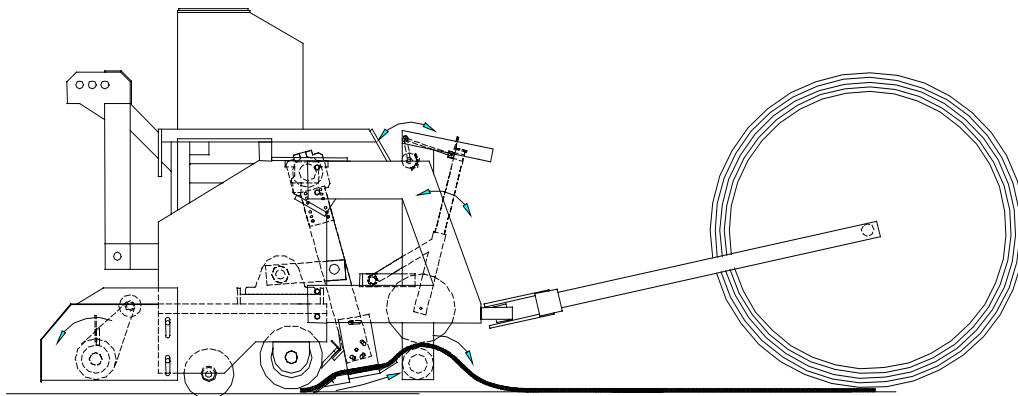


Usersmanual

# **BIG TICK SOD-HARVESTER**



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# 1. Introduction

With the Big Tick Sodharvester it is possible to make Big Rolls of 1 or 1,20 meter width. The following options are available on the machine:

- length-control: measuring the length of the sod and cut off automatically controlled by a computer-unit
- thickness-control: the thickness of the sod is measured continuously and adjusted if necessary by a computer-unit

You will have the best advantage of this machine when you follow the instructions as mentioned in this users manual. Please read this manual completely before you start working with the machine.

Together with this users-manual, you received a “parts book” for the Big Tick machine. In this users manual there will be referred sometimes to this parts book.

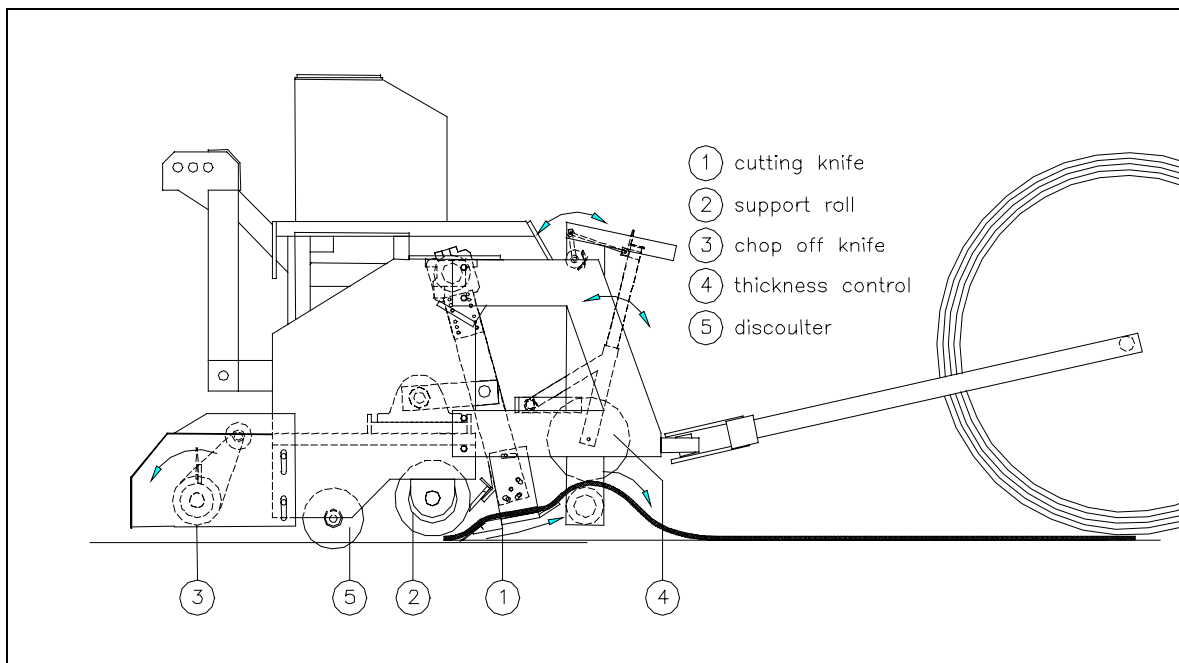
The parts book contains the most important parts of the machine. However you will not find the parts for the thickness control and length control in this partsbook

Turf Tick Products B.V. is not responsible for damage and indirect damage due to errors in operating the machine, due to no professional maintenance or due to a false usage of the machine.

