

# LIRA

HYDRAULIC SPRING-TOOTH  
WIDE LEVEL HARROWS





# LIRA

LEGENDARY LIRA



Effective farming with the use of min-till and no-till technologies depends on the quality of crop residues control. Their keeping and uniform distribution provide the following advantages: snow retention, retention of melt and rain water; reduction in water loss from evaporation; improving the organic composition of the soil; reduction of air and water erosion.

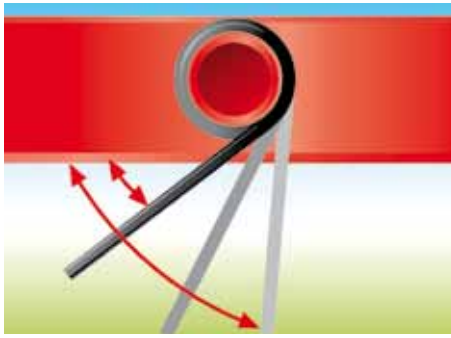
Combine straw choppers, especially with wide headers, not always optimally distribute the straw, which entails broken seedlings, uneven ripening and significant deterioration of the harvesting quality.

Application of the LIRA harrow allows not only weeds killing without expensive chemicals, but also moisture retaining and air access to seeds.

More than 16 years of successful work in the fields have made the LIRA spring harrow truly legendary! Its simplicity, reliability and the highest quality of work are familiar to farmers in Ukraine, Russia, Kazakhstan and many other countries.

The LIRA spring harrow is applied for:

- early spring harrowing for crust destruction and encouraging the weeds germination;
- weeds destruction in the "white fiber" phase;
- moisture retention by means of interruption of capillary flow from the substrate;
- even distribution of stubble remains on the field;
- incorporation of seeds and mineral fertilizers, distributed across the field;
- overall tillage when handling the fallow lands and seedbed preparation when fall-ploughing;
- windrowing of straw and hay.



Improved tillage quality

Working sections consist of five rows of the offset spring teeth with spacing of 38 mm. Such teeth location excludes noncultivated areas.

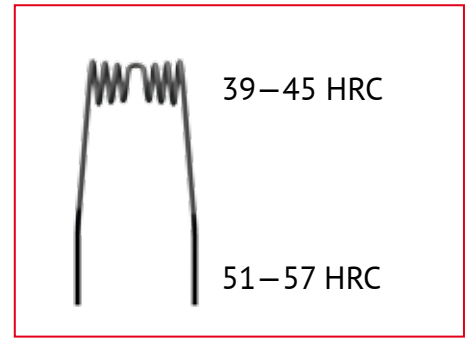
Careful cultivation provided by the adjustable tilt angle of teeth. The teeth tilt angle is adjusted for entire section with limits from 15° to 90°, and interval of 15°.

Blockage-free work of teeth and perfect loosening provided by vibration effect.



Premium class spring tooth

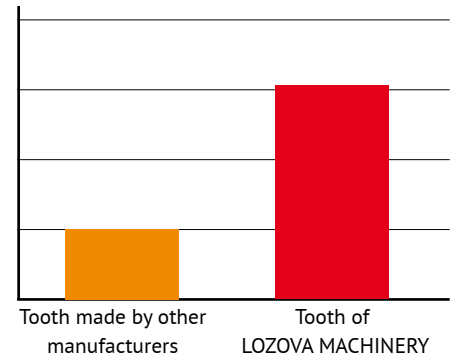
The spring tooth is made of high-quality special steel with special double heat treatment. The spring tooth diameter is 10 mm, but application of innovative hardening significantly (in 2...3 times) increases the tooth wearresistance in the working area with high wear, wherein the areas under torque stress are highly strength.

