



# ADVANCED STRIP TILL TECHNOLOGY

The XTill® for Strip Till with and without  
root-level liquid manure fertilization

**VOGELSANG – LEADING IN TECHNOLOGY**

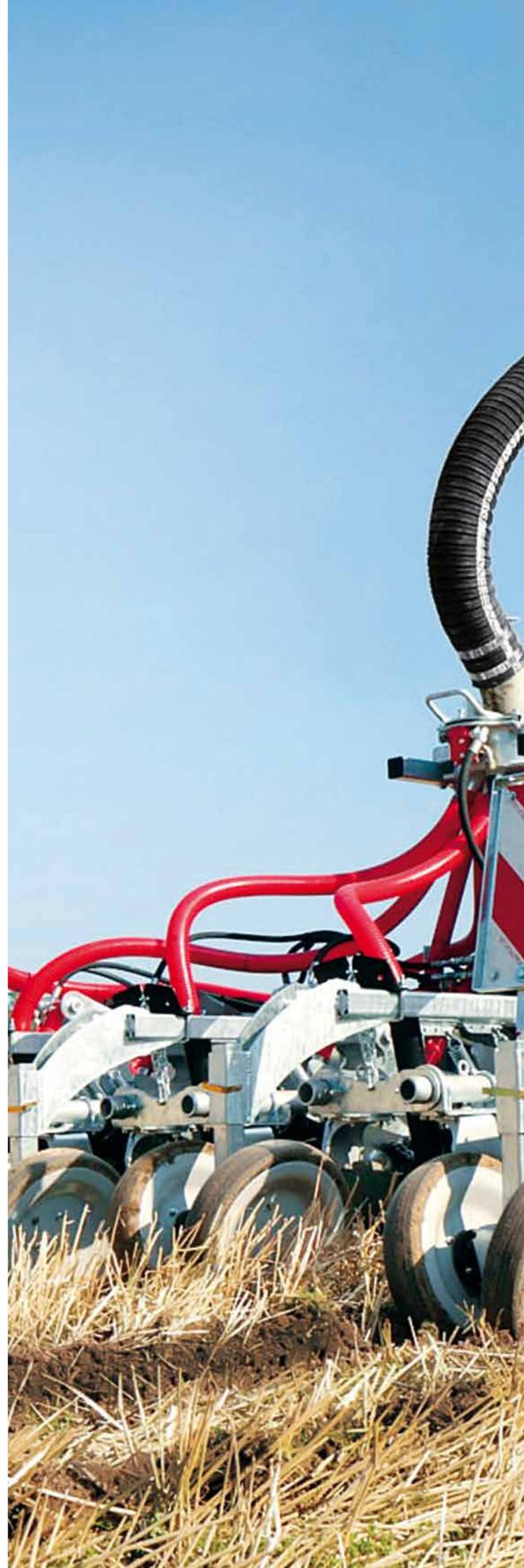
**VOGELSANG**



# CLEVER COMBINATION OF CROP AND SOIL FERTILIZATION

## General information on the Strip Till method

For decades, Strip Till has proven highly successful in dry regions or areas that suffer from drought or erosion problems. This system is now also used in Europe for many row crops such as corn, canola, sugar beets or sunflowers. With this method, the field is not plowed or otherwise prepared; the soil is just machined in strips. Catch crops and residue from prior crops are left on the surface.





### **Save time and money**

Strip Till combines the advantages of no-till and conventional soil cultivation systems. Multiple steps, including plowing deep tillage, seed bed conditioning and liquid manure incorporation, can be efficiently combined into one step. This saves you valuable time and money.

### **Protects against erosion, compacting and evaporation**

The agricultural advantages of this method concern the partial tillage of the soil: Only a partial area of the entire surface is cultivated in strips – for example, preparing for maize sowing only requires a 25 cm-wide strip. The unprocessed area of 50 cm remains covered with harvest remnants. This protects against soil erosion, damaging compactings and evaporation. The farm machinery is only driven on the untilled strips, which supports the soil's intact pore system. As a result of this also the water infiltration and the bearing capacity is improved. In the tilled strips, the soil warms up very quickly, creating optimal germination and growth conditions for crops.

