

# AUTOMATIC MACHINES IN HORTICULTURE

# CHECKLIST



BAR Jord til Bord



# Preface

Agricultural Council for Safety and Health at Work, Farm to Fork, has published a guide to automatic machines. This provides information on how to include the working environment when purchasing, installing and using automatic machines in horticulture.

Agricultural Council for Safety and Health at Work, Farm to Fork, consists of representatives from the parties of the labour market and has been established according to the law on working environment. One of the Council's responsibilities is to inform and instruct about working environment conditions.

Agricultural Council for Safety and Health at Work, Farm to Fork, has formed the permanent committee Agriculture's Working Environment Committee. This committee deals with the working environment within the areas of agriculture, forestry, horticulture and landscape gardening. The committee's composition, objectives and tasks can be found on Agricultural Council for Safety and Health at Work, Farm to Fork's website: [www.barjordtilbord.dk](http://www.barjordtilbord.dk).

This checklist has been prepared by Agricultural Council for Safety and Health at Work, Farm to Fork, in cooperation with Knowledge Centre for Agriculture.

The Danish Working Environment Authority has read through this instruction and finds it in compliance with the law on working environment. The Danish Working Environment Authority has evaluated the instruction as it is, and has not dealt with whether it covers all relevant subjects within the various areas. We make reservations for the technological development.

For the Danish Industry Working Environment Council

Vagn Henriksen, 3F, The United Federation of Danish Workers

and

Johnny Ulf Larsen, Association of Employers in Horticulture, Agriculture and Forestry



# Checklist

This checklist is a practical tool for businesses planning to purchase new machines.

The checklist is primarily aimed at businesses within the horticultural area, but importers and suppliers may make use of the content with advantage, since part of the responsibilities lies with them.

According to Danish working environment legislation it is not allowed to start operating a machine unless it is safe. It is not enough that the supplier has declared the machine safe through documentation and CE-marking.

In the checklist you can find help to assess the conditions necessary during the purchasing, installation, and operation phases.

The checklist is a tool, which purchasers, or the group behind the purchaser, can use to chart working environment conditions that are decisive for formulating the specification of requirements to the supplier as well as requirements for installation, repairs, use and service.

The checklist has been found in the guide for purchasing, installation and use of "Automatic machines in horticulture". The guide informs the owner, purchaser, and user about the amount of focus needed in relation to the working environment surrounding automatic machines in order to prevent health hazards for those operating the machines.

The guide can be found on [www.barjordtilbord.dk](http://www.barjordtilbord.dk)

It deals with the issues that user and purchaser need to take into consideration when purchasing new machines.



# Checklist – Purchase

Example of a checklist for use before purchasing a new machine for the horticultural business.

## Checklist for use before purchasing a new machine for the horticultural business

Machine	Brand	Type	Filled in by	Date

## Considerations before purchasing a new machine

Take your starting point in the business' experience, requests, WPA (Work Place Assessment), purchasing policy and working environment policy.

	More knowledge wanted	Comments, ideas and requirements for the new machine
<p>1.0 GENERAL</p> <p>1.1 Does your business have a plan for purchasing?</p> <ul style="list-style-type: none"> <li>- Distribution of tasks and responsibility</li> <li>- Resource plans and budgets</li> <li>- Information within the business</li> <li>- Company contracts</li> <li>- Involvement of external competencies</li> </ul>		
<p>1.2 Does your business have a plan for the working environment in the WPA?</p> <ul style="list-style-type: none"> <li>- For change of systems and organisation.</li> <li>- Praxis for use of the safety organisation.</li> <li>- Involvement of employees for use of existing resources.</li> </ul>		
<p>1.3 Are the operators involved in the purchase?</p> <ul style="list-style-type: none"> <li>- Involve affected employees.</li> <li>- At least those who will operate the machine.</li> <li>- And those with practical experience.</li> </ul>		
<p>1.4 Can the machine be viewed in operation in another business?</p> <ul style="list-style-type: none"> <li>- Supplier's list of references</li> <li>- Seeing the machine in operation can show conditions that could not be predicted</li> <li>- Learn about the experiences of other users</li> </ul>		
<p>1.5 Does introduction of new technology influence organisation and allocation of resources?</p> <ul style="list-style-type: none"> <li>- Training for new work assignments.</li> <li>- Changes in routines.</li> <li>- Training for new work processes.</li> <li>- Freeing resources.</li> </ul>		



