

# Grass Master - Heavy Duty Grass Harrow & Air 16 Seeder

The Grass Master is a high output Grass Harrow and Air Seeder suitable for over-seeding or full re-seeds and designed specifically with contractors in mind. It consists of a heavy duty harrow frame that incorporates a levelling board enabling light cultivation of the seedbed, the Air 16 Seeder that is used is capable of high working speeds and high seed rates enabling a huge amount of work to be done in a day. Furthermore the Grass Master design incorporates a large loading platform making filling and calibrating the seeder very simple and the machine folds up hydraulically to under 3m so that the operator can move quickly and easily from job to job.



## Grass Harrow Specifications

Working Width	Weight*	Transport Height	Transport Width	HP req.	Harrow Sections	Number of tines	Depth Wheels
Non-Folding							
1.5m	145kg	1.45m	1.5m	10	1x1.5m	48	2 16x6.5-8
2.0m	165kg	1.45m	2.0m	13	1x2.0m	60	2 16x6.5-8
3.0m	260kg	1.45m	3.0m	15	2x1.5m	96	2 16x6.5-8
Hydraulic Folding							
4.5m	390kg	1.70m	2.5m	20	3x1.5m	144	2 16x6.5-8
5.0m	440kg	1.70m	2.5m	25	2x1.5m	156	2 16x6.5-8
					1x2.0m		
6.0m	520kg	2.20m	2.5m	40	3x2.0m	180	2 16x6.5-8
6.0m	530kg	2.20m	3.0m	40	4x1.5m	192	2 16x6.5-8
6.4m	550kg	2.60m	3.0m	40	2x1.5m	204	2 16x6.5-8
					2x1.7m		
7.5m	710kg	3.15m	2.8m	50	5x1.5m	240	4 16x6.5-8
8.0m	740kg	3.25m	2.8m	55	4x1.5m	252	4 16x6.5-8
					1x2.0m		
Scissor Folding							
9.0m	1010kg	2.75m	2.8m	60	6x1.5m	288	4 16x6.5-8
10.5m	1050kg	3.50m	3.0m	65	7x1.5m	336	2 18x8.5-8
							2 16x6.5-8
12.0m	1170kg	3.40m	3.0m	70	8x1.5m	384	2 18x8.5-8
							2 16x6.5-8
12.4m	1270kg	3.40m	3.0m	70	6x1.5m	396	2 18x8.5-8
					2x1.7m		2 16x6.5-8