## **The technology**

### **Strip Till and root-level liquid manure fertilization combined**

Liquid manure and digestates are valuable organic fertilizers. They are a natural source of plant nutrients that can be precisely spread onto the soil. The combination of tillage and liquid manure spreading with the Strip Till is not only state of the art and prevents loss of nutrients, it is also more environmentally friendly than traditional methods, such as wide spreading techniques.

The XTill machines prepare the soil optimally for sowing row crops. Liquid manure can be spread at the same time and is deposited precisely where plants need nutrients – around their roots – with low emissions.





#### **Crop cultivation advantages of the Strip Till method**

- Improved water retention and intake because the soil's pore system remains intact
- Less water evaporation thanks to organic plant matter on untilled strips
- Tilled strips warm up faster compared to no-till cultivation
- Ideal seed bed conditioning
- Greater biological activity and humus creation
- Promotes soil fertility
- Excellent protection against erosion because up to 70 percent of soil is untilled

#### **Advantages for your business**

- More reliable and stable yields
- Saves time and money thanks to complete soil cultivation in one step
- Compliance with the four-hour rule
- Improved driving surface

# EFFICIENT AND ENVIRONMENTALLY FRIENDLY

**The XTill® VarioCrop for effective soil cultivation under a wide range of conditions**

## **Liquid manure Strip Till cuts costs by up to 40 percent**

In conducted trials by the University of Applied Sciences in Kiel, Germany, Strip Till was compared to conventional soil cultivation. In the Strip Till experiment, energy and diesel requirements decreased significantly because fewer passes were needed. Low-emission spreading of liquid manure minimized the need for inorganic fertilizer. Overall, the Strip Till method reduced costs by up to 40 percent compared with conventional soil cultivation.\*

## **Reliable yields thanks to Strip Till with root-level liquid manure fertilization**

Thanks to a range of horticultural benefits, such as excellent water retention and optimal nutrient supply for root-level liquid manure fertilization, yields are more stable and higher than with conventional cultivation methods, especially when growing conditions are unfavorable.

## **Strip tillage cultivation tips**

Soil is strip-tilled directly on harvest remains or after a catch crop. For heavy soil with a high clay content, strip tilling should take place in Autumn in order to utilize frost action. Free-flowing soil can be strip-tilled in the spring before sowing. To ensure growth, radicles must reach the fertilizer depot at an early stage. A nitrification inhibitor often can improve growth and yields.

## **XTill® with root-level liquid manure fertilization**

With the XTill, liquid manure can be deposited at root level at a depth of 10 to 25 cm underground in the depot. The XTill is equipped with the DosiMat LVX distributor head that uses a rotor to continuously distribute the liquid manure to the outlets. The cutting blades on the rotor safely cut all fibrous matter and ensure that it is homogeneously and precisely distributed. This ensures an optimal supply of nutrients to plants. To meet a full range of requirements, two different XTill series are available.

\* Dr. Birte Reckleben, Research and Development Center at Kiel University of Applied Sciences

### **XTill® VarioCrop**

The XTill VarioCrop can be used for any kind of crop, including corn, canola, sugar beet or sunflower. Row spacing can be adjusted flexibly from 45 to 75 cm. The machine features many settings for easy adjustment to a variety of operating conditions. As a result, you can use the XTill VarioCrop for a comprehensive range of applications.

### **XTill®: Soil cultivation with root-level liquid manure fertilization**

- Eliminates the need for multiple steps (liquid manure spreading and incorporation, plowing, seed bed conditioning)
- Nutrients are placed exactly where plants need them: around the roots
- Organic root-level fertilization is no longer necessary
- Sustainable cultivation methods and intelligent use of liquid manure without odors improve the reputation of farming



#### **Information and advice**

To make sure you get the most of the Strip Till method, our experienced XTill experts can offer personalized advice and will be happy to provide more detailed information about Strip Till with XTill.

Interested? Contact us.

We look forward to hearing from you.

#### **The XTill® technology at a glance:**

- Working widths up to 6 meters
- Units drawn on a parallelogram
- Units depth-guided individually, pressure application infinitely variable
- Row spacing can be adjusted from 45 cm to 75 cm (with XTill VarioCrop)
- Hydraulically foldable frame for 3 meters' transport width
- Spring-loaded press wheels follow the soil contour
- Ridging disks adjustable on three levels in relation to the injector tine
- Injector tine can be height-adjusted, hydraulic stone protection
- Height control on coulter blade
- Three-point fixture Cat. 3/3N/4N

Machine pressurization is infinitely variable.

