



**GRASS STRIP MAINTENANCE  
& SOIL CULTIVATION**



[www.perfectvanwamel.com](http://www.perfectvanwamel.com)



# PERFECT equipment for orchards and vineyards

PERFECT machines have been designed and built in Beneden- Leeuwen completely under own management since 1947. The manufacturing process is characterized by using the very best materials/components and state-of-the art production methods. Our team of 3D designers utilises the most advanced simulation techniques in order to guarantee optimal functionality and operation.

Van Wamel BV has a worldwide network of PERFECT dealers. Our partners are an indispensable link in the sales and service of PERFECT machines.

## TABLE OF CONTENTS



|   |           |
|---|-----------|
| <b>GRASS STRIP MAINTENANCE</b>            | <b>3</b>  |
| › WBG 2 GRASSLAND SUBSOILER               | 4         |
| › GB AERATOR                              | 7         |
| › GRASS PROFI OVERSEEDER                  | 10        |
| <b>SOIL CULTIVATION</b>                   | <b>10</b> |
| › SKYROS VARIO DISC HARROW                | 10        |
| › TERRA RANGER IN-ROW<br>SOIL CULTIVATION | 11        |

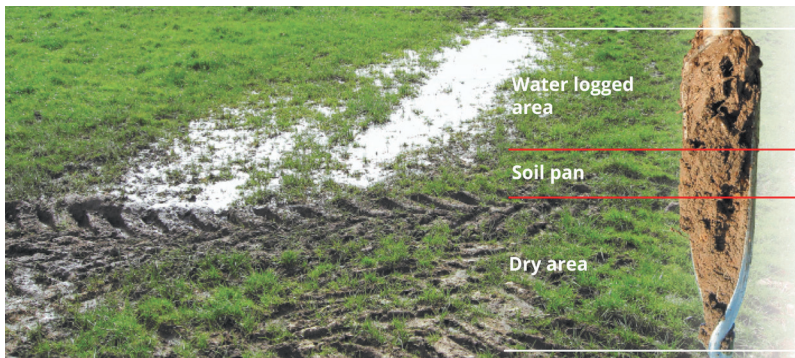
## GRASS STRIP MAINTENANCE

# SOIL MAINTENANCE

## The basis for quality and bearing capacity

The quality and carrying capacity of the grass strip depends on the soil, moisture and nutrition. If any one of these three factors is insufficient, it has major consequences for the quality and carrying capacity of the grass strip.

The amount of moisture is directly dependent on rainfall and the soil. The quality of the soil is partly dependent on the use and driving of increasingly heavy fruit growing machinery. Perfect offers various solutions to open and aerate soil compaction. Essential operations to maintain optimal soil condition, and d grass strip.



Soil compaction leads to wet spots. Driving over them clogs the surface and damages it.



Perfect's subsoilers and aerators keep crop sod intact and improve infiltration by breaking up compaction.



## WBG 2

# Subsoiler

- > Breaks up disturbing layers in the subsoil and compaction in the top layer -> the grass strip remains intact
- > Improves air and water circulation in the soil
- > Pest management and disturbance
- > Cutting discs are infinitely adjustable in height, spring-loaded and soil-following
- > Tines fitted with shear bolt protection against overload as standard
- > Simple depth adjustment with adjustment on each roller segment
- > Heavy cast steel spring-loaded rollers for optimal pressure



WBG 2 with MT tines

| MODEL     | TINE DISTANCE  | TRANSPORT WIDTH | NO. TINES | MIN. POWER (KW/HP) | WEIGHT            |
|-----------|----------------|-----------------|-----------|--------------------|-------------------|
| WBG-2 180 | 0.90 m (2'11") | 1.40 m (4'7")   | 2         | 66 / 90            | 705 KG / 1550 lbs |

### SPECIFICATIONS

- > Tractor linkage cat. II
- > Distance between the tines 90 cm
- > Maximum working depth 45 cm
- > Standard shear bolt protection
- > Spring-loaded cutting disc, height-adjustable by way of spindle in front of every tine
- > Orion Ø 47 cm roller behind every tine





## SOIL COMPACTION

Heavy rainfall, grazing and driving over the grassland with heavy machinery leads to soil compaction under the sward. With soil compaction, roots do not penetrate far enough into the soil to absorb water and nutrients. During heavy rainfall, water does not quickly sink into the ground, creating puddles and wet spots. Wet patches may cause a lack of oxygen, slower growth and withering of plants. That is how the grassland turns into a field with poor quality grass.