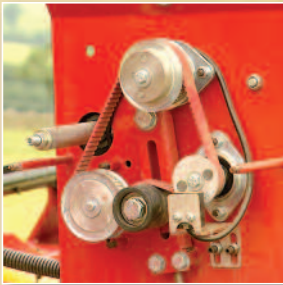
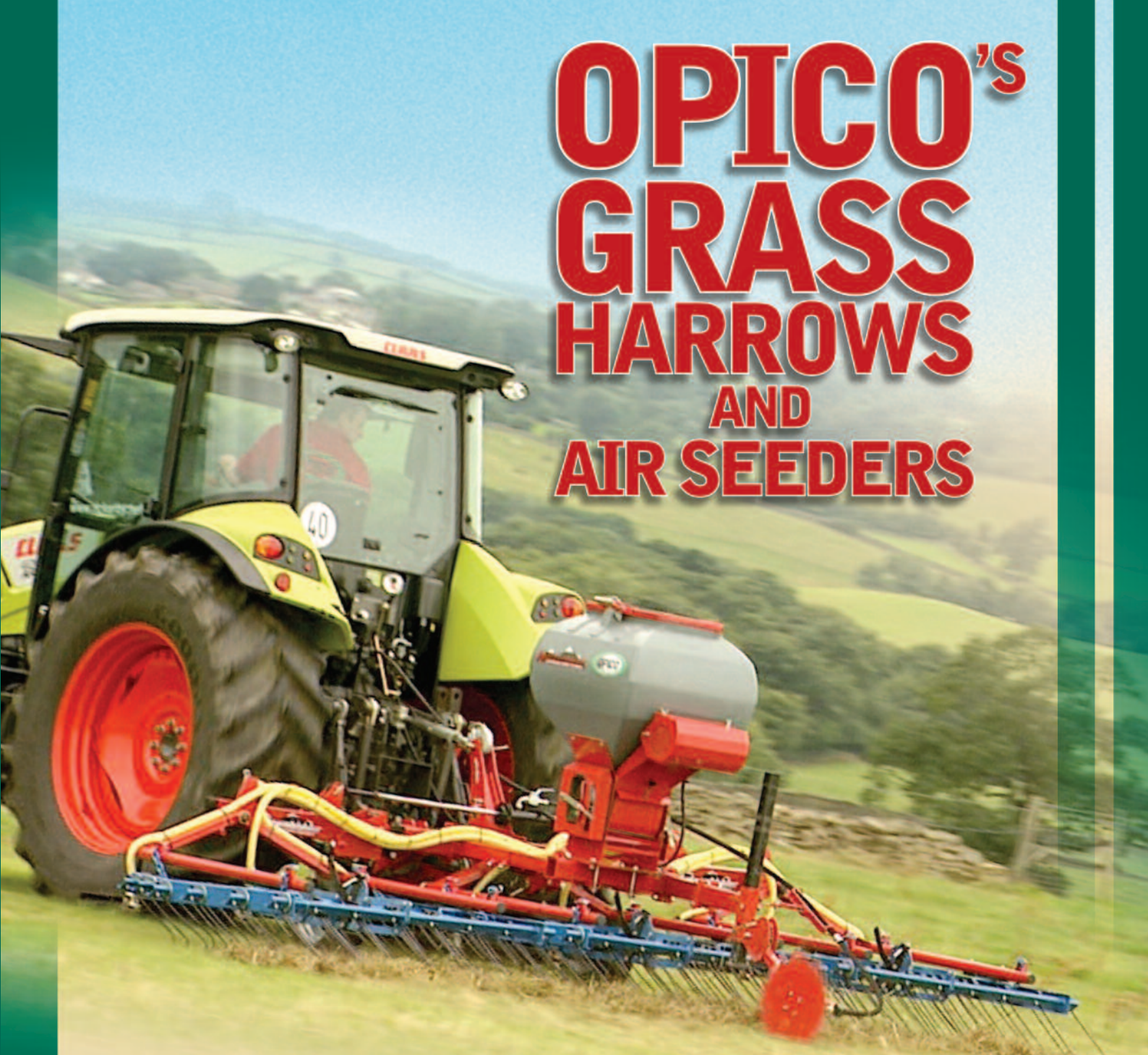
\* Weights with 7mm tine  
OPTIONS: 7mm or 8mm tine, Front levelling board, Front mount kit, Fence protectors.

## Air Seeder Specifications

Suitable for the following seed types: Grass mixtures, clover, lucerne, kale, linseed, mustard, rape, stubble turnips and slug pellets							
Model	Working Width	Seedbox Volume	Fan Type	Seed Outlets	Control	Seed Rate per hectare *Dependent on forward speed	Weight
Air 8	Up to 6.5m	180 ltrs	2 x Electric - 12v Fans	8	Mechanical	40kg when fitted to 6.0m working width 80kg when fitted to 3.0m working width	66kg
Air 8E	Up to 6.5m	180 ltrs	2 x Electric - 12v Fans	8	Electronic	40kg when fitted to 6.0m working width 80kg when fitted to 3.0m working width	66kg
Air 16E	Up to 12.5m	400 ltrs	1 x Hydraulic Fan - 20l/min	16	Electronic	40kg when fitted to 12.0m working width 80kg when fitted to 6.0m working width	130kg

OPTIONS: Step and Loading platform, Electronic hectare meter.  
400 litre Hopper to fit Air 8 Seeders.  
N.B. Hydraulic Fan requires 0 - 20 l/min max oil supply and free flow return.

# OPICO'S GRASS HARROWS AND AIR SEEDERS



Look after your grass for  
profitable pastures!



Profit from our knowledge

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Profit from our knowledge



# Revitalise! Rejuvenate! Re-seed!

## Three options for more productive leys.

The OPICO grass harrowing concept simply transforms the way you work your grass. The angle of the tine combined with the overall design of the harrow makes it ideal for stimulating new grass or renovating old pastures.