## 2. Working

The total weight of the machine rests on a support roll. So the sod is pressed firmly before it is cut by the cutting knife (1). At each side of the machine a cutterwheel (5) cuts the side-edges of the sod. After the sod is cut by the cutting knife (1), the sod is moved to the thickness-control (4) where the thickness is constantly measured.

After the thickness-control the sod can be rolled till the desired length. This length of the sod is constantly measured by 2 sensors on the support roll (2) and send to the control-unit. When the desired length has been reached, the sod is automatically cut off by the chop off knife (3). The width of the sod is standard 1 meter or 1,2 meter. It is possible to cut the sod in 2 pieces of each 50 cm (with a 1 meter sod) or 60 cm (with a 1,2 meter sod). This can be done by an extra cutterwheel that is mounted in the middle of the machine. This cutterwheel can be moved downwards or upwards by a lever.



schematic view of a Big Tick sodharvester

### 3. Safety precautions

Read following safety precautions completely before you work with the machine. At the machine you will find some pictograms which will be explained at this chapter. Learn these pictograms. Know where they stand for!

1.

**Attention! Danger for injury when not reading the users manual first**

**Read the usersmanual completely before you start working with the machine.**



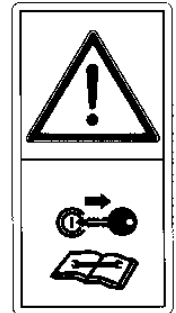
2.

**Attention! Danger for injury when making maintenance at the machine**

**Before you make maintenance at the machine:**

**Place the machine at his “support-legs”**

**De-activate the electrical system of the machine, stop the engine of the tractor, use the handbrake of the tractor and take off the contactkey of the tractor.**



3.

**Attention! Danger for getting jammed between the moving parts of the cuttingknife**

**Before entering the cuttingknife-area allways stop the machine first. Don't come closer to the moving parts before they stand still completely.**



4.

**Attention! Danger for getting jammed between the moving parts of the chop off knife**

**Before entering the area of the chop off knife allways stop the machine first. Don't come closer to the moving parts before they stand still completely.**



5.

**Attention! Danger for getting jammed between the moving parts of the Big Roll frame**

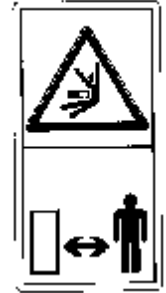
**The frame where the Big Roll is rolled can be moved hydraulically. Make sure that you don't put your hands between the moving parts of this frame**



6.

**Attention! Danger for getting jammed between the moving parts of the machine.**

**Always keep a distance to the machine of at least 5 meters.**



7.

**Attention! Danger for getting jammed between moving parts when the protection shields are taken off.**

**Never work with the machine when the protection shields of the machine are not mounted.**

8.

**Attention! Hydraulic system**

The hydraulic system works with high pressure (160 bar). Make sure first that there is no pressure at the hydraulic system before making maintenance to the machine

9.

**Attention! Danger when mounting or dismantling the machine to the tractor.**

Make sure that during mounting the machine no person is trapped between the tractor and the machine

10.

**Attention! Danger when new users don't know the security precautions**

Make sure that new users know how the machine works and which security precautions have to be made before using the machine or making maintenance to the machine.

## 4. Put into operation

Before using the Big Tick machine for the first time the following actions have to be done:

