

BOSS • big BOSS m BOSS



NO-TILLSPECIALIST
No-Till Drill
Minimum Tillage

COMPANY

AGRISEM is a french company born in the mid 90s, specialized in the design, manufacture and sale of TCS tools for tillage, fertilization and sowing. Our main focus is to help the farmer get the most out of his most important tool: the soil.

The has been elaborated in Lot & Garonne - France. by Mister Cyrille Geneste a farmer. The advantage of being real min-till and no-till farmer, is that you are aware of the reality of the job itself, in and out of the field.

Every new idea and machine is tested thoroughly in real conditions, in a variety of soil types.

We stain for our vision of sustainable farming. Minimum and No tillage practices are what we believe in. Our everyday work is to imagine, develop and manufacture machines which will help you to perform with

new challenges.



The main AGRISEM innovations are focused around two main aims :

- The shallow work for managin organic material, fertility of soil and seedbed preparation we have designed a range of machine with that spirit.

- The deeper loosening for geting the best of structure of soil, without minreal losses, in order to

give the plant the good condition for growth.

- Precision sowing to plant crops in the best conditions, fertilize as accurately as possible thanks to versatile tools.

- More recently, AGRISEM continues its development with new solutions for viticulture and conservation agriculture.



BOSS STORY

Conservation agriculture is at the heart of our concerns.

This no-till drill is the result of a long period of collaboration with experienced no-till drill farmers. The challenge was to imagine a drill allowing us to overcome the difficulties encountered with actual no-till drill: Residue in the furrow, difficulty in penetrating hard/dry soil and difficulty in closing seed furrow in wet conditions.

We have travelled the world to find a no-till coultter design we could adapt for European conditions.

Weather and climate is constantly changing, conditions change, residue levels change, so choosing the correct coultter is vital to your success. We quickly found out that the no-till drill which could fix most of these issues, is available in Australia, pioneers of the No-till technic, and made by BOSS. The Boss unit from Australia has been adapted for European conditions, we have successfully combined years of BOSS's experience in the toughest conditions, with our knowledge of the European requirements and we end up with a new and innovative double angled disc no-till drill: The BOSS

The great strength of the product is its double angled disc which reduce the down pressure requirement and the seed furrow compaction. This ensure a great furrow quality : clean and less pack or even « unpack », which will allows a seed germination and root development.

THE SEED DRILL THAT YOU ACCOMPANIED AT YOUR RHYTHM

The range is large and scalable to answer everyone's need: from 3 to 12m, with no or up to 4 dosing unit, 16.7 cm, 18.75 cm, 20 cm or 25 cm row spacings.



The selection of a new drill is something difficult, in order to make your choice, AGRISEM can visit you with a demo machine. Test and compare the BOSS in front of the drills that caught your attention: essential before purchase...

THE FINDING

By combining our extensive research with customer experiences and feedback we have found that most of the problems associated with no-till are the same no matter what the brand of coulters/drill or machine.



Residue in the furrow
(Hair-Pinning)



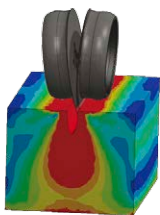
Difficulty in penetrating
hard/dry soil



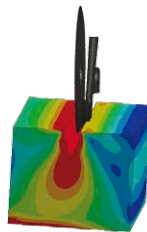
Difficulty in closing seed
furrow in wet conditions

COULD THERE BE A LINK ?

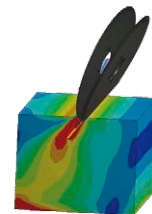
Thanks to both field testing and 3D modelling we have calculated different simulations using both existing and new designs of disc coulters. We have considered the soil as a known material to see if any correlations appear.



V DOUBLE DISC
WITH SIDE GAUGE



SINGLE DISC
WITH SIDE GAUGE



ANGLED DOUBLE V
DISC

The red zones show compaction, blue show little compaction.

Red zones have confirmed the two difficulties of penetrating in the dry versus closing a furrow in the wet. It has also shown how a lack of row cleaners can cause more severe compaction when planting. More residue means a greater surface area pushing down and therefore a wider and larger compacted area.

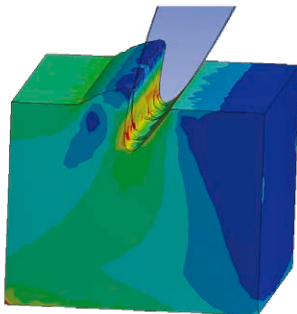
It is simple to understand that when any seed germinates it first anchors itself with roots and begins nutrient and water uptake, so it is vital that this first stage of life is a success.