## PERFECT – VAN WAMEL TECHNIQUE

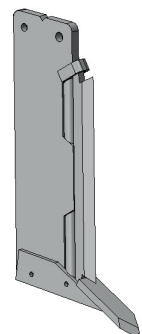
Cutting discs are stageless adjustable in height, spring-loaded and follow the contours of the ground. The discs cut into the sward and the tine works its way into the soil without causing damage to the sward. The tines eliminate the compaction at the deeper level without mixing the soil. The subsoil is broken up so that after this treatment it can once again absorb water adequately and has better permeability. Behind each tine is a heavy-duty Orion roller, which reconsolidates the sward of the crop. When there is a sufficient amount of oxygen in the soil, the grass roots better and achieves optimal absorption of nutrients. The quality of the grass strip improves and the bearing capacity increases.

## THE SOLUTION

The Perfect-Van Wamel Grass strip subsoilers eliminate soil compaction by breaking up the subsoil. At the same time, the sward remains intact. Subsoiling below the sward improves both water and air balance in the soil. As a result, machinery can drive on the grass strips sooner. The improved soil structure combined with regular overseeding means that (relatively expensive) re-seeding can be postponed, or even left out altogether. This results in immediate cost savings.



KG tine (6 cm Hardox chisel)



MT-tine (6 cm Hardox chisel and interchangeable wear blade)



WBG 2 with Dent-Michel tines

## EXTRAS:

- > Hydraulic obstacle protection
- > Version with KG-tines
- > Version with MT-tines
- > Version with Dent-Michel tines
- > Vibration function



GB

## Aerator

- Removes compaction from the soil
- Working depth to 18,5 cm
- Four blades per rotor for maximum aeration per working width
- Cutting edge on front and back of blade keeps grass sod intact
- Improves aeration and permeability of the grass sod
- Improves water storage capacity
- Provides more oxygen in the root area
- Ensures good growth, better quality and higher grass yield
- Easy to combine with a second pass
- Pest management and disturbance



| MODEL  | CAT. | WORKING WIDTH  | TOTAL WIDTH    | NO. ROTORS | WEIGHT             |
|--------|------|----------------|----------------|------------|--------------------|
| GB-130 | 1    | 1.30 m (4'3")  | 1.35 m (4'5")  | 8          | 400 kg / 880 lbs   |
| GB-150 | 1    | 1.50 m (4'11") | 1.55 m (5'1")  | 9          | 420 kg / 925 lbs   |
| GB-165 | 1    | 1.65 m (5'5")  | 1.70 m (6'0")  | 10         | 440 kg / 970 lbs   |
| GB-180 | 1    | 1.80 m (5'11") | 1.85 m (6'1")  | 11         | 460 kg / 1.010 lbs |
| GB-215 | 1    | 2.15 m (7'1")  | 2.20 m (6'11") | 13         | 480 kg / 1.055 lbs |
| GB-150 | 2    | 1.50 m (4'11") | 1.55 m (5'1")  | 9          | 420 kg / 925 lbs   |
| GB-165 | 2    | 1.65 m (5'5")  | 1.70 m (6'0")  | 10         | 440 kg / 970 lbs   |
| GB-180 | 2    | 1.80 m (5'11") | 1.85 m (6'1")  | 11         | 460 kg / 1.010 lbs |
| GB-215 | 2    | 2.15 m (7'1")  | 2.20 m (6'11") | 13         | 480 kg / 1.050 lbs |
| GB-230 | 2    | 2.30 m (7'7")  | 2.35 m (7'8")  | 14         | 500 kg / 1.210 lbs |





## MORE AIR IN THE TOP SOIL

The Perfect-Van Wamel Soil aerator effortlessly removes compactions in the soil structure down to 18.5 cm. Compaction or smearing in the top soil and damage caused by pests are resolved effortlessly. The Soil aerator improves aeration and permeability which is good for water holding capacity. The top layer drains water faster and more oxygen reaches the roots. More oxygen is essential for growth, quality and increases the bearing capacity of the soil.