With an OPICO Grass Harrow, leys can be revitalised and dry matter yields boosted. You can attach an OPICO Seeder, and oversow old worn leys to boost grass and clover content, or start afresh and put down a brand new ley with the harrow and seeder combination.

The OPICO Grass Harrow covers every inch of the ground, thanks to its unique contour flexing tine bed. It clears moss, opens the surface, improves aeration and encourages growth. Like all good ideas it is very simple and is now recommended by thousands of farmers who have switched to this common-sense approach to what used to be a 'harrowing' job.



### Revitalise leys with harrowing

An OPICO Grass Harrow will:

- **Clear out moss and trash clogging the base of the sward**
- **Drag out shallow-rooted weeds like chickweed and annual meadow grass**
- **Open up the soil surface and let oxygen get to the roots**
- **Release locked-up surface nitrogen to the growing ley**
- **Break up and disperse clumps of slurry and muck**
- **Iron out molehills to prevent silage making problems**

The net effect is a more vigorous and revitalised ley, often appearing darker green thanks to the breakdown of the nitrogen cap on the soil surface which is made available to the grass.

The most important angle on the OPICO Harrow is built into every tine. Firstly, its oil hardened spring wire has three times the service life of a normal sprung steel wire. The tine itself has an effective angle, but the tines within the bed can be adjusted allowing for ten different tine settings depending on the work to be done. 48 tines per 1.5m bed with 30mm spacing creates more pressure per tine point and good self-cleaning action. The triple coil spring tine has a multi-flexing vibrating action.

The OPICO Air Seeder units are the most cost-effective way to reseed or over-seed your pasture.



Refilling the Air Seeder

Whether you're re-seeding to put vitality and yield back into old pastures, or over-seeding an existing ley to boost yields and prolong life, the OPICO Seeder is your answer to fresher pasture and better yields.

The units broadcast the seed consistently and evenly for improved productivity and a lower cost of establishment and are easily mounted onto grass harrows or any other implement, for truly efficient and versatile seeding.



### Hidden profit



Ryegrass seedlings 21 days after sowing

**The OPICO Grass Harrow and Seeder is a vital tool in finding that hidden profit in your pasture.**

Simple low cost operations such as over-seeding into an existing ley boosts the yields and prolongs the useful life of the sward whilst a complete re-seed rejuvenates the whole pasture bringing back vitality and maximum yields.

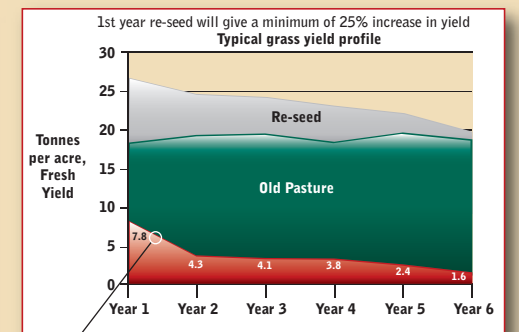
The hidden profit, in terms of extra milk or increased live weight gain from forage rather than costly supplements, ends up where it belongs - in your pocket.

In trials, grass yields have been increased by over 40% by re-seeding and up to 25% by over-seeding and more importantly the M.E. (Metabolisable Energy) of the fodder is improved considerably giving you better quality, low cost home produced feed.

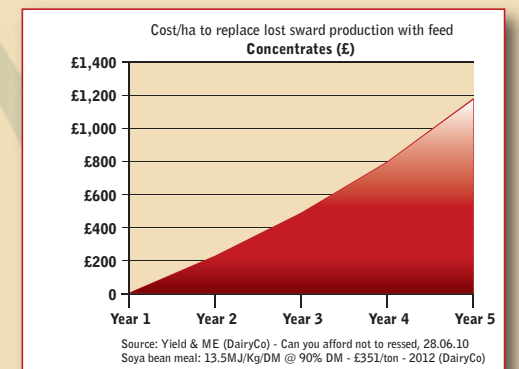
The Seeder unit broadcasts the new seed consistently and evenly whilst the Harrow creates the ideal Tilth and then covers the seed in. Ten different tine angle settings and variable tine pressure coupled with an infinitely variable seed rate between 1 and 80kg per hectare† mean that you can set up the OPICO Harrow and Seeder to do whichever job you want.

