



Agrisem's Disc-O-Mulch can be mounted or trailed; widths run from 3m to 12m. For part of the test we teamed the 4.5m version with a 120hp tractor.

**Agrisem Disc-O-Mulch Gold cultivator:**

## Disc-O rocks the fields

French machinery specialist Agrisem has come up with a monster disc-based mulching cultivator in the shape of the Disc-O-Mulch Gold, sold in the UK under the KRM banner. We used one for a season; here's what we think

**D**esigned for fast, shallow cultivation that mixes and levels any crop residue while encouraging weed seed germination, the Disc-O-Mulch comes in mounted and trailed forms with working widths from 3m to 12m. Versions up to 3.5m wide are rigid, 4m machines can be rigid or folding, and then all the wider variants are fold-only. We went for a 4.5m trailed model, whose two rows of scalloped discs can be backed by one of eight rear rollers; the test machine came with a 600mm diameter Flexi-Roll.

Whatever the French engineers might have economised on when laying out the Disc-O-Mulch, it wasn't steel. The test machine weighed in at an impressive 7.75t, which if nothing else should mean that hard-land penetration won't be a problem. The design is based around a central spine frame that carries two vertical-folding wings, with a couple of transport wheels at the back and a long, rear-pivoted drawbar. Tractor attachment is either via a ring hitch, a 70mm ball hitch or a linkage drawbar; we opted for the latter as our preferred choice (the ball hitch)

brought the cultivator's drawbar-mounted air brake couplers and hose carrier too close to the pto shaft of a Claas Axion 820. While that won't hold true for all tractors, Agrisem said it will re-jig the brackets to give more clearance.

**Machine attachment involves connecting lines for the lights and brakes plus seven hoses: six serve double-acting rams for the drawbar, wing folding and the transport wheels; the other handles the wings' transport locks. Two drawbar stands are used,**





A substantial 1.07m in between the gangs, plus 0.63m of under-beam clearance, leaves plenty of room for trash movement. Individual discs attach via a very hefty 35mm-section pigtail spring, which allows up-and-side ways 3D movement to accommodate obstacles while also giving positive down-force (and thus effective disc action) when working through tramlines – excellent. Continuing the ‘big is better’ theme, each disc is carried on 80mm sealed bearings (much bigger than the opposition fit, says Agrisem) with a 100mm option in reserve for extreme conditions. On first sight we thought the



Where the front depth control ram is used, setting is by drop-in spacers.



Attachment is by ball hitch or, as here, by linkage drawbar. The hose holders and cable routing could be better. When a ball hitch is specified, the ram (right) controls the front of the machine.

one to each side, so the operator has to walk round the machine. A single stand should be plenty, but Agrisem says two stands are better when moving the Disc-O-Mulch on a flat-bed trailer. On the plus side, very tight turns are possible thanks to the drawbar’s generous length. Where a ball hitch is the preferred option, drawbar ram extension during lift is decided by drop-in spacers.

Two gangs of scalloped discs are used, each carried by a massive 120mm x 120mm frame.



Four sets of pin-and-hole adjusters control working depth. Stickers show hole choice.

## Test assessment

### Agrisem Disc-O-Mulch Gold

Stands	⊗
Wiring/hose holder	⊗
Break-back protection	⊕⊕
Disc penetration	⊕⊕
Finish	⊕⊕
Consolidation	⊕⊕
Depth uniformity	⊕
Cultivation across full machine width	⊕
Block-up risk	⊕
Press performance	
- in heavy soil	⊕⊕
- in light soil	⊕⊕
Manoeuvrability	⊕/⊕⊕
Depth control	⊗
Transport/work change	⊕
Transport width	⊕⊕
Stability in transport	⊕
Lights, warning panels	⊗
Maintenance	⊕
Build	⊕⊕
Paintwork	⊕⊕
Operator’s manual	⊗

Ratings: ⊕⊕ = very good; ⊕ = good;

⊗ = average; ⊖ = below average; ⊖⊖ = poor



Big 35mm x 35mm pigtail legs carry the discs. With 215kg/leg, penetration wasn’t a problem.

sizeable hubs would interfere with trash flow, but they don’t; in reality the slim design of the pigtail/disc assembly, plus the 255mm disc spacing between legs on a gang, provides plenty of space. Taking into account the stagger between gangs, the effective disc spacing is half that.