## AIRATION WITHOUT CAUSING DAMAGE

The Perfect-Van Wamel Soil aerator has 24 blades per metre and has a maximum working depth of 18.5 cm. Each rotor is fitted with four blades. The hardened blades have a sharp cutting edge on both the front and back. The blades are designed not to damage the grass. The blades can also be mounted at an angle for an even more intensive effect.

## SKID PROTECTED

The skids under the flange bearings of the Perfect soil aerators protect the flange bearings, limit the maximum working depth and ensure undamaged sod. They are integrated into the frame and made of high-quality steel for a long service life.

## MORE WEIGHT - DEEPER WORKING

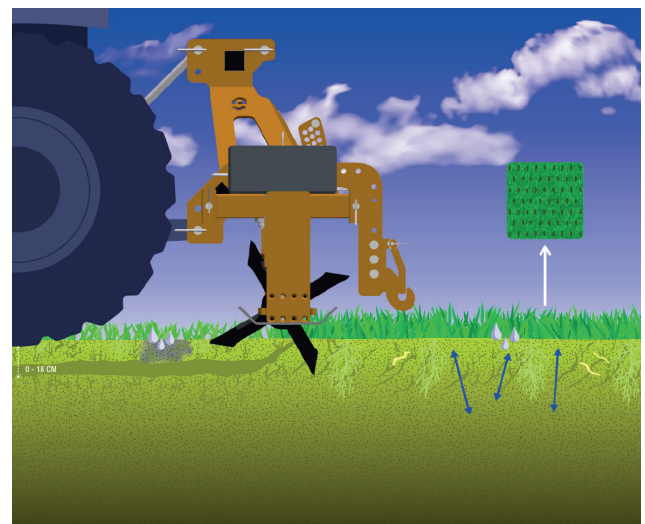
Weights can be added to the grassland aerator for better penetration into the soil. This can also help to achieve excellent results in difficult conditions. The weights are 100 kg each.

## SPECIFICATIES

- Tractor linkage cat. I or II
- 4 knives per rotor
- Each knife has 2 cutting edges
- Skids for protection of the flange bearings and depth control
- Low power requirement (min. 40 hp)

## EXTRAS:

- Mechanical power lift up (only with cat. 2)
- Weight 100 kg (only with GB-215 en GB-230, cat. 2)

