



HELSINGIN YLIOPISTO



**Eesti Maaülikool**  
Estonian University of Life Sciences



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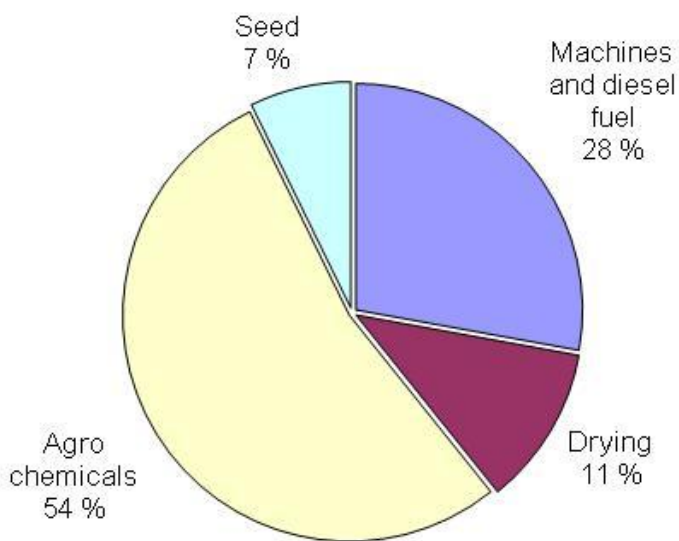
# Energy Positive Farm - ENPOS

## Energy saving strategies – field work

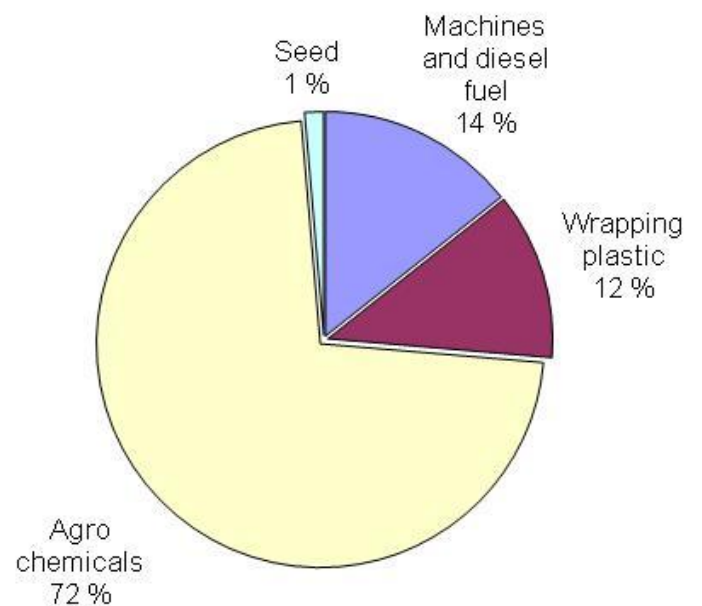
ENPOS Seminar - Energy use in plant production – Otepää 20 – 22 January 2010

