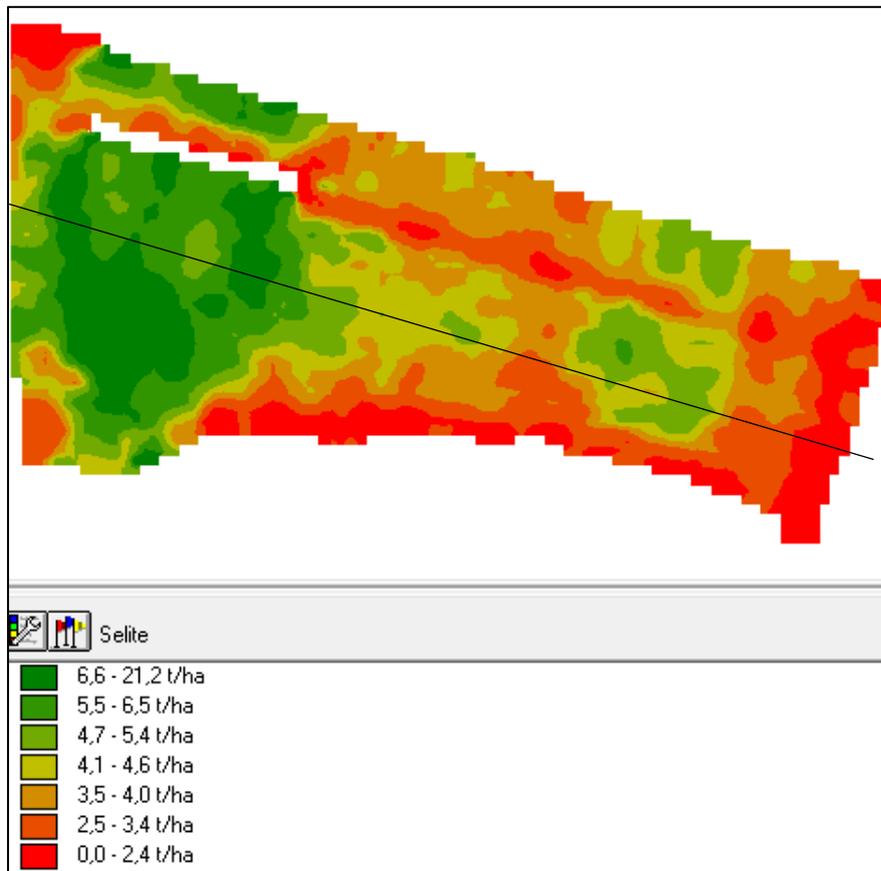


Figure 7. Yield map from threshing machine.