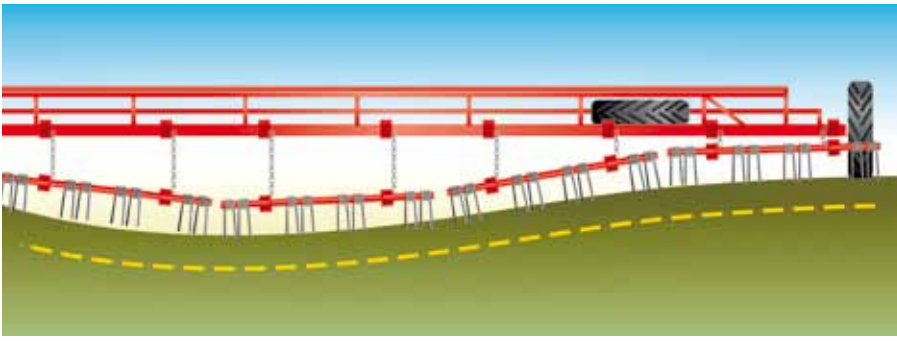


Good tooth lifetime

Lifetime of our tooth is three times higher than tooth of other manufacturers.

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Precise and careful soil treatment

Having the chained individual working sections, the LIRA spring harrow perfectly follows any field contours in spite of its wide working width.

Special agricultural low-pressure tires almost fully eliminate the risk of damage to plants. Also these tires eliminate overcompacting of the soil and don't leave tracks.



Uniform distribution of crop residues

Combine straw choppers, especially with wide headers, not always optimally distribute the straw, which entails broken seedlings, uneven ripening and significant deterioration of the harvesting quality. The LIRA harrow can remedy the situation.





Forged cross



Simple folding-unfolding

Forged crosses compared to welded ones provide high durability and reliability regardless of "human factor".

One tractor driver can fold and unfold the harrow due to design of frame and hitch. For rapid folding/unfolding the LIRA harrow is equipped with transport wheels with adjustable toe angle.

#### Costs of cultivation of 1 ha with the LIRA (*amortization charges + fuel consumption + repair + maintenance*)

- in comparison with domestic analogues costs are **30%** lower
- in comparison with import analogues costs are **2,5** times lower



**LIRA+REAL**  
RECEIVE DOUBLE EFFECT IN ONE PASS!





**Complex is an effectiveness and productivity**

Universal REAL unit is applied for application of the plant protecting agents and complex fertilizers.

Due to simultaneous incorporation of the applied spray material, the REAL unit allows achieving the most effective incorporation and minimizing of the agent consumption, as well as environmental impact (due to lower application rate), and reducing the number of the unit passes.



**Technological advantages of the complex**

For the uniform distribution of the spray material along entire working width, the REAL module is assembled with the ARAG high-quality control panel and the Annovi Reverberi axialpiston pump with tractor PTO drive.

The unit is equipped with a brake system which enhances the operating safety.



**Universal mounting**

The REAL unit can be easily mounted to any other standard LIRA springtooth harrow, as well as with spring harrows from other manufacturers, because it is fixed to frame by U-bolts.

Besides preliminary treatment, the REAL can work both with seeds and early seedling and clamps.

## TECHNICAL DATA

	LIRA-15	LIRA-24	REAL-15+LIRA-15	REAL-24+LIRA-24
Working width, m	15	24	15	24
Tractor power, hp	min. 80	min. 130	min. 80	min. 150
Coupling with tractor	trailed	trailed	semi-mounted	semi-mounted
Basic weight, kg	2032	2850	920	2040
Number of working tools	200	320	–	–
Teeth spacing, mm	38	38	–	–
Teeth tilt angle, °	15, 30, 45, 60, 75, 90	15, 30, 45, 60, 75, 90	–	–
Operating depth, cm	max. 9	max. 9	–	–
Number of nozzles, pcs.	–	–	30	48
Tank volume, m <sup>3</sup>	–	–	2,5	5,0
Pump performance, l/min.	–	–	185	250
Distance between nozzles and soil, m	–	–	0,5	0,5
Operating speed, km/h	8–15	8–15	8–12	8–12
Efficiency, ha/h	max. 12,1	max. 19,4	max. 13,1	max. 21,0
Fuel consumption, l/ha	0,8–1,5	0,8–1,5	1,0–1,8	1,0–1,8
Transport dimensions (length x width x height), mm	10462 × 4200 × 2460	17190 × 4400 × 2460	13876 × 4200 × 2460	21600 × 4400 × 2460