# Facts to keep in mind!

**Barley, 11.6 GJ/ha total**

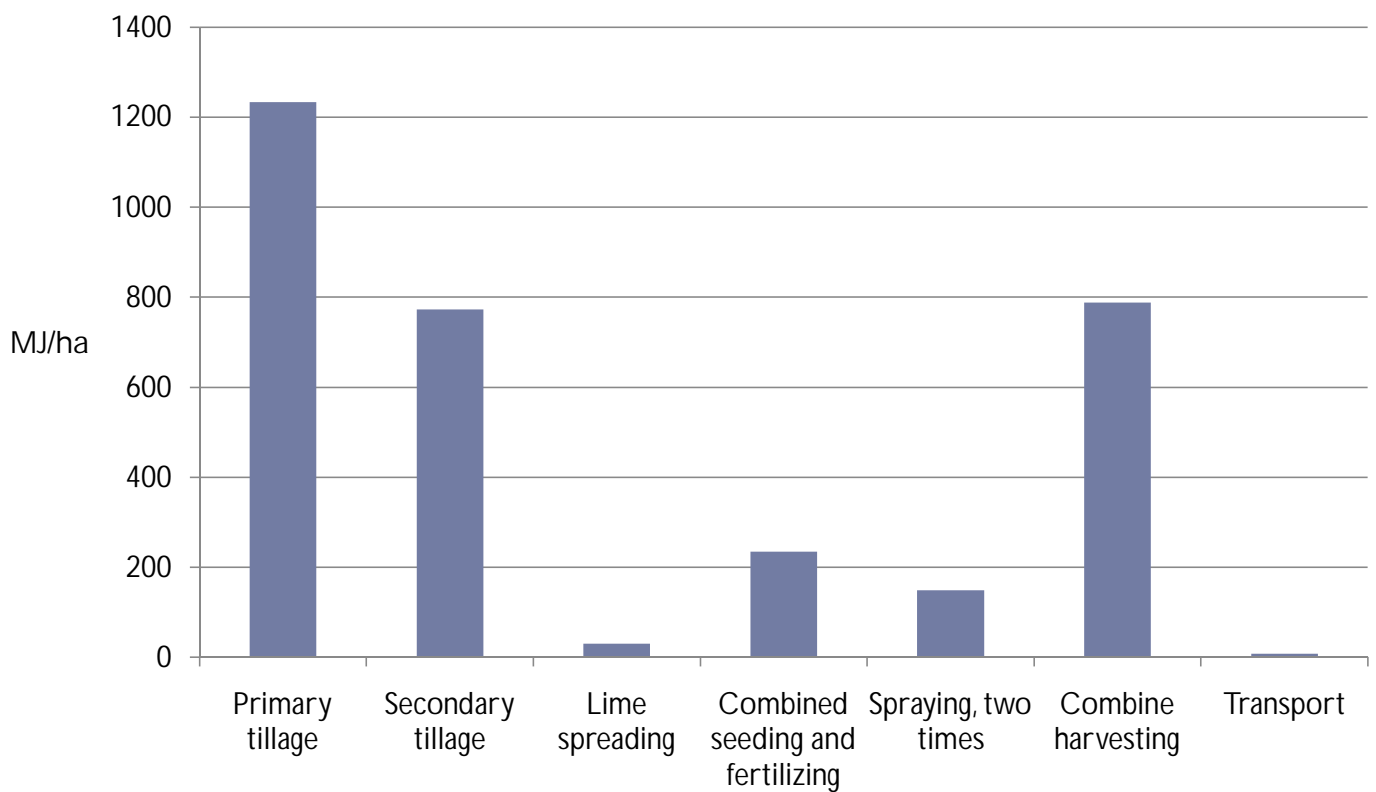


**Lay for silage, 15.5 GJ/ha total**

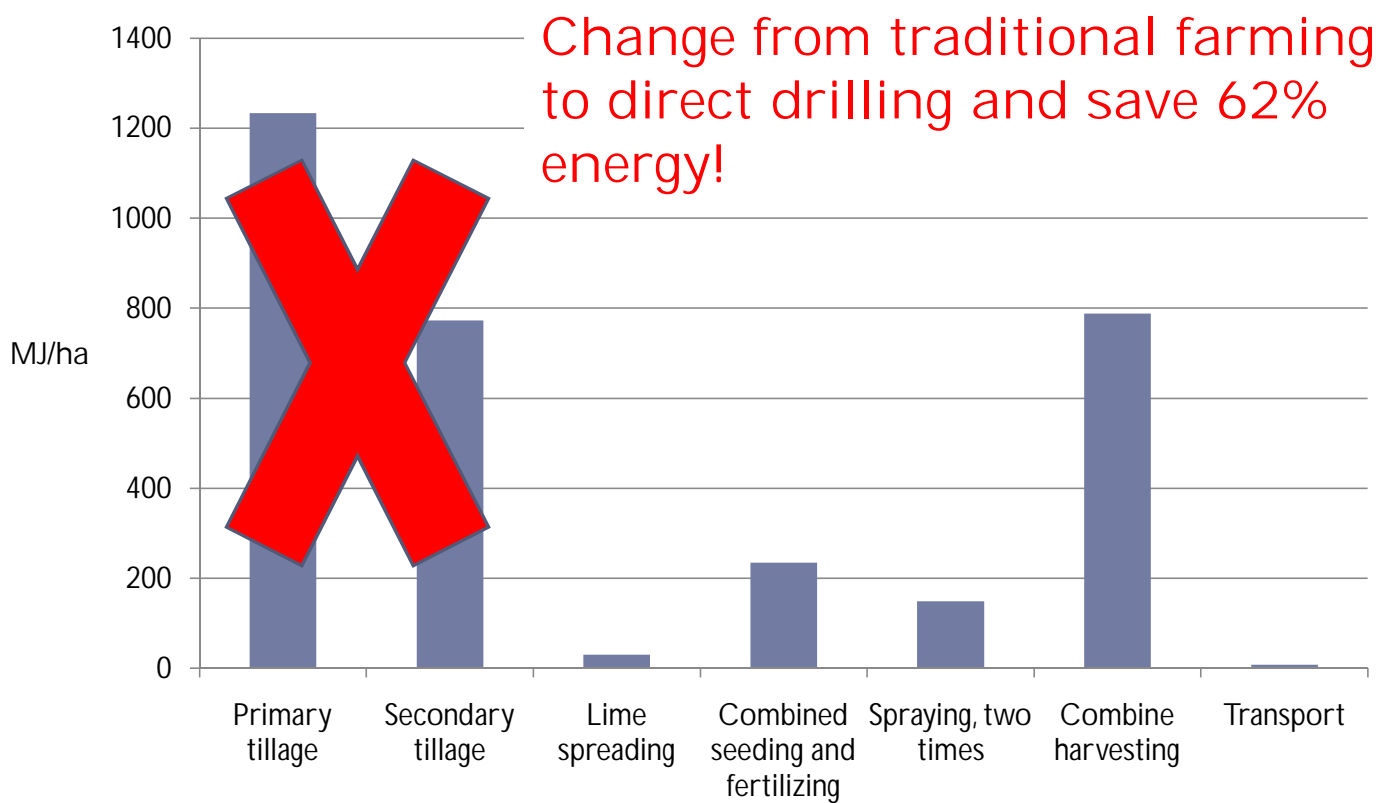


# Energy consumption for field work in barley cultivation

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# Proposal to energy saving strategy