A parallelogram design ensures constant soil tillage depth.

# INNOVATIVE, RELIABLE, SUCCESSFUL

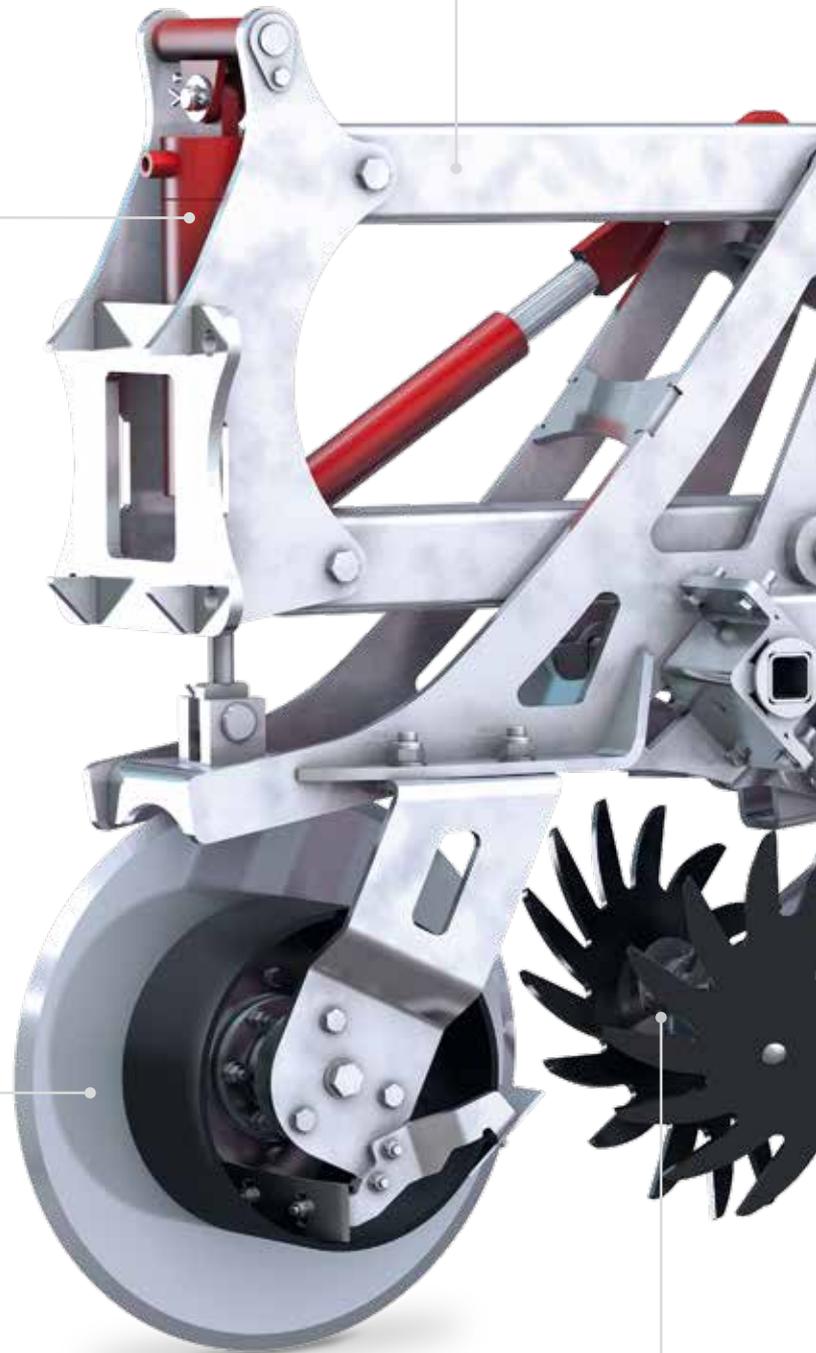
XTill<sup>®</sup> machines for soil-kind cultivation and fertilization in one step