PRINCIPLE OF THE UNDERCUT

A concept that caught our eye in Australia was the double angled disc, also called the undercut disc. This solves many problems associated with no till seeding.

When we run analysis on the double angled disc we found that the down pressure requirement was reduced and more manageable versus seed furrow compaction.



We also observed the inflation of soil on the outside of the disc.

! If we place a gauge wheel at this position then severe localised compaction would occur.

TYPE OF DISC GAUGE TYPE	MONODISC	V DOUBLE DISC	ANGLE DOUBLE DISC V	UNDERCUT DISC	UNDERCUT DISC
	SIDE	SIDE	REAR	SIDE	REAR
Penetration in dry conditions	--	-	---	++	+++
Closing the furrow in wet conditions	--	---	++	-	++
Residue in the furrow	-	--	-	+	++
Depth control with residue	-	--	-	-	+

WHAT COULD BE THE IDEAL NO-TILL DRILL ?

UNDERCUT DISC + CLOSING & GAUGE WHEEL + ROW CLEANER

The Boss unit from Australia has been adapted for European conditions, it features a double angled disc. The gauge wheel is at the back of the unit and is also the closing wheel. The side wheel is mounted on a spring and acts as a scraper and keeps the soil in the furrow. To manage residue a Sly row cleaner is available with pneumatic down pressure, controlled from the tractor cabin.



WE KEPT THE ESSENTIALS

1 UNIT DOWN PRESSURE

The unit is mounted on a parallelogram. Down pressure is achieved via hydro-pneumatics.

Connected to a sensor on the gauge wheel, the hydraulic down pressure allows ultimate control of the coulter pressure. This gives an ideal situation to monitor and control furrow compaction and depth.

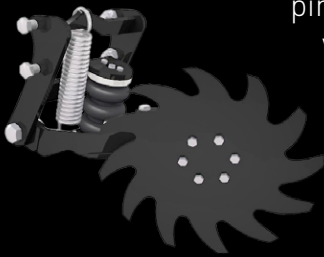


2 ROW CLEANING

Farmers very rarely use precision planters without row cleaners in no-till so why do we do it with drills?

The Boss concept greatly reduces hair pinning when following a crop like wheat with chopped straw.

The use of row cleaners is optional but it allows the owner of the drill to choose which solution is correct on a given day, since no day is the same and no field is the same.



3 THE DISC & SEEDBOOT FOR A PERFECT MARRIAGE

The seedboot is placed in shadow of the disc. This allows excellent performance in wet sticky conditions. The seedboot is positioned to never touch the soil and such that the front of the disc is the only soil contact point. The wet soil is cleaned by an active scraper (the side wheel). The less static parts in contact with the soil results in far less risk of plugging/bunging. The concept allows for drilling in the same direction as last year's corn rows. If you do not need to run at an angle to last year's crop, there is a better chance of implementing practices such as CTF (controlled traffic farming). No angle generally means a smoother travel and better seed placement improving emergence and therefore yields.



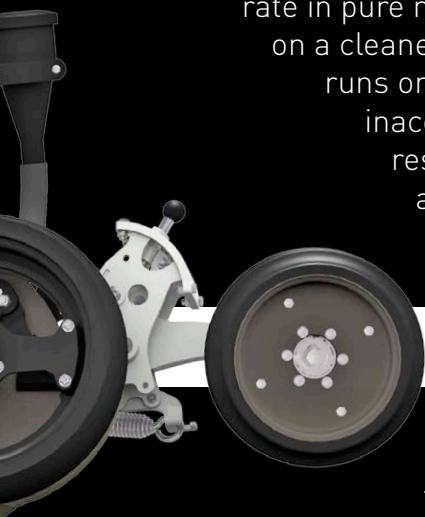
BUT WE CHANGED THEM A LITTLE!

4 TWO GAUGES ARE POSSIBLE

The gauge of the unit can be done either by the rear closing wheel or the side wheel. We intentionally chose to allow both. It all comes down to the same problem, no condition is the same, our customers must have flexibility.

GAUGE WITH THE SIDE WHEEL This position will be the most accurate to drill in the best conditions or on prepared soil where there is no problems of penetration or furrow closure (fields that may have been lightly tilled or are in very good condition post harvest). The wheel is close to the seed boot and so depth control is like a precision planter.