There is innovation over disc diameter, as the Disc-O-Mulch employs 610mm items up front and 560mm items in the second row. Consequently, the front gang cuts a little



## Measurements

### Agrisem Disc-O-Mulch Gold

Length/width/height	7.30m/< 3m/< 4m
Linkage drawbar width	1.02m
Main beam	400mm x 300mm
Disced land width	4.53m
Disc number front/rear	18/18
Gang spacing	1.07m
Disc spacing on land	128mm
Disc diam. front/rear	610mm/560mm
Disc thickness	6mm
Nearside discs f/r	510mm/560mm
Disc angle at front/rear <sup>1)</sup>	17°/20°
Disc pitch at front/rear <sup>1)</sup>	9°/9°
Break-back protection	Pigtail spring
Rear press	600mm Flexi-Roll
Press width	4.63m
Number/spacing of rings	26/180mm
Ring element width	50mm
Weight	7.75t
Weight per disc	215kg
Tyres	400/55-22.5
Max transport speed	25km/hr
Base price, before VAT	£40,650

<sup>1)</sup> Maker's data

deeper than the rear. But the back ones spin faster and so promote mixing, and it's also claimed the arrangement evens out wear between the front and back sets. The gangs' angles are fixed but are also different, with the front discs pitched at 17° to the direction of travel and rear ones at 20°. All discs are also angled down by 9° in the direction of travel, yet despite this relatively shallow set, the penetration was always effective – which has much to do with the roughly 215kg loading on each disc. Even at low forward speeds the discs mix up trash and soil very well. A standard clod board can be fitted between the gangs. Adjusting this needs spanners; a powered option would be preferable here.

So does this weighty bit of kit take a lot of pulling? Not as much as you might think. We handled it with 120hp up front, though naturally more power would be better for any



The folded 4.5m Disc-O-Mulch measures comfortably under 3m wide. The transport speed is set at 25km/hr max.



Lateral rams fold weighty wings up for transport. The spindly-looking lighting arms are now stronger.



Tyres seem small for a 7.75t cultivator. There's plenty of room for bigger boots.

deeper work and in more demanding going. Regardless of forward speed the Disc-O-Mulch seemed to just surf the land, never bouncing through rough and/or hard patches; again that weight works in its favour.

Working depth is set across a 150mm range by adjusting the rear roller, via a pin-and-hole system. This arrangement gives plenty of steps but you really do need the instruction sticker, as the hole pattern isn't easy to figure without it. Changing pin position on the middle two sets involves climbing over the rear roller.

The maker says that the cultivator's working speed range spans 8km/hr-18km/hr. For stubble incorporation we worked relatively shallow and motored along at 14km/hr, but also went down to 120mm depth in looser soils with chopped straw and slurry on top. Beyond this we found an increasing tendency to block up between discs in some soils. The way soil and trash are mixed is first rate, and the combination of two small outer discs and an adjustable deflector on



the left side meant that hardly a crumb escaped, even at high forward speeds. On the right side there is another adjustable big deflector. Thanks to the combination of these the Disc-O-Mulch leaves a very level finish and accurately matched bouts, deserving of special praise.

**There's quite a gap between the second disc gang and the roller, which gives soil a brief window to settle.** The test unit's Flexi-Roll measured 600mm in diameter (since increased to 700mm), and its relatively supple construction proved immune to blockage; the resulting surface finish was level, well-consolidated, free from any stripes and promoted uniform emergence of volunteers. Each of the roller's rings is made from segments of 50mm wide flat steel, free at one end and arranged like a series of slippers to form a circle. In work a couple of segments broke on contact with big obstacles and a few supporting spokes were bent; current versions are made from heavier-duty steel, says Agrisem.

For road transport the cultivator rolls on 400/55-22.5 tyres. These seem on the small



*The Flexi-Roll press on the test machine used individual segments of 50mm wide steel, arranged in a spiral. One of eight roller options, it worked very well. Segment width has since been increased to 80mm.*

side given its bulk, though with the machine rated for travel at 25km/hr they shouldn't be a problem. If you prefer Agrisem now offers a 500/55-22.5 option at £595. Wings latch hydraulically once folded so transport/

work conversion is simple. Out on the road the Disc-O-Mulch rides smoothly and tracks well behind the tractor; the only shortcoming we found was with the slim road light brackets, which needed welding during the test. The maker says these have since been beefed up.

**Other business:**

- Lighting cables are routed untidily, hose routing is much better
- The drawbar's hose support bracket is too close to the tractor
- All pivot pins are bolted down (so can't turn) and are greasable – very good.

**Summary:** Easy to set up and use, the 4.5m Disc-O-Mulch stands out for its fine quality of work across a wide range of conditions and depths. Dependable soil penetration stems from its very substantial 7.75t weight. This is a massive machine with quality evident in almost all quarters, which exacts a price – £40,650 in base form. That money, though, buys a rock-solid cultivator.