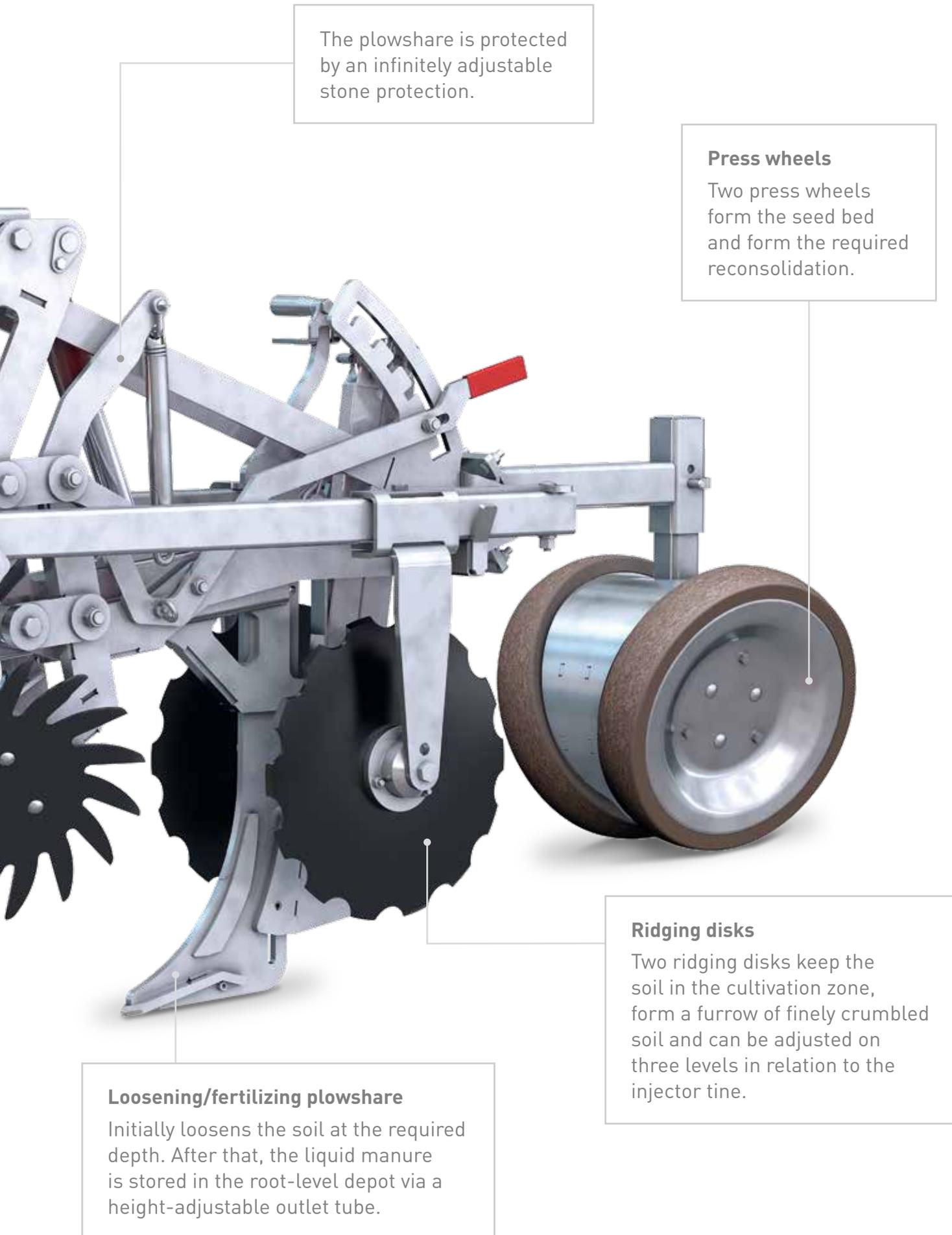
## Coulter blade

The coulter blade cuts up the surface and ensures the depth adjustment.

## Star-notched disk blades

Two depth-guided and height-adjustable star-notched disk blades clear the zone to be tilled of harvest residues and crop material.





The plowshare is protected by an infinitely adjustable stone protection.

**Press wheels**  
Two press wheels form the seed bed and form the required reconsolidation.

Ridging disks

**Ridging disks**  
Two ridging disks keep the soil in the cultivation zone, form a furrow of finely crumbled soil and can be adjusted on three levels in relation to the injector tine.