	More knowledge wanted	Comments, ideas and requirements for the new machine
<p>2.0 MACHINE SAFETY</p> <p>2.1 Is the machine CE-marked and in compliance with...</p> <ul style="list-style-type: none"> <li>- The Danish Working Environment Authority's notice on The design of technical aids</li> <li>- The Danish Working Environment Authority's notice on Use of technical aids</li> </ul>		
<p>2.2 Is an emergency stop for the machine necessary?</p> <ul style="list-style-type: none"> <li>- Where should this be placed appropriately?</li> <li>- Who is responsible for mounting and maintaining this?</li> </ul>		
<p>2.3 How does the steering system work and who is responsible for connecting the machine and responsible for testing? Supplier, buyer or user?</p>		
<p>2.4 Is there a user manual in Danish with understandable information about installation, operation, maintenance, cleaning and repairs?</p>		
<p>2.5 Er der farlige dele, og hvilke beskyttelsesanordninger leveres?</p>		
<p>3.0 NOISE</p> <p>3.1 Does your business have a policy for noise?</p> <ul style="list-style-type: none"> <li>- does the supplier specify the machine's noise level.</li> <li>- No employees may be subjected to a noise level over 80 dB(A) calculated over an eight hour working day.</li> <li>- Hearing protectors must be used if the noise level exceeds 80 dB(A).</li> </ul>		
<p>3.2 Have you made an evaluation of acoustics, noise and noise damping?</p> <ul style="list-style-type: none"> <li>- Many hard surfaces increase the noise level.</li> <li>- Can the machine cause noise problems other places in the business?</li> <li>- Can the machine be delivered with sufficient noise damping?</li> </ul>		
<p>4.0 ERGONOMICS</p> <p>4.1 Can physical strain be alleviated with the machine?</p> <ul style="list-style-type: none"> <li>- Some machines can be delivered/improved in order to make the operator's work less taxing and consist more of supervision and control.</li> </ul>		
<p>4.2 Is it possible to work manually in proper working positions with the new machine?</p> <ul style="list-style-type: none"> <li>- It is important that the operator can maintain the right working positions in order to avoid unnecessary strain and wear.</li> <li>- Can the height be adjusted?</li> <li>- Can the distance between the rows perhaps be adjusted?</li> </ul>		





	More knowledge wanted	Comments, ideas and requirements for the new machine
5.0 CHEMICAL CONDITIONS 5.1 Consider whether the new machine emits health hazardous fumes, aerosols or dust that will lead to changed requirements for ventilation.		
6.0 INSTRUCTION 6.1 Consider how best to instruct the operators. - Should the supplier take care of instruction? - Should there be a "super user" to instruct future operators?		
6.2 How should the employees who will maintain and/or clean the machine be instructed?		
6.3 Is personal protective equipment necessary? - The supplier must inform about necessary protective equipment. - Protective equipment must be made available.		
7.0 LAY-OUT OF THE WORKPLACE 7.1 How much room is available for the machine? - Height, length, width - Free height, length, width - Room available for the operator work space		
7.2 Will there be differences in levels that may pose a risk for falling? - For example between floor and operating platform. - Prevention of fall accidents. - Machine stability during operation.		
7.3 Other working environment related factors? - Lighting when operating the machine. - Indoor climate around the machine, ventilation, draught problems etc.		



# Checklist • Instruction

Example of a checklist for the instruction of employees.

(The checklist must be adjusted to the work of the employee and can be increased/shortened in relation to the example below.)

Instruction of employee\_\_\_\_ (Name)\_\_\_\_ for daily operation of (machine).

Subject	Contents	Done date (sign.)
General functionalities of the machine	Description of what must be gone through	
Selection of particular elements of risk	Description of particular elements of risk and why	
Instruction in daily operation of the machine	Operating instructions Aim: The employee must demonstrate that he/she can operate the machine independently in situations related to the employee's areas of responsibility.	
Identification of emergency stop and procedures for stop and start	Description of the machine's emergency stop as well as procedure for starting and stopping the machine. Aim: The employee must demonstrate that he/she can identify and operate the emergency stop as well as start and stop the machine according to procedure.	
Procedure for downtime or disruptions	Description of what the employees can do themselves in connection with downtime or disruptions and who to contact if the problem cannot be solved within the employee's area of competencies.	
Daily supervision and cleaning	Description of what to supervise and how daily cleaning must be carried out.	
Special conditions	Description of special conditions, for instance supervising the number of hours the machine has been operating in relation to service and maintenance.	



Agricultural Council for Safety and Health at Work,  
Farm to Fork  
Agro Food Park 13  
DK-8200 Aarhus N  
Mail: [barjordtilbord@gls-a.dk](mailto:barjordtilbord@gls-a.dk)  
Telephone: +45 87 40 34 00

Employee Secretariat  
BAR Jord til Bord  
Kampmannsgade 4  
DK-1790 København V  
Mail: [barjordtilbord@3f.dk](mailto:barjordtilbord@3f.dk)

[www.barjordtilbord.dk](http://www.barjordtilbord.dk)



**BAR Jord til Bord**