Comparative costs and minimum extent of utilization

Costs of internal mechanization = **Costs for service provider**

Fixed costs + Variable costs + Wage claim = Billing rate

$$\frac{41.000\ €/y.}{X\ ha/y.} + 41{,}10\ €/ha + 8{,}40\ €/ha = 125\ €/ha$$

Additional disadvantage „Timeliness costs“

Additional drying costs for 20% of the yield because of untimely harvest (Yield = 70 dt/ha, Drying costs= 1,60 €/dt)

20% × 70 dt/ha × 1,60 €/dt = 22,40 €/ha

Minimum extent of utilization:

$$X\ ha/y. = \frac{41.000\ €/y.}{(125\ €/ha + 22{,}40\ €/ha) - (41{,}10\ €/ha + 8{,}40\ €/ha)} = 418{,}8\ ha/y.$$

20% × 70 dt/ha × 1,60 €/dt

Comparative costs and minimum extent of utilization

Costs of internal mechanization				=	Costs for service provider
Fixed costs	+ variable costs	+ Wage claim		=	Billing rate
41.000 €/J. / X ha/J.	+ 41,10 €/ha	+ 8,40 €/ha		=	125 €/ha

Additional technological disadvantage:

Due to the longer operating life of the machine compared to the service provider, (= on average older machine) internal mechanization is causing higher losses of 0.5% of the yield compared to the service provider.

(Yield = 70 dt/ha, Grain price = 18 €/dt)

Minimum extent of utilization (ha/year) ???