

Oekosem® Rotor-Strip-Till System

The Machine for All-Year-Round Planting,
Seeding, Fertilizing and Corn Stubble Processing

✓ **Saves Time, Money and Fuel**

Thanks to combining several work steps in one machine you will be planting in one single

✓ **Reliably High Yields**

Thanks to a perfect seed bed as well as water and heat retention in the untilled strips

✓ **Stops Erosion**

Thanks to 60 % untilled surface you avoid erosion and soil compaction





Reduces Costs and Secures Yields

The Rotor-Strip-Till System Oekosem creates a perfect seedbed for all row crops in one single pass. The untilled strips are preventing erosion and save water. Through fertilizing, sub-soiling, rotavating and seeding in one single pass you are saving time, money and preserve a high-yielding soil structure.

In Switzerland the ploughless Rotor-Strip-Till System has been applied successfully over the last 25 years. For instance: Despite increasing drought periods the yields have remained high thanks to the high water holding capacities in the no-till strips. Oekosem is effectively fighting water- and wind-based erosion thanks to strip-tillage. Only 40 % of the overall surface are tilled while the remaining 60 % stay untilled. .

Water Conservation

In water conservation areas the tillage system Oekosem can effectively heighten the retention potential of the soil through no-till strips which store and buffer nutrients as well as filter pesticides. Also, Oekosem strip-till potentially reduces the necessity to use pesticides in the first place.

Fighting European Corn Borer

After harvest, the Oekosem can be retrofitted to be used as corn stubble processing tool. The soon to be patented tool is effectively fraying the corn stubble including the rootstock so that the European corn borer (*Ostrinia nubilalis*) doesn't find any residue that could be used for it's overwintering. At the same time, you can add the doublerow planter Baertschi Duo-Drill to the machine and plant a winter-hardy cover crop in that one single pass. (See image 1, 2, 5, 7, 12)

Advantages

- ✓ Little to no soil erosion or soil capping thanks to no-till strips
- ✓ Reliable system for high yields, especially with limited water resources
- ✓ 30 - 50% cost savings thanks to fewer passes on the fields
- ✓ Long-term conservation of soil fertility through minimum tillage
- ✓ Improves the image of corn production towards critical

- 0 Title Page: Row-rotavating and -planting of corn into forage grasses in one pass.
- 1 With this soon to be patented tool, the rotavating blades are fraying the corn stubble including the rootstocks.
- 2 The corn stubble processing is highly effective and hits almost all stubble residue and rootstocks within the rows.
- 3 Sub-soiling tines with wide wing shares are loosening the soil in depth and also lift the soil into the rotavator.



Simple and Successful System

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4 Combining work steps: Fertilizer is fed from the front mounted tank and incorporated with the Rotor-Strip-Tiller. The precision planter and the micro-granulate-spreader are semi-mounted to the back.

Oekosem is tilling 4, 6 or 8 rows simultaneously. The row spacing can be varied to 37.5, 50, 70 or 75 cm. The sub-soiling tines are running in a depth of around 15-25 cm.

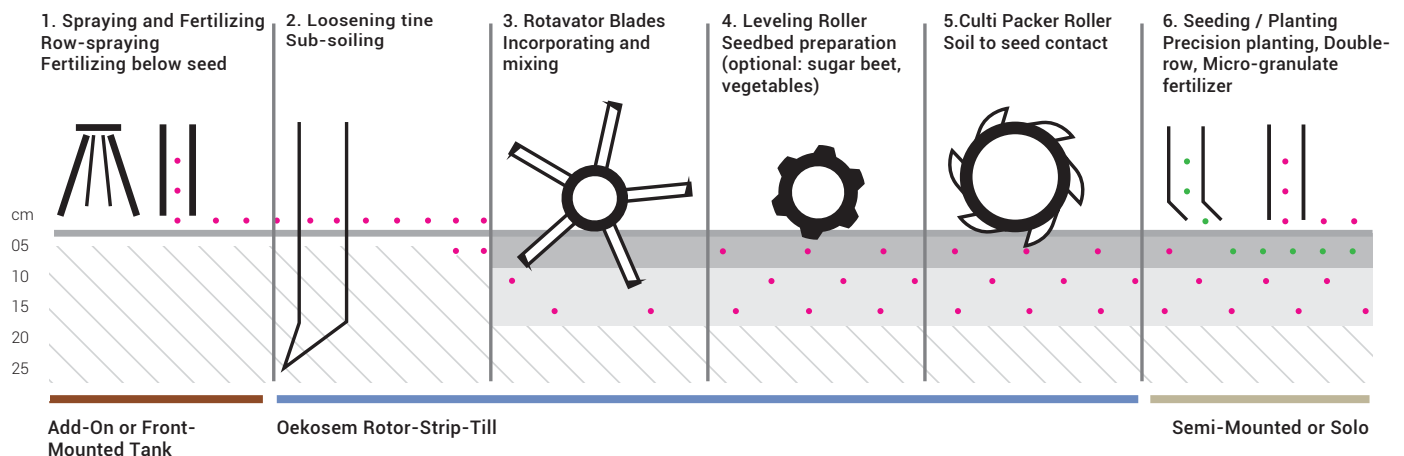
The rotavator is incorporating any applied fertilizer into a depth of 7-15 cm and produces a uniform and finely structured seedbed. The culti packer roller secures tight soil to seed contact.