GAUGE WITH THE CLOSING WHEEL The position will be the more efficient and accurate in pure no-till conditions: The gauge wheel is the closing wheel which is running on a cleaned row to improve depth control. In no-till, a gauge wheel on the side runs on crop residue, which means that the depth can be inaccurate and is very susceptible to the condition of the field and what residue is left. As we have found residue effects furrow compaction and a solid side wheel can increase sidewall compaction so rear gauging is preferred in no-till.



5 CLOSING FURROW MANAGEMENT

The closing wheel has a very important job to do, if incorrectly chosen it can have detrimental effects on the emergence and yield.

On our unit it has two jobs, closing the slot but also most of the time gauging the seed depth. On the Boss unit the closing wheel, closing angle and the seeding depth is adjustable all without the need for tools, row by row.

This gives the farmer ultimate control of the seed depth and closing furrow in any conditions or soil type (for example behind the tractor wheels).



To suit every soil type, different closing wheels are available and if none of them are your preferred the bracketry and axle is designed to suit the most common types of closing wheel available on the market.

Adjustable without tools



OPTIONAL

THE SEEDING UNIT

- Rear gauge: No tool depth and angle adjustment
- Floating trash wheels with in cab control



- Active scraper: iron circle clamp on the tyre
- Limiter on floating wheel: Allows to gauge with the side cleaning



THE FRAME

- Hydraulic markers
- 710/50R26.5 Wheels



- Electrohydraulic module: 1HD - 3 functions
- Hydraulic central system 70 litre tank



TANKS

- mBOSS Divided hooper from 1600 to 3200L and small seed tank



- 1,2 or 3 tanks solid or liquid of 1200 or 2000 liters and small seed tank



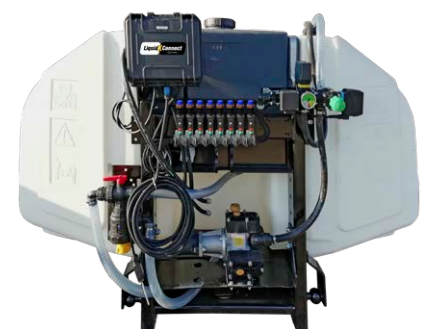
- Seeding controller
- Tramline system

LIQUID FERTILISATION EQUIPMENT

- Tank, Available capacity 700, 1100, 1200, 1500 or 2000L.
- Exadose Regulation
 - 2 models, 15 or 75 l/mn
 - Fittings, couplings
 - GPS and on/off switch
 - Software for IOS or Android



- Liquid fertilisation kit: WILGER Ball Flow Indicators + connections + 1 set of nozzle at the user's choice + assembly



THERE IS A BOSS DRILL FOR EVERY FARMER





THE MBOSS A FULLY EQUIPED SEED DRILL

The custom-made chassis has a rolling gauge of 2.99m for France and a maximum of 4m for abroad. The mBOSS is fitted as standard with all options on the row. Like the big ones but small size!

It can be equipped with 3 different size of double product hopper, from 1600 to 3200L. An additional small hopper DS 200 and/or a 22L hopper for small seeds for incorporation in the dosing units can be fitted as well.

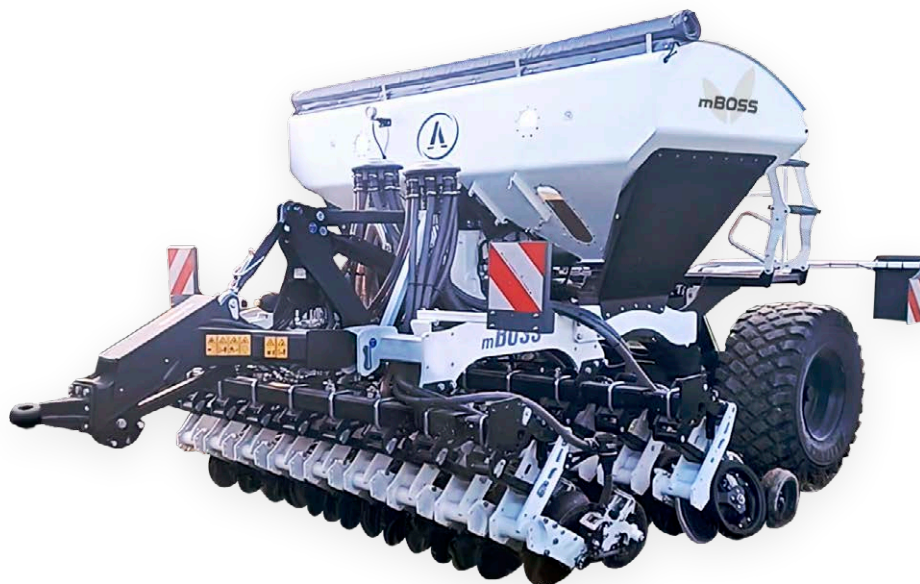
The doser is electrically driven with a pneumatic transport system and a shutter system for a differentiated distribution of 2 products.