The Grass Harrow and Seeder can either be used for a full re-seed, to over-seed an existing ley or to patch seed damaged areas of a field.

### Re-seeding



Extra grass



**Put the hidden profit back where it belongs, in your pocket!**



### Look after your grass!

With approximately 12.5 million hectares of grassland in the UK it is amazing that only 7% is under 5 years old. As can be seen from research by NIAB both yield and energy values of a sward reduce significantly as it ages. To compensate for this loss in sward output and maintain productivity farmers generally turn to feed supplements, the above graph illustrates the cost of replacing lost sward energy with supplements. While re-seeding or over-seeding a grass sward is often seen as costly, careful consideration needs to be given to sward management. Grass really is our cheapest source of animal feed and a planned approach to grass production will see reduced feed bills and improved margins.



# A harrow designed for all conditions

The OPICO Grass Harrow has revolutionised grass harrowing in recent years, larger working widths, more adjustment and aggressive spring tines mean that a better job can be achieved faster and at a lower cost.

With typical working speeds of 4½ mph to 7mph the Grass Harrow is a high capacity machine, a 6m for example, is more than capable of covering over 100 acres in a normal working day.

## ✓ The Range

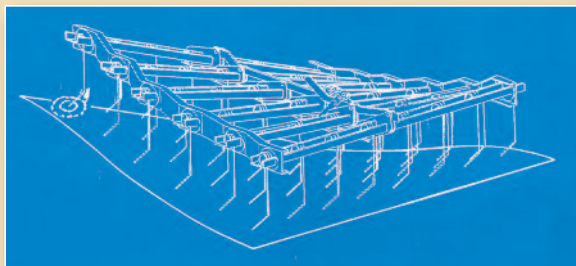
Working widths range from a very handy 1.5m to 12.4m. There are rigid and hydraulic folding units with a choice of 7mm or 8mm tines.

The machines are designed for strength without the need for high horsepowers and are equipped with a fully adjustable depth wheel, which works alongside the tine angle settings for maximum effectiveness.

The hydraulic folding models have a single acting ram that allows the grass harrow to be folded and unfolded from the tractor seat.

## ✓ Flexible Bed

The flexible design of the tine beds allow them to follow the contours of the land ensuring effective coverage and even tine pressure. Each bed has tines spaced at 30mm centres apart. As well as ensuring even tine pressure onto the ground, this design allows the harrow to self-clean as it moves through the sward.



## ✓ Adjustable Tine Angle



Quick and simple tine angle and pressure adjustment. Ground conditions will determine how aggressive tine pressure needs to be for effective harrowing. There are 10 clear tine angle settings so pressure can easily be altered, ensuring the vibrating action of the triple coil spring tine can be maximised.

## ✓ Spring Tines



The Grass Harrow's 7 or 8mm spring tines are able to penetrate even the hardest of ground, ripping out dead thatch this opens up the soil surface allowing air in the root zone to stimulating and encourage growth. The oil hardened spring wire has three times the service life of a normal sprung steel wire.

Channel mounting of tine coil prevents damage to the growing tip and leaf of the grass.

## ✓ Construction



The construction of the headstock consists of interlocking pieces of steel so the Grass Harrow doesn't just rely on the welding for strength. The frames and beds are powder-coated and most of the other steel parts are anodised so your harrow will stay in good working order and looking newer for longer.

## ✓ Hydraulic Cylinder



Hydraulic cylinder with lock to ensure safety during road transport.

## ✓ Folding System

When in transport position, the hydraulic folding models fold to between 2.5m and 3m dependant on the model of grass harrow. This allows easy transportation on the road and through narrow gateways.



## ✓ Support Wheel



Height adjustable support wheels are used in conjunction with the tine angle when setting the aggression and pressure required on the harrow tines to ensure the correct amount of pressure is applied.





# OPICO'S Air Seeders

OPICO Air Seeders are easily mounted onto Grass Harrows or any other implement. Seed is broadcast consistently and evenly, giving complete coverage of the area sown.