And this is how simple the ploughless Rotor-Strip-Till System really works: The soil in the tilled strip is mixed with the applied fertilizer, finely crumbled and therewith prepared for seeding. The sub-soiling tines which are fitted in between the rotavator knives can be easily adjusted to the desired depth in which the soil is to be loosened. Within the strip, the soil is lifted into the rotavator with the wide wing shares so that the soil is settling back down a little after the rotavator has passed. This is to avoid any hard-panning through smearing of the rotavator. At the same time, this stimulates strong root growth and a penetration of roots into even deep layers of the soil.

For vegetable producers there is a new option available: An actively powered leveling roller which is planing the soil surface perfectly and leaves a very finely structured seedbed. At last, the adjustable culti packer roller is delivering the right soil to seed contact.

All of this amounts to a perfect seedbed which is the best basis for strong root growth.

5 to 8 Work Steps Combined into One Single Pass





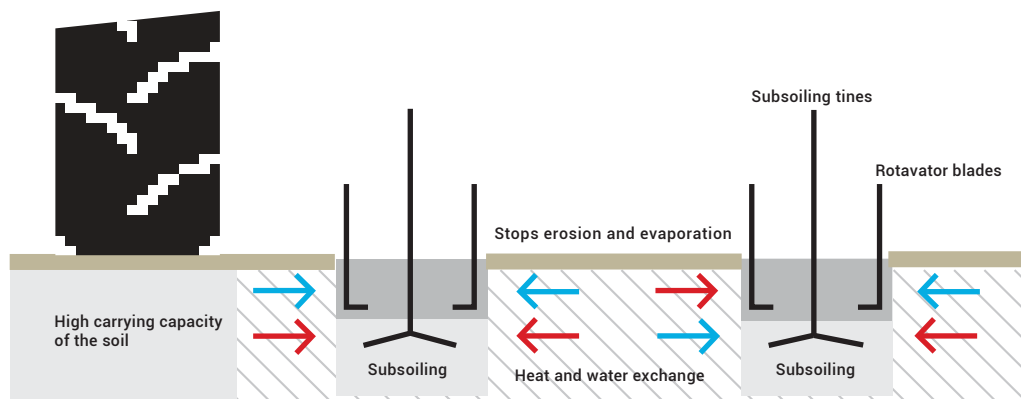
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Experience with the Oekosem

The Rotor-Strip-Till System was developed 25 years ago in Switzerland and has ever since been improved and further developed based on the experience of farming professionals that utilized it. An example: Nearly 40 % of the overall corn production in Switzerland is nowadays utilizing this system. This does not come as a surprise: It delivers high yields reliably, saves costs, and prevents soil compaction as well as water and wind based erosion.

In every single row, precisely below the working depth of the rotavator, there is a sub-soiling tine that is partially lifting the soil and therewith loosening it. The rotating rotavator blades are tilling the first 7 to 15 cm of the soil, depending on the exact adjustment. They are incorporating the remaining plant residues into the soil. The soil gets aerated and a finely structured seedbed is created.

Minimum Tillage, Optimal Soil Conservation and Maximum Yield





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Some Typical Fields of Action

- 5 Row-rotavator with semi-mounted double row planter Baertschi Duo-Drill. Example here: Double-row planting of canola
- 6 Emergence in the field of canola double rows. Next to it: The no-till strips.
- 7 Corn stubble processing unit with the roller crimper WecoCut from Baertschi trailing behind.

You can acquire Oekosem in different designs, based on your needs:

Corn Production: One of the most important fields of action

Allows time for mowing of the previous (forage) crop in the spring. Stops erosion, allows for heat and water buffering. Especially applicable in production areas with a lot of slopes. Reliably high yields also under extreme weather condition such as drought or heavy rainfall.