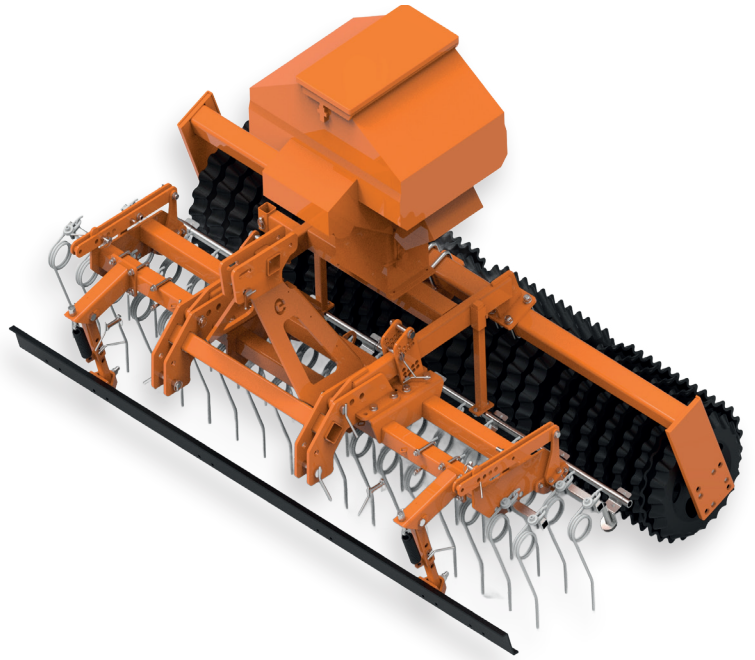




## GRASS PROFI

# Overseeder

- The spring-loaded, height-adjustable leveling bar flattens the ground
- The spring-loaded harrow tines pull the sod loose, removing weeds and superficially rooting grass, leaving the good, stronger grass in place
- The tines also create a seed bed for the grass seed
- The pictor roller secures the grass seed in the ground allowing it to germinate well
- In addition, the roller presses and levels
- Combines four operations in one pass
- The different elements of the overseeder can also be used separately



| MODEL       | WORKING WIDTH  | TOTAL WIDTH   | ROWS OF TINES | WEIGHT               |
|-------------|----------------|---------------|---------------|----------------------|
| P44/49 -180 | 1.80 m (5'11") | 1.95 m (6'5") | 2             | 1.200 kg / 2.640 lbs |

### SPECIFICATIONS

- Tractor linkage cat. II
- 2 rows of robust harrow tines Ø 12 mm, adjustable in terms of aggressiveness
- Solid, spring-loaded, height-adjustable leveling bar
- Working width 180 cm
- With pictor roller Ø 44/49 cm
- Including P-box STI seeder





## 4 OPERATIONS IN ONE PASS

The Perfect Grass Profi is the grass row maintenance machine or grass row overseeding machine that can be used to level, overseed and roll all at once.

- Levelling: the levelling bar levels uneven areas in the field, such as molehills
- Weeding harrows: robust harrowing tines remove weeds and superficially rooting unwanted grasses. The aggressiveness of the harrow tines is continuously variable
- Overseeding: the mounted seeder drill sows and distributes grass seed accurately. Sow the right amount of young quality grasses into the sward to ensure that it remains in top condition
- Rolling: rear rollers compress the grass seed for rapid and successful germination. Rolling also activates soil life and promotes the tillering of existing grasses.



## P-BOX SEEDER

All small seeds and seed mixtures can be sown from appr. 1 kg/ha. The seeds are blown through the hoses and against the deflector plates.

These deflector plates distribute the seeds precisely over the entire working width.

The P-Box-STI sows at a constant seeding rate by automatically adjusting to the working speed.

This is done by means of a wheel sensor, GPS sensor, radar sensor or via the tractor's 7-pin signal plug. The P-Box-STI is fully electronically controlled. The sowing shaft is driven by an electric motor, which in turn is connected to various sensors and the Speedtronic controller.

This system ensures a very accurate seed rate, independent of the speed. The P-Box-STI is equipped with a Speedtronic control system. This seed drill also comes standard with a sowing shaft (fine and coarse).

SKYROS VARIO

# Disc harrow

- > Stubble cut across the full width
- > Discs in stabbing and scooping position
- > Serrated discs for good drive and clog-free working
- > Intensive mixing action
- > High working speed possible
- > Optimum compaction of the soil
- > Simple working depth adjustment
- > Each disc is supported individually



| MODEL      | WORKING WIDTH  | TOTAL WIDTH    | NO. DISCS | MIN. POWER (KW/HP) | WEIGHT               |
|------------|----------------|----------------|-----------|--------------------|----------------------|
| 12-150 R45 | 1.50 m (4'11") | 1.63 m (5'4")  | 12        | 37 / 50            | 850 kg / 1.870 lbs   |
| 14-175 R45 | 1.75 m (5'9")  | 1.88 m (6'2")  | 14        | 40 / 55            | 900 kg / 1.980 lbs   |
| 16-200 R45 | 2.00 m (6'7")  | 2.13 m (7'5")  | 16        | 44 / 60            | 950 kg / 2.090 lbs   |
| 18-225 R45 | 2.25 m (8'2")  | 2.38 m (7'10") | 18        | 47 / 65            | 1.000 kg / 2.200 lbs |
| 20-250 R45 | 2.50 m (8'3")  | 2.63 m (8'8")  | 20        | 51 / 70            | 1.075 kg / 2.365 lbs |

