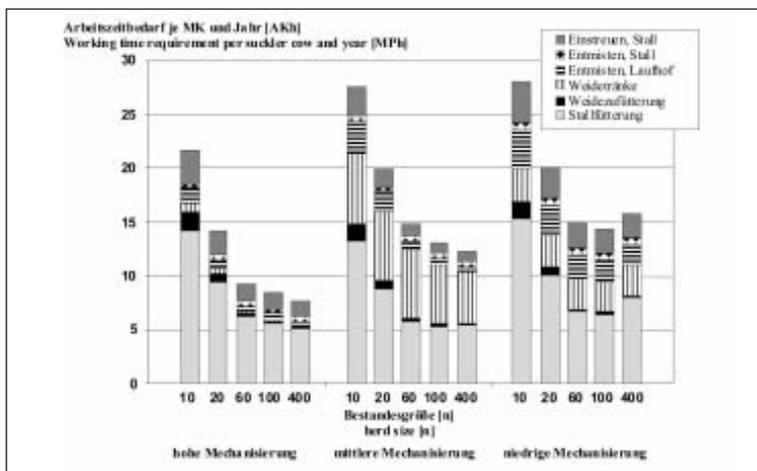


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Working Time Requirements in Suckler Cow Husbandry

Figures on working time requirements available for suckler cow husbandry are no longer up-to-date and do not take into account dramatic changes in the basic conditions of agricultural practice. In the ART project entitled „Working Time Requirements in Suckler Cow Husbandry“, part of the KTBL Working Programme Calculation Standards, working time requirement figures were determined for routine tasks, special tasks and animal monitoring in suckler cow husbandry. Existing data for management tasks was utilized. The results presented are based on a procedural comparison of model farms with different herd sizes and mechanization levels.

Fig. 1: Comparison of working time requirements for routine tasks with 3 mechanization levels; results from model calculation, depending on herd size (MK = suckler cow; AKh = man hours required)



The collection of the working-times takes place on work-element level through direct measurements during work-observations of practice farms. The individual work-elements and work-routine sections are established for each work (part) process with the respective measuring points. The times are grasped per element / section over a Pocket-PC with time-recording software afterwards.

Work-elements or work-routine sections partially appear with several work-processes, can also be assigned specifically to operations, however. Among the first-named ones are work-routine sections of „going without load“ and „climbing on tractor and starting“. More final are work-routine sections like for example „feeding with feed mixers (self propelled)“ and „submitting Pour-

On, animal at feeding rack.“

Furthermore, all accruing influencing factors, which are important for the plan-time-preparation, are grasped on the farms (number of animals, distances, quantities, frequencies).

The produced plan-times are processed in a model calculation system, which allows calculating an individual practice farm with low input.

Influencing factors of model farms

The working-time requirement in the suckler-cow husbandry consists of the processes feeding (house feeding during winter period + possibly pasture feeding), dung removal (house and yard), distributing straw (house

Table 1: Influencing factors of the model farms, three mechanization levels

Work procedure	high mechanization	medium mechanization	low mechanization
house feeding pregnant cows	silages – FS/FMW, straw – QB/FMW	silages – RB/rack, straw – QB/rack	silages – FL/feeding table, straw – QB/feeding table
suckler cows	silages – FS/FMW, hay – RB/FMW	silages – RB/rack, hay – RB/rack	silages – FL/feeding table, hay – RB/feeding table
additional feeding of suckling calves	hay – RB/feeding table, KF – feeding table	hay – RB/feeding table, KF – feeding table	hay – lose/by hand, KF – feeding table
additional feeding on pasture	hay – RB/rack, lick stone	hay – RB/rack, lick stone	hay – RB/on ground, lick stone
pasture drinking trough	stationary installation	mobile installation	scuttlebutt (mobile)
dung removal – run yard	stationary	mobile	by hand
dung removal – house	tractor, grap pliers	tractor, grap pliers	yard tractor, grap pliers
distributing straw – house	RB, FVW	RB, tipping	RB, by hand
special tasks management	e. g. daily operation	weekly operation	weekly operation
	discussion, regular advanced training	discussion, regular advanced training	discussion, rarely advanced training

FS = clamp silo, FMW = feed mixer, RB = round bale, QB = square bale, FL = front loader, KF = concentrate, FVW = feed mixer with distributor