The seed rate can be varied from 1 to 80kg\* per hectare, according to the type of seed being sown

and whether re-seeding or over-seeding. Where over-sowing only specific areas of a field Electronic seeders can also be switched on or off during the harrowing operation.

Sowing should always be followed with rolling to ensure good seed-to-soil contact is achieved.



## Perfect partners

OPICO Grass Harrows and seeders can be used together for new re-seeds or for over-seeding old or patchy leys.

## Rejuvenate existing leys

The productivity of old or patchy leys can be rejuvenated and the life of the ley extended, simply by over-seeding. This is especially useful where poor drainage or flooding has killed off grass in certain areas of a field, or where livestock have poached ground near gateways and troughs. In addition the field does not have to come out of use.

With few effective clover-safe herbicides around, many farmers have adopted the approach of ridding the leys of perennial weeds like docks and thistles first, and only stitching-in clover once a clean grass ley has been established. Using the OPICO Grass Harrow bare ground is exposed onto which the broadcast clover seed can land and establish.

## Re-seeding new leys

Typically a first year re-seed is expected to give 25% more yield than an old ley, although improvements of 40% have been known. The modern grass varieties in seed mixtures have been bred to utilise nitrogen better, and have higher yields and digestibility than older grasses.

Where ground is heavy to work with conventional drills the OPICO Harrow and Seeder combination will get the job done faster.

After the usual ground cultivations always roll the field at least once to obtain a good firm seedbed before harrowing and seeding.

## Best practice

For leys to reach their full yield potential and quality, an integrated approach to grassland management is essential. As well as harrowing, this includes: maintaining good drainage, avoiding soil compaction, re-seeding with grass and clover mixtures appropriate to livestock and purpose, timely weed and pest control and tailoring fertiliser applications to compensate for soil nutrient shortfalls.

## Precise seed metering

Unlike many seeders, the OPICO Air 8 and Air 16 use individual metering wheels for each seed outlet enabling extremely accurate seed metering and guaranteeing the same amount of seed is fed to each outlet. This is crucially important when using low seed rates and small seeds.

### Four types of metering rollers are available

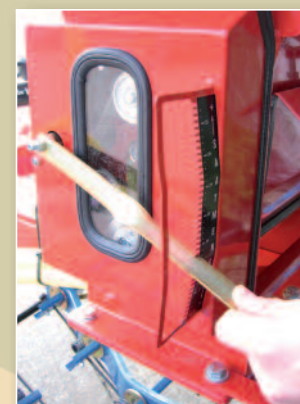
Two of these quickly interchangeable seed rollers are supplied as standard, the optional rollers can be purchased as an extra.



## Accurate seed-rate control

The amount of seed applied is controlled by the speed of the metering roller and is adjusted until the desired seed rate is achieved. The Air 8 mechanical drive seeder has a clever step-less gearbox to ensure reliability in work and seed rate. The Air 8 and Air 16 Electronic machines have a high specification speed-sensing motor that is constantly checked and adjusted by the computer control box to give you a constant seed rate at all times.

### Mechanical versions



A step-less gearbox and lever are used to adjust the seed rate.

### Electronic versions



The control box in the cab allows setting and adjustment on the move, and records the area that has been travelled and how much seed was put on that area.

## Calibration



On all machines this is performed by removing the metering roller cover and using the calibration tray.

## Drive mechanism



A toothed non slip belt is used for positive drive, to further guarantee drive all seeders are fitted with a drive belt sensor.

The belt also drives the agitator to stop seed bridging inside the hopper. To engage or disengage the agitator a simple coupler is quickly turned.

## Forward speed related metering

All OPICO Seeders have a heavy duty spoked land wheel drive that follows the contours of the ground to give constant forward speed related seed metering. It does not matter if you slow down or increase your speed you will always get the correct seed rate.



Electronic versions use a radar land speed sensor to feed information back to the control box. Standard mechanical drive machines use a greaseable 12mm steel flexible drive cable connected straight to the metering gearbox.

## Pneumatic seed delivery

Two Bosch 12v electric fans provide the air flow on the Air 8 Seeder to accurately deliver the seed down the pipes to the distributors. Optional on the Air 8 and standard on the Air 16 is a hydraulic drive fan.



\*Dependant on seeder