### SPECIFICATIONS

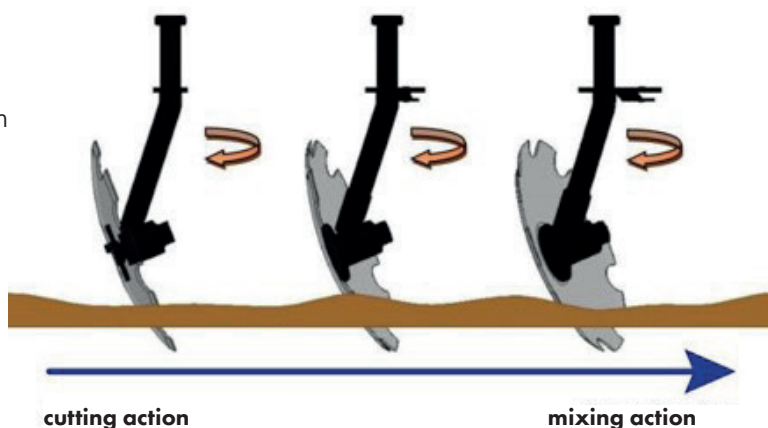
- > Tractor linkage cat. II
- > 2 rows of serrated discs Ø 510 mm
- > Maximum working depth 10 cm
- > Infinitely adjustable angle system of the discs
- > Standard trailing roller: tubular roller Ø 45 cm 8x1.25" V-shape

### EXTRAS:

- > Supplied without trailing roller
- > Hydraulic trailing of the roller

### INNOVATIVE STEPLESS ANGLE ADJUSTMENT

The innovative, continuously variable angle adjustment of the Perfect disc harrows makes that the machines can be accurately adjusted to perform the given tasks. Deep or shallow cultivation, plenty or little crop residue, dry or wet soil: the Vario-Disc harrows work hassle-free under any circumstances. The discs have maximum effect by adjusting the angle of the discs for each row.





## MECHANICAL WEED CONTROL

# PERFECT Terra Ranger

The Perfect Terra Ranger is a unique machine specially designed for mechanical control of weeds in the orchard or vineyard.

The thoughtful and very robust construction of the machine makes it possible to effectively eradicate weeds both under and between trees at a high working speed.

### Fast and effective tillage:

The PERFECT Terra Ranger enables extremely fast soil cultivation in the row. The combination of a double-sided reverse rotating tiller in combination with a finger weeder ensures very fast and effective weed control; the driving speed is a maximum of 12 km/h (7.5 mile/h).

Thanks to the fully mechanical drive, the Terra Ranger can be used with tractors from 50 hp. The high working speed of the Terra Ranger offers a cost-effective alternative to the use of soil herbicides.





## TERRA RANGER

# In-row soil cultivation



Due to the limited rotational speed and profile of the tiller blades clogging is prevented. The result is a very well crumbled soil.



For use in uneven orchards, working angle of the tiller can be adjusted up to a maximum angle of 10 degrees. The tiller head is designed in such a way that no soil is left on the grass runway.

### REVERSE ROTATING TILLER

A tiller is the most effective machine for working in any soil type and to achieve an optimal treatment and processing of soil and vegetation.

Due to the application of a reverse rotating tiller, working speeds of up to 12 km/h (7.5 mile/h) are achievable without compromising quality.



### FINGER WEEDER

The finger weeder enables a quick and effective operation in the row of trees or vines. The flexible 'fingers' grip into the top layer of the soil and uproot weeds and other vegetation.

On the Terra Ranger, the finger weeders are positioned in such a way that they throw the vegetation before the tiller. Conditioning of the vegetation contributes to a slower regrowth.



To optimize the operation of the finger weeder work level, work angle and relative position to the tiller cutter can entirely be adjusted as required.



The main frame and implements move independently of the 3-point hitch; this makes for a perfect ground contour adaptation. In addition, the adjustable headstock enables shortest attachment to any type of tractor.



The Terra Ranger comes with two sets of running wheels, which are positioned very close to the black strip.