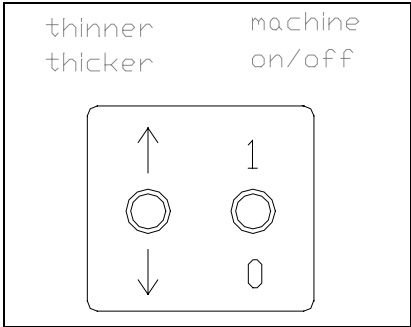
1. Make sure that the machine can be mounted at the 3-point hitch of the tractor.
2. Lift the Big Tick in the 3-point hitch of the tractor
3. When there is a transporting frame connected to the Big Tick dismount this first then. The “support legs” are mounted in a way so that the machine takes minimum space for transporting. Take off the “support legs” and turn them 180 degrees so that the horizontal bar of the leg has a maximum distance to the machine. Place the support legs again.
4. Lift Big tick machine from the ground  
Lower the machine till the machine rests at the support roll (partsbook 300-51-08). Only do this in the field or sandy underground, because otherwise you will damage the cutting knife!  
When the machine is resting at the support roll, adjust the machine so that the machine is exactly horizontal. This is very important
5. Make a mounting-construction for the hydraulic pump so that the pump can be mounted easily to the PTO-shaft of the tractor.
6. Make the electronic connection for the 2 control-units:
  - the length control: make sure that the *positive-pole* of the battery is connected with the *red-labelled* wire! Make sure that there is enough voltage for the control-unit. The control unit needs at least 11,5 Volts
  - thicknesscontrol/machine on/off
7. Check whether there is enough hydraulic oil in the tank.
8. Plug in the hydraulic hoses for the Roll-up frame (partsbook 300-50)

# 5. Operating the machine

Before the machine can be used, the machine first has to be “put in operation” and the security precautions have to be read.

## 5.1. The operating panels

### 5.1.1. Standard control box

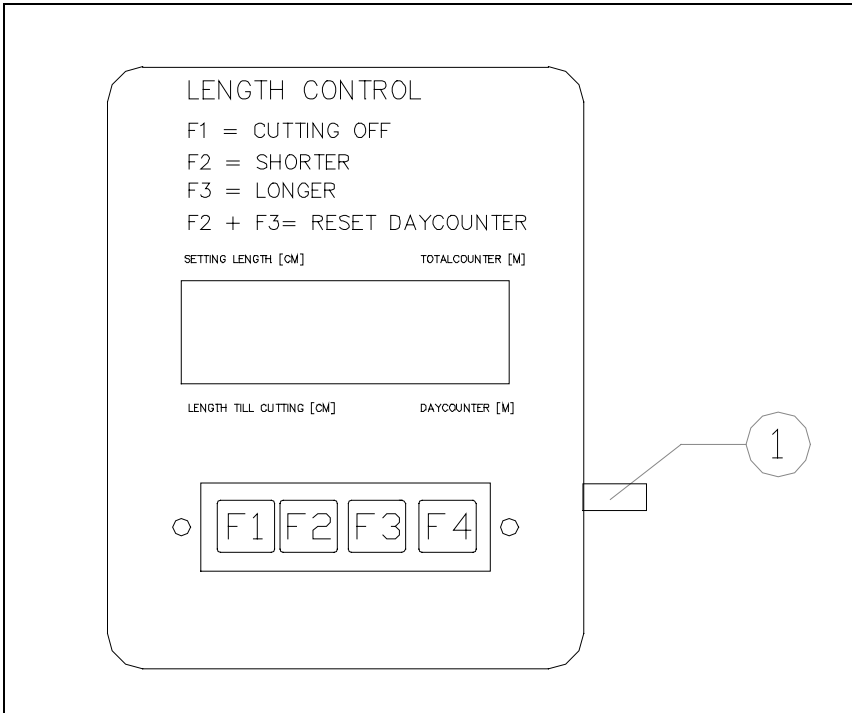


This control box controls:

- machine on/off: when the PTO is activated and this knob is set to “1” the cutting knife will be activated.
- Thinner/thicker: with this knob the cutting knife will move upwards (thinner) or downwards (thicker)

### 5.1.2. length control

The operation panel of the length control of a Big Tick machine is as shown below here.



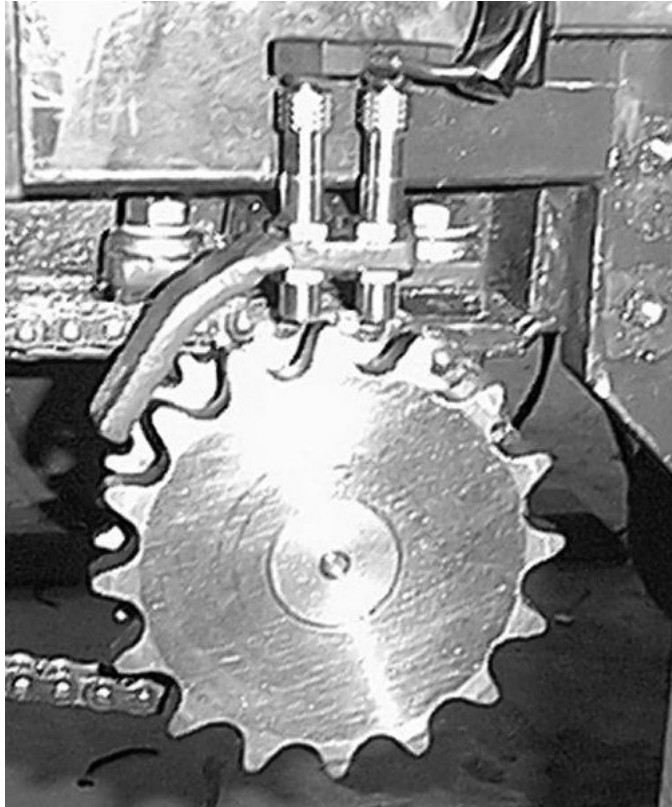
Posnr.1 is the main switch for turning on the electrical power of the system.