# From traditional tillage to minimum or no-tillage

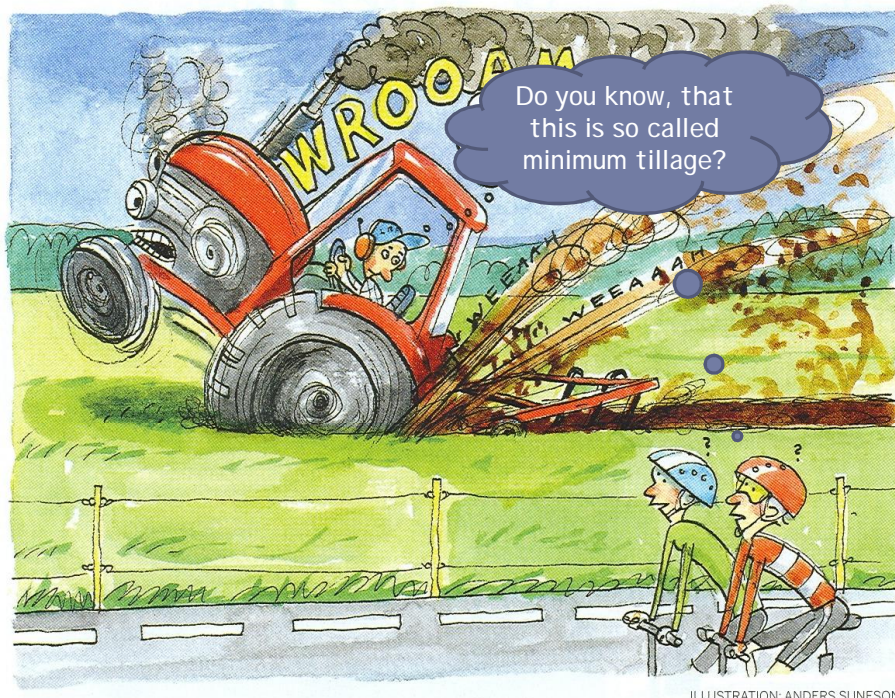
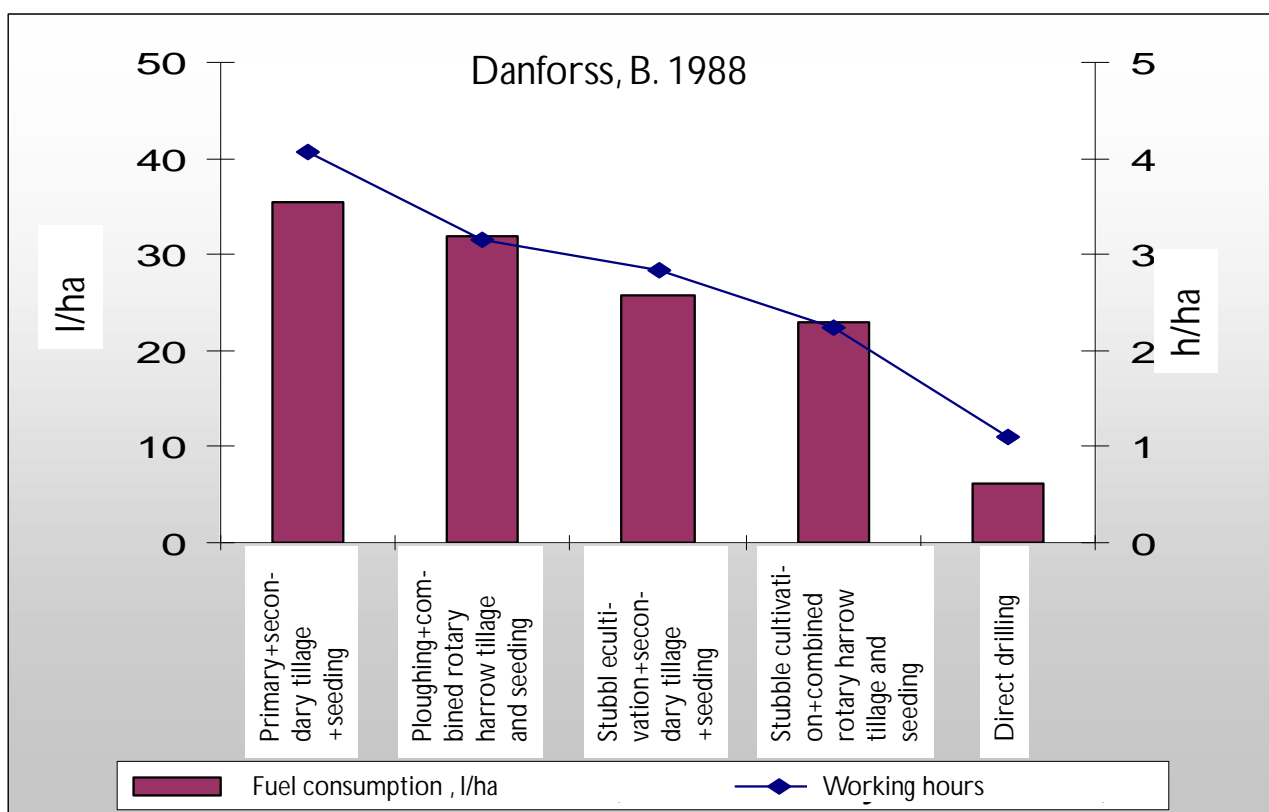


ILLUSTRATION: ANDERS SUNESON

## **sunesons synpunkt**

► Det blir inte automatiskt reducerad jordbearbetning bara för att man har ställt undan plogen. Bearbetar man djupt med en kultivator eller kör många gånger kan det bli tvärt om, liksom en plog rätt använd mycket väl kan passa i ett reducerat system.

# Fuel consumption and work requirement of different tillage and seeding combinations



## Finnish experiences from direct drilling

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- ▶ Over ten years experience
- ▶ Saves time
- ▶ Saves energy
- ▶ Can be used on all soil types
- ▶ Add seed rate 10% compared to traditional
- ▶ Soil adapts to zero tillage in a few years
- ▶ Some problems with weeds, but can be solved with correct plant protection strategy
- ▶ Yield level can drop in the first years but in a long yield level can even increase



Thank you for your patience  
during these three days!





This material has been produced in ENPOS project. ENPOS is acronym for *Energy Positive Farm*.

The project partners are

- University of Helsinki, department of Agricultural Sciences – Agrotechnology
- MTT Agrifood Research Finland - Agricultural Engineering
- Estonian University of Life Sciences

Project home page is at <http://enpos.weebly.com/>

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