Canola: Ideal if combined with the canola drill Baertschi Duo-Drill.

Thanks to double-row drilling: heavy tillering and better aeration. Simultaneous sub-soiling for optimal root growth. Living strips fix the volatile nitrogen in the soil over the winter month. More light and stronger yields through better development of pods.

Sugar Beet: Oekosem-P with actively powered leveling roller (Image 8)

Perfect emergence rates through homogeneous and fine seedbed. Planting in one single pass, therefore better utilization of early planting dates. Good traction for harvesters without causing compaction thanks to green tramlines. Better yields though high water-holding capacity of the no-till strips.

Cabbage, vegetables, strawberries, herbs and transplants generally

Especially advantageous in water conservation areas thanks to no-till strips. Good traction for harvesters without causing compaction thanks to solid lanes. Stops erosion, especially on hilly terrain. High yields through high water holding capacity of the no-till strip

Beans and Soybean

Good traction for harvesters without causing compaction thanks to solid lanes. More light and high yields thanks to fully filled pods . Reliable yields also after heavy rain and drought.



Planting with a Row-Rotavator: A Field Trial

Extract from field trial results published on landwirt.com, January 2014

Experimental site in Oberlimbach (Stmk) - Grain maize

	Plough	Reduced tillage	Row-Rotavator
Dry matter	71.89%	73,82%	74,07%
Dry weight (86% TM)	7780 kg/ha	7840 kg/ha	7920 kg/ha
Relative to plough	100%	101%	102%

Experimental site in Bad Wimsbach-Neydharting (OÖ) - Grain maize

	Plough	Reduced tillage	No-till	Row-Rotavator
Dry matter	63.8%	64,6%	64,9%	63,9%
Dry weight (86% TM)	8625 kg	8938 kg	6044 kg	9611 kg
Relative to plough	100%	104%	70%	111%

Summary of the field trials

Through the good, in-depth soil structure and soil-loosening the corn root had enough growing space available and the plant could develop accordingly. In contrast to some of the the plough or reduced till variants, even after torrential rains in May, the soil remained stable in the row-rotavator variants and no water was lost.

Oekosem, the All-Year-Round Equipment



Seeding Sugar beet, silage corn, grain maize, soybean,



Winter hardy cover crop, canola,

	February	March	April	May	June	July	August	September	October
Planting									
Vegetable, Herbs									
Strawberries, corn stubble processing									



Technical Facts and Options

- 8 New: Oekosem-P with actively powered leveling roller (in the center of the machine) for a perfectly even, finely crumbled surface for seeding sugar beet, vegetables and canola
- 9 New: Strip-Rotavator for 8 rows with a row spacing of 37.50 cm suited for canola, soybean and vegetables.
- 10 Reliable and high yields thanks to high water and heat holding capacity in the no-till strips
- 11 Result of the corn stubble fraying with the soon to be patented stubble processing tool.
- 12 Back side: Corn stubble processing with the Oekosem combined with the double row planter Baertschi Duo-Drill for seeding a cover crop or green manure.

Oekosem can be delivered in different designs tailored to your specific needs:

Technical Facts

Type	4R700	4R750	6R500	6R750	8R375
Number of Rows	4	4	6	6	8
Working Width	280 cm	300 cm	300 cm	450 cm	300 cm
Row Spacing	70 cm	75 cm	50 cm	75 cm	37,5 cm
Working Depth Subsoiler	20–35 cm	20–35 cm	20–35 cm	20–35 cm	20–35 cm
Working Depth Rotavator	7–15 cm	7–15 cm	7–15 cm	7–15 cm	7–15 cm
Operational RPM	1000 U/min				
Power Requirements	from 104 kW/ from 140 PS				

2015 Technical changes and product adaptation reserved

These options are available:

2 fertilizer tanks, 750 liter row-fertilizer-spreader

3-point hitch for your own planter

Precision planter and drill for corn and sugar beet

Double-row planter and drill Baertschi Duo-Drill for canola, soybean, etc.

Set of stubble processing tools for fighting the European Corn Borer with Oekosem

Mascar precision drill especially designed for Oekosem

Baertschi Duo-Drill can be upgraded with the modular system of Fobro weeding technology

Visit us on
one of our field days.
The upcoming dates
can be found
on our webpage:
baertschi.com



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We are offering profitable deals for contractors of agricultural equipment.
Please request a trial seeding for your own business.