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Keywords

Suckler cow husbandry, working time requirement, routine tasks and special tasks

Work procedure (shares of animals)	high intensity	medium intensity	low intensity
cows			
resetting earmarks (10%)	1x yearly	1x yearly	1x yearly
taking of blood samples (100%)	1x yearly	1x yearly	1x yearly
vaccinating (100%)	2x yearly	1x yearly	1x yearly
parasites care (PourOn) (100%)	2x yearly	1x yearly	1x yearly
pregnancy checking (5%)	5 procedures yearly	4 procedures yearly	3 procedures yearly
uterus therapy (10%)		after birth (cow in house)	
claw care (100%)	2x yearly	1x yearly	every 2 years
treatment (10%)		treating directly,	
assistance at births (5%)		50% on pasture	
calves, followers			
resetting earmarks (100%)	every calf	every 2 calves	every 3 calves
castration (50%)	foreign task	foreign task	own task
treatment (10%)		treating directly,	
changing, heifer and yearl. bull	1x yearly	1x yearly	1x yearly
controls			
controlling, sick cows (10%)	3x daily	2x daily	1x daily
controlling sick calves (10%)	3x daily	2x daily	1x daily
controlling of group boxes	2x daily	2x daily	1x daily
controlling drives pasture	2x daily	1x daily	3x weekly
droving / loading			
selling breeding animals (10%)		1 animal every procedure	
buying breeding animals		1 animal yearly	
droving, pasture - pasture (100%)	every herd 15x (2x monthly)	every herd 7x (monthly)	every herd 7x (monthly)
droving, house - pasture (100%)		1x yearly	
droving, pasture-house, loading (100%)		1x yearly	
housing herd for treatment	4x yearly	4x yearly	2x yearly
assembling, striking droving ways	20x yearly	12x yearly	10x yearly
assembling, striking corral	1x yearly	1x yearly	1x yearly
house			
cleaning boxes	1x yearly	1x yearly	1x yearly
clearance tasks	6x yearly	3x yearly	1x yearly
repairs	10x yearly	3x yearly	1x yearly
pasture			
looking for calves on pasture (10%)		during control-driving on pasture	
looking for mother of newborn calve (10%)		during control-driving on pasture	

Table 2: Influencing factors for the special tasks of the model farms

or lying place on winter-pasture), special tasks and management.

For the calculation of the total working-time requirement it is assumed that the animals are kept in littered loose houses with one area and yard for 150 days and on pasture during 215 days. Table 1 shows the influencing factors of the model farm for the three mechanization levels.

The dung will be removed from the house after beginning of pasture period annually once. 10 kg of straw per animal are distributed daily. The manure removal from the yard during the housing period takes place daily by using mobile cleaning and twice daily by using stationary cleaning units. For feeding during the housing period, four rations are subordinated: pregnant cows, suckler cows (beginning suckling period), suckler cows (from middle of suckling period) and additional feeding of suckling calves. Additional feeding on pasture takes place during 28 days (14 days each at beginning and at the end of pasture period). Table 2 shows the influencing factors subordinated with the mo-

del calculations for the special works. Three intensity levels are considered.

Results for the model farms

The results of routine tasks from the model calculations are presented in form of a pro-

cedure comparison in Figure 1.

The comparison of procedures shows that working-time can be saved with higher mechanization. In the procedure with the lowest mechanization level, the gradual decreasing effect tilts from a herd size of approximately 150 suckler cows. Above this herd size, it should be thought about a procedural change with higher mechanization. With the more highly mechanized procedures, savings effects still are possible also with bigger herd sizes. Through optimization-measures (for example a tractor with front loader only used for feeding, no daily preparation) still further work-time can be saved.

With special tasks and management activities, the gradual decreasing effect behaves exactly vice-versa like with the routine tasks, since it is assumed, that a farm with high mechanization level shows a high intensity also with special tasks and management activities (Fig. 2).

Conclusions

The working-time requirement in the suckler cow husbandry in routine-tasks essentially consists of feeding (house feeding, additional feeding on pasture, water supply on pasture) and distributing of straw. The management and with the special tasks the control-activities claims the second-biggest share of annual working time requirement per suckler cow.

Clear saving-possibilities are to be expected through procedural and organizational optimization-measures.

So rationalization and practicing effects can be better exploited e.g. by combining activities. Simultaneously, also working-time can be saved with it. Therefore in most suckler cow farms as many as possible special tasks are put on one day so that each cow must be caught and be fixed for several treatments only once.

Fig. 2: Comparison of working time requirements for special tasks and management with 3 mechanization levels; results from model calculation, depending on herd size

