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For many years, under the working of the soil, the plough has been considered the best technique for obtaining the maximum soil fertility. Now things seem to be changed! The agriculture and, by consequence, the agricultural mechanization process have to grant as higher as they can the productions, by maintaining the increasing company costs and, in the same time, to value the production factors for saving the environment resources, in particular soil and water.

In this new landscape, the techniques of sub soiling and soil loosening, combined with a superficial breaking of the soil, find their space.

The ma/ag's answer is the Combined Decompactor Subsoiler COMBILAM.

#### WORKING IN DEPTH AND ON SURFACE FOR A BEST CROP

- Equipment studied for obtaining the soil loosening and the de-compaction of the soil without the reverse of the layers. By using the COMBILAM, it is possible to obtain an effective working up to 40-50 cm without creating soil cloddiness. This characteristic is possible by the use of the original Anchors with bending profile "Michel" patent, arranged on 2 rows.
- The equipment can be combined and completed with a series of tools, in front and on the rear of the ripper, in order to optimize the performances with a high reduction of working costs.
- The front disc with the hydraulic adjusting is very effective, fruit of thirty years of experience in the passive working that allows you to manage significant amounts of crop residue.
- On the rear, the equipment can be fitted with different solutions (breaking discs, finishing rollers, etc.) designed to achieve the desired effects.

#### RESULTS THAT YOU CAN REACH BY THE MANAGEMENT SOIL CONSERVATION

- **High productivity of the work** for obtaining high speed of intervention, exceed the constraints of climate trends, make tight turns.
- **Restraint of energy costs** by reducing processing working steps;
- Best water development, encouraging both the dripping water and its ascent by capillary pitch;
- **Growth and increase of the cluster root activity,** trying to differentiate the functions of support from those absorbing water and nutrients;
- Breeding and feeding of the soil fertility, favouring the concentration of the organic matter on the surface layer where the humidification processes are most favourable;
- Rational utilization of fertilizers, from the equipments for working the soil, to locate and split in the time their distribution. You must take into account that in Italy, about half of the arable land surface is on clay or clay-loamy soils, with irregular rainfall, which, especially if invested in crops renewal, working the soil is extremely important in allowing a water development and promote the development of the cluster root activity.



#### **POWER POINTS**

The **Combined Decompactor Subsoiler COMBILAM** permits:

- High productivity of the work with a working speed variable from 5 to 15 Km/h and a yield per hour from 4 to 7 hectare/hour according to the models and a consequence reduction of the manpower
- **Double layer work,** obtained thanks to the use of the subsoiler: up to 50 cm with the anchors and up to 15 cm with the front and rear discs
- Low level surrounding impact, less reduction of carbonic acid in the environment and a very significant reduction of the use of the fuel per worked hectare
- **Possibility of the use of the biologic agriculture,** thanks to the sequence of the working elements that permit the control of the weeds
- Reduction of the number of passes obtaining thanks to the working elements. In general it is necessary 1 or 2 passes for obtaining the desired work.
- Reduction of the production cost up to 50% to the "traditional" working system with the plough and the rotary harrow thinking of the equipment costs, maintenance costs (minimum), depreciation (medium life of the equipment high) and working costs (big productivity)
- Production yields comparable, if not superior, to that obtainable with the "traditional" working system
- High presence of the crop residues after the working up to 70%, obtaining thanks to the not inversion of the layers.
- Hard activity of the soil formation in fact, after a couple of years by using the equipment, the presence of animals, like earthworm or other, in the first soil layers is significantly increased.

### **MAIN ELEMENTS**

(1) III point linkage to the tractor III<sup>a</sup> CAT

- Corrugated, breaking and mixing disc. Ideal for managing a significant amount of crop residues. Realized with boron steel and mounted on a square 40x40 mm shaft and swivelling supports with double conical bearings with interchangeable protection carter system ma/ag.
- 3 Hydraulic device for the regulation of the effect on the soil of the front discs and of the depth of the rear loosening group.
- 4 Soil loosening group with Anchors with bending profile type "Michel" H 800 mm. The anchors are arranged on 2 working rows, permitting the soil loosening without the reverse of the layers at important depths.

# Safety device by a shear bolt. Interchangeable anti wears shares and protections.

5 Double corrugated breaking roller, mechanical adjustable by a plate with holes, that permits to mix the soil and the further breaking of the crop residues, permitting, in this way, the fast decomposition of the same and the subsequent transformation into natural organic fertilizer.

Realized with boron steel discs, mounted on a steel shaft and swivelling supports with conical bearing with interchangeable carter - system ma/ag.

6 Single levelling stabilization cage roller. Put after the double corrugated breaking roller, it is available in the plates or tubes version, in different diameters, according to the use of the same.



CBL I 40/12





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## **TECHNICAL DATA**

MODEL	WORKING W (m)	TRANSPORT (m)	FRAME	ANCHORS (N°)	HP NEEDED	SUBSOILER WEIGHT (Kg)	FRONT DISCS WEIGHT (Kg)	REAR DISCS WEIGHT (Kg)
CBL 30/8	3,00	3,00	Fix	8	140/180	1330	670	810
CBL 30/10	3,00	3,00	Fix	10	150/200	1470	670	810
CBL I 40/12	4,00	2,55	Hydraulic fold.	12	200/280	2120	890	1130
CBL I 55/16	5,50	2,55	Hydraulic fold.	16	280/360	2410	1225	1410



EQUIPMENT WITH PRESSED STEEL ROLLER, WITHOUT DOUBLE BREAKING DISCS







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