**Loosening/fertilizing plowshare**  
Initially loosens the soil at the required depth. After that, the liquid manure is stored in the root-level depot via a height-adjustable outlet tube.

# AS PRECISE AS IT IS FLEXIBLE

The XTill<sup>®</sup> VarioCrop  
is adjustable for all row crops



### Strip Till system for any type of crop

The XTill VarioCrop allows for Strip Till with root-level liquid manure fertilization for an extremely wide variety of crops. The compact units in this system are easily adjusted to allow for row spacing from 45 cm to 75 cm.

### Precision technology

Compared to older Strip Till methods with narrow row spacing, the XTill VarioCrop generates highly precise tillage zones that are clearly delineated from the area between the rows. The width of the neatly cleared strip can be adjusted up to 25 cm. The untilled area between the strips remains covered with harvest residues. The machine is pressurized pneumatically. This means that the XTill VarioCrop follows the soil contour optimally and maintains a constant tillage depth. This is crucial for the success of the method.

### Extremely easy to adjust

To ensure ideal growing conditions for crops, there must be separate depth adjustments for the plowshare and liquid manure deposition. The XTill VarioCrop enables this thanks to a new design. With the new solution, flat liquid manure deposition is possible for the deep loosening of soil. The liquid manure can also be deposited at two different depths simultaneously.

In addition to the depth-adjustment feature, the XTill VarioCrop also offers nine adjustment options to adapt to the current working conditions and crop. All adjustments can be made conveniently from the rear of the device, making your work much easier and efficient. Developed in collaboration with practitioners, the design of the XTill VarioCrop has been tailored to real working requirements. As a company, we continue to maintain regular communication with our users and stay ahead of market demands.

### The technology at a glance:

- Working widths up to 6 meters
- Hydraulically foldable frame for 3 meters' transport width
- Spring-loaded press wheels follow the soil contour
- Ridging disks adjustable on three levels in relation to the injector tine
- Injector tine can be height-adjusted, hydraulic stone protection
- Height control on coulter blade
- Three-point fixture Cat. 3/3N/4N



### Advantages of XTill® VarioCrop

- Strip Till method for any type of crop, with option of simultaneous root-level liquid manure fertilization
- Row widths of tilling units can be adjusted flexibly from 45 cm to 75 cm
- Separate depth adjustment for plowshare and liquid manure deposition
- Option of simultaneous liquid manure deposition through two outlets at separately adjustable depths
- Quick-and-easy adjustment from the rear side of the units
- Extremely safe and reliable handling





# WHEN IT COMES TO SERVICE, WE LEAVE NOTHING TO CHANCE

## Comprehensive services for smooth operation and a long lifetime

### Support and supply from A to Z

Because we are aware that close customer proximity is essential for our mutual success, we design our services to best meet your needs. In Germany and in countries where we have subsidiaries, Vogelsang service centers and contractual partners generate an active dialog with our customers and provide reliable support.

This means you always get the precise support you need in every phase of our partnership. Our highly qualified staff make it possible – experts such as consultants and technicians who know your Vogelsang machines inside and out.



Since its establishment in 1929, Vogelsang has become an internationally recognized mechanical engineering company with numerous branches, sales centers and subsidiaries.



### **We think ahead**

Thinking ahead in your best interest begins with our extensive and detailed product documentation. Spare parts are available within a short time due to our high degree of vertical integration in production. In addition, you will always find an authorized service partner in your area who can help with repairs and wear part replacement. The Vogelsang ServicePack completes the offer. Whether you need start-up, on-site training, training at the Vogelsang facility, or full service support with a maintenance contract and a wear parts service package – we offer a support program tailored specifically to your needs.

## What we offer

We provide solutions in the following sectors:  
AGRICULTURAL TECHNOLOGY, BIOGAS,  
INDUSTRY, TRANSPORTATION, WASTEWATER



## Our broad range of products and services

- Consulting and service
- Data management and control technology
- Disintegration technology
- Individually tailored solutions for special applications
- Pumps and pump systems
- Solid matter feeders
- Solids reduction, separators and mixers
- Spreading technology
- Supply, disposal and cleaning

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