### FRONT AND REAR MOUNT

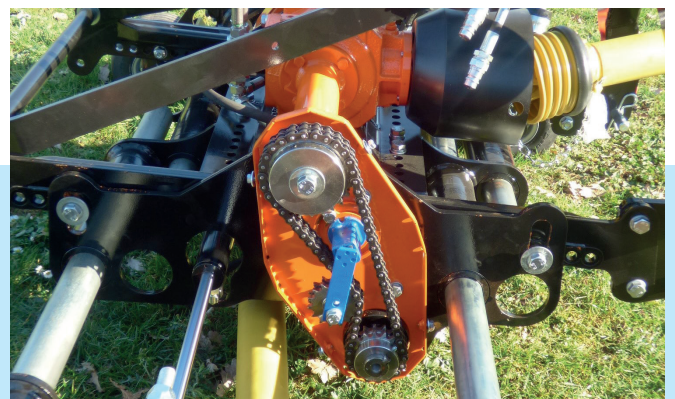
For use with a variety of tractors, the Terra Ranger can easily be converted for use in the front linkage and vice versa.



### DRIVE SPEED MODIFICATION

By swapping two gears in the drive unit, the drive speed can be easily adjusted from 540 to 1000 rpm, and vice versa.

The drive is protected by a slip clutch on the PTO shaft.





The working depth is infinitely adjustable from 0 to RANGER 70 mm; for the first operation, work is usually carried out at a depth of a few centimeters, for the following operations, a superficial treatment is sufficient.

## SPECIFICATIONS

- Tractor linkage cat. 2
- Required PTO power (kW/hp) 37/50
- PTO speed (rpm) 540 / 1000
- Working dept tiller 0 - 70 mm

## EXTRAS:

- Hydraulic raisable finger weeder and tiller – right or left (+ 1 DA per side)
- Weed sprayer (Tank 120 lt, clean water tank, 12V pump)
- Also available without finger weeders (with and without weed sprayer)



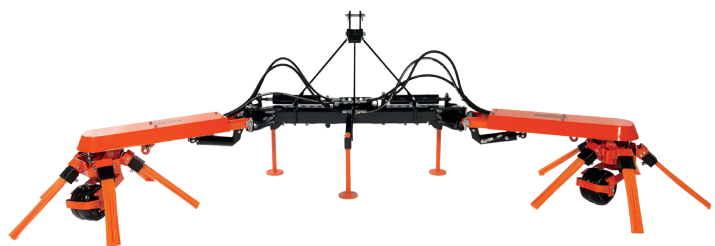
| MODEL     | WORKING WIDTH TILLERS | DIAMETER FINGER WEEDER | FOR ROW SPACINGS          | WEIGHT             |
|-----------|-----------------------|------------------------|---------------------------|--------------------|
| TR 30-70  | 30 cm (1'0")          | 70 cm (2'3")           | 2.5 - 3.6 m (8'2"-11'9")  | 820 kg / 1.805 lbs |
| TR 30-100 | 30 cm (1'0")          | 100 cm (3'3")          | 2.8 - 3.9 m (9'2"-12'10") | 860 kg / 1.890 lbs |
| TR 40-70  | 45 cm (1'4")          | 70 70 cm (2'3")        | 2.7 - 3.8 m (8'10"-12'6") | 825 kg / 1.815 lbs |
| TR 40-100 | 45 cm (1'4")          | 100 cm (3'3")          | 2.8 - 4.0 m (9'2"-13'1")  | 865 kg / 1.905 lbs |

Technical data is subject to change without notice.

FRUIT GROWING AND WINE SPECIALIST

# PERFECT

In addition to machines for grass strip maintenance and tillage, Perfect - Van Wamel has been your specialized manufacturer for a very wide range of rotary mowers, shredders, brush sweepers and swing discs for over 75 years.





📍 **PERFECT Van Wamel B.V.**  
Energieweg 1, 6658 AE  
Beneden Leeuwen  
The Netherlands

☎ +31 (0) 487 59 29 44  
@ [www.perfectvanwamel.com](http://www.perfectvanwamel.com)  
🌐 [sales@vanwamel.nl](mailto:sales@vanwamel.nl)

**Your PERFECT partner**