

Ground level manual work

Task Description:

When working on ground level weeding, planting or harvesting a lot of ergonomic dilemmas occurs, including awkward work postures such as bent back, kneeling, squatting and stooping. These awkward postures are performed continuously over many hours a day.



Working on ground level with bent back, kneeling, squatting or crawling with the knees on the ground causes constant pressure on the back and knees.

Comments from the employee:

- 'After a days work, I often have aches in my knees and lower back'
- 'It is an uncomfortable crawling on the ground, my knees and dorsal feet gets sore'

MSD risks:

- Ground level work involves working below knee height.
- Bent back and twisted working postures.
- Continuously static load.

Exposed areas:

- Lower back / hips
- Neck
- Knees

Solutions:

- Manual work from / with working carts.
- The laying posture may cause shoulder/neck pain due to lifting the head. This can be prevented by head support.



Various types of machinery to improve working postures of manual work at ground level. The lying posture may decrease the load on the lower back and pressure on the knees.



Harvesting asparagus from cart to prevent stooped postures of the back and/or squatting or kneeling positions. This type of harvesting also prevents lifting and carrying tray of harvested vegetables.

Cabbagharvester – harvesting cabbage



Onionharvester – harvesting onion



Leekharvesting



Plantingmachine



Packing/ bundling



Comments from the employer:

- *'The technical solutions solves several ergonomic problems and they also improve the productivity'*

Comments from the ergonomist:

- *'Improved working posture of the back and reduced muscle load as a result of technical solutions'*
- *'Further research and development are needed to solve remaining problems during ground level work'*

Research references:

Lundqvist, P. 2004. The Scope of the Problem of Stooped and Squatting Postures in the Workplace. International Perspectives (Sweden). Conference on Stooped Postures in the Workplace. Oakland, California, U.S.A., 2004-07-29 --30, University of California, Davis

Lundqvist, P. 2004. Agricultural Interventions in Sweden. Conference on Stooped Postures in the Workplace. Oakland, California, U.S.A., 2004-07-29 --30, University of California, Davis

Photos: Johan Ascard, RJ-Maskiner and Karin von Schenck, ÖsterlenSparris, Sweden