The ISOBUS regulation associated with the GPS speed allow you to connect a controller according to your needs (A-Touch: Latest generation terminal, tactile with precision farming functions, or A-Manager), and combine it with a radar and a 120 ° infrared camera.



FROM 3 TO 4 M

mBOSS



SPACING

ROW	16,7 CM	18,75 CM	20 CM	25 CM
12	WIDTH (CM):			300
14				
16		300		400*
18	301			
20			400*	
22		413*		
24	401*			

Divided hopper: from 1600 to 3200L
DS3200 2x1600L with x 2 dosing unit (4xØ70mm)
DS2200 2x1100L with x 2 dosing unit (4xØ70mm)
DS1600 2x800L with x 2 dosing unit (4xØ70mm)

Independent distribution of 2 products and distribution heads
Electric dosing unit, pneumatic distribution by air flow
Electronic or ISOBUS control computers
Compatible with DGPS receiver
Transport width: 2,99m

* 4meter model not road homologated in France,
please check the regulations that apply in your country



THE BOSS, A VERSATILE SCALABLE SEEDER THAT ACCOMPANIES YOU IN YOUR DEVELOPMENT

Its design is based on the modularity of its chassis. Available as standard in 3m you can upgrade your BOSS by adding wing extensions to reach up to 7m90 wide!

In the same way you can start with just one central hopper and add other ones, small seed tanks, liquid or solid fertigation tanks (front or rear) later according to your needs and your development schedule.

The elements, fully adjustable without tools, allow flexibility of use and ease of settings to adapt your work very precisely according to the field conditions encountered.



FROM 3 TO 7M

BOSS



SPACING

ROW	16,7CM	18,75CM	20CM	25CM
12	WIDTH (CM):			300
14				350
16		300	320	400
18	301	338	360	450
20	334	375	400	500
22		413	440	550
24	401	450	480	600
26	434	488	520	650
28	468	525	560	700
30	501	563	600	750
32	534	600	640	
34	568	638	680	
36	601	675	720	
38	635	713	760	
40	668	750		
42	701	788		
44	735			
46	768			

Pressurized hoppers: 1,2 or 3 hoppers of 1200 or 2000 liters each. Hopper small seed: 200 litres
 Electronic regulation: Standard with hoppers - ISOBUS Compatible
 Transport width: 2,99m



THE BIG BOSS, THE LARGE-SIZED SEED DRILL FOR LARGE SOWING

From 7m to 12m, you take advantage of its large carrying capacities to sow very large areas and achieve significant economies of scale.

The Big BOSS is designed for large spaces and allows the integration of all the specific equipment of AGRISEM technologies in the field of direct seeding: undercut disc, lateral gauge, hydraulic depth control, adjustment of the rear gauge and its possibilities of liquid fertilization.

Despite its size, the Big BOSS remains easy to use on a daily basis with its hydraulically-controlled folding maneuvers and its 2m99 width for road transport.



FROM 7 TO 12M

big BOSS



SPACING

ROW	16,7CM	18,75CM	20CM	25CM
28	WIDTH (CM):			700
30				750
32				800
34				850
36			720	900
38		713	760	950
40		750	800	1000
42	701	788	840	1050
44	735	825	880	1100
46	768	863	920	1150
48	802	900	960	1200
50	835	938	1000	
52	868	975	1040	
54	902	1013	1080	
56	935	1050	1120	
58	969	1088	1160	
60	1002	1125	1200	

Pressurized hoppers: 1,2 or 3 hoppers of 1200 or 2000 liters each. Hopper small seed: 200 litres
 Electronic regulation: Standard with hoppers - ISOBUS Compatible
 Transport width: 2,99m

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