At first the controlunit will check wether the chop off knife is in it's home position: knife vertical upwards, so that the homeposition sensor will "see" it.

When this is not the fact, the chop-off blade is activated immediately and you will hear the buzzer.

The measuring of the length is done by 2 sensors which detect the rotation of a sprocket mounted on the main roll (partsbooknr. 300-51-8).

So when the main roll is rotating, the length is counted.



**the 2 sensors for measuring the length of the sod**

Settingvalues and measuringvalues are displayed on the display. There are 4 counters on this display:

*Setting length:*

With the buttons F2 and F3 the length of the sod can be set.

*length till cutting:*

This counter displays the length of the sod that still has to be cut.

When the sod will be cut through you will hear a buzzer to warn the chauffeur.

*daycounter:*

You can turn this counter to 0 by pushing the F2 button and the F3 button together.

This counter will constantly be incremented. Also after cutting through the sod. The length is given in metres.

*totalcounter:*

This counter displays the length of sod that has been cut in the whole history of the machine. This counter can't be changed to 0 or any other value.

### *Chop off manual:*

With the F1-button the sod will be cut through independently of the values of the different counters. Attention! The chop off knife will only turn when the cutting knife is also activated by the knob machine on/off of the standard control box.

During chopping off you will hear a buzzer.

## **5.2. The cutting procedure**

When the main switch is turned on you may hear the buzzer. It indicates that the chop-off blade is not in its home-position. Watch out when you turn on the cutting blade because immediately the chop-off blade will turn to its home-position.

### *recommended cutting procedure:*

1. start tractor
2. turn on the power knob of the length control. Don't start the tractor when the length control unit is on, because the voltage can drop because of the starting so that it will be under 11 Volts. The length control unit can be disturbed by this.
3. lower the machine till it rests on the support roll
4. make sure that the machine is horizontal
5. turn on the PTO (not faster than 540 rev/cycle)
5. turn on cutting blade
6. choose whether you want to lower the middle cutting wheel

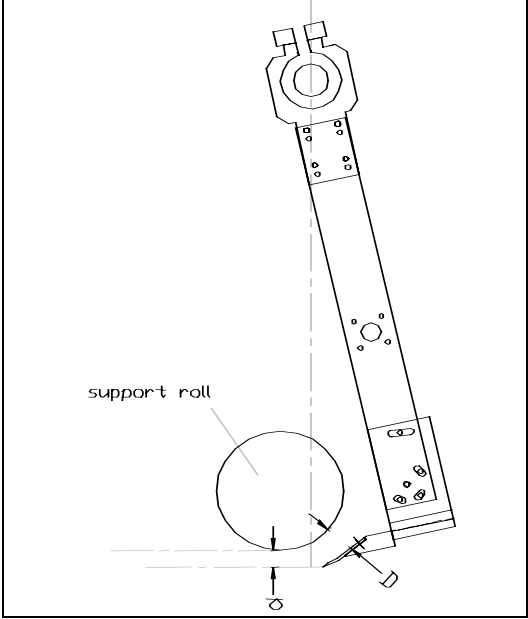
## **5.3. end of roll**

During chop off you will hear the buzzer till the chop-off blade is in its home position again. Keep driving until the slab is completely on the roll then exchange the roll.

# 6. Adjustements

## 6.1. The cutting blade.

For the cutting blade to work correctly it is important that the cutting edge is as straight as possible below its spindle and that the main roll is placed so that **D** is greater than **d**. If **D** is smaller than **d** the sod is pressed by the cutting blade causing too much pressure to its bearings.



## **7. Hydraulic scheme**

## **8. Electronic scheme**