PE SPC

27 B. Khmelnytskogo Avenue
Melitopol
Zaporizhia Region 72319
Ukraine

Tel. +38 0619436028, +38 061944-03-37
Tel\fax +38 0619437771
E-mail: mail@rosta.ua
www.rosta.ua

Hand vegetable seeder SOR-1/1 (BBA96/6)

Technical specification and operating manual

Introduction

Manual seeder SR-1 is used for dotted-line and hole sowing of vegetable crops and cucurbitaceous crops such as cucumber, tomato, beet, carrot, onion, radish, water-melon and melon.

The seeder is easy operating and comfortable. The seeder operation does not require any special training, but keep in mind that for sowing of every new kind of crop you will need to have definite skills.

For the seeder's long and failure-free operation one should follow the rules of its maintenance, perform technical service described in this Manual completely and in proper time.

The seeder hasn't got large sizes. Being folded (without handles) it may be placed in a boot or a passenger compartment of a car, carried by a public transport. It doesn't need large room for storage.

Because of the process of seeder constant improving its design may include some insignificant changes which are not described in this Manual.

ATTENTION!

Before starting work study this Manual (operating manual) carefully.

If you follow makeready and technical maintenance requirements stated below seeder technical service will provide more complete functional qualities and long operating life.

Safety Requirements

Before operation study this Manual carefully.

Seeder operation must be performed with installed protective devices provided by the design.

Don't do any work near rotating parts of the seeder.

Don't let the seeder reverse movement with the ploughshare deepened in the soil.

Technical Data

Type of the sowing unit	brush-typed
Type of a ploughshare	carinate
Type of a covering knife	lamellar
Amount of holes per running meter	2 or 4

	Distance between the seeds during dotted-line sowing	depends on the kind of the seeds and the disc's settings
	Capacity of the bin for seeds, dm^3	2,0
	Depth of the seeds covering, cm	1…5
	Distance between rows which are provided by marker, cm	to 50
	Recommended speed, km/h	3…4
	Overall dimensions, mm	
10.1	In a working position	
	• length	1300
	• width	155
	• height	970
10.2	While transported (with the handles taken off)	
	• length	840
	• width	155
	• height	300
	• length of the taken off handles	1000
	Weight, kg	9,5

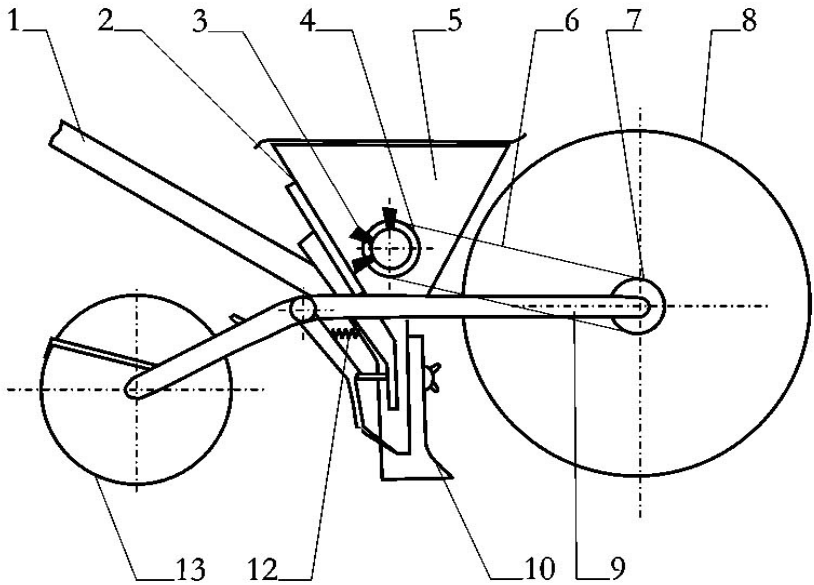
Delivery set

Sowing device (ready-fitted)	1
Handle	2
Distance bar	1
Marker with the fixing device	1
Bolt M8 x 15	2
Nut M8	2

Nut M6	2
Cottar	1

Seeder arrangement and operation

The vegetable seeder consists of the frame (9) which looks like two parallel planks and contains such fixed parts as the support-driving wheel (8) (in the front); a brush sowing unit (3) with the bin for seeds (5), the ploughshare (10) and the covering knife (in the middle); a rolling wheel (13) and the handles (1) in the back which are fixed on the frame by means of pinned connection. There is a marker in the back of the frame.



The sowing unit is a frame where the bin for seeds (5) with the rotary disc (2) (at the rear part), a ploughshare (10) with a seed pipe, a brush mechanism (3) with the valve drive (11) of the ploughshare and the covering knife are mounted.

The sowing unit is driven from the support-driving wheel by means of the chain transmission (6). During the movement of the seeder the rotary brush (3) of the sowing unit takes the seeds and throws them into the seeds pipe through the hole in the bin (5) and in the rotary disc (2). The rotary disc is placed on the

shaft on the left side of the sowing device. The ploughshare is fixed at the double-arm and interacts with the rotary disc. The seeds are accumulated in the valve (11) of the ploughshare. Intermittently (2 or 4 holes per 1 meter depending on settings of the rotary disc) seeds are put into the furrow made by the ploughshare. The furrow is closed by the coving knife and rolled up by the rolling wheel. The marker which is set according to necessary distance between rows makes traces for the next pass of the ploughshare.

If one needs to perform a dotted-line sowing the valve is fixed in the open position by means of the stop.

Latest changes in the seeder design

1. Bin design is changed (there is no 'dead' seeds rest).
2. Slider bearings are installed in the movable joints.

Seeder assembling and preparing for the work

For the seeder assembling one should perform such operations:

- to join handles by means of the bolted joint
- to install the distance bar on the top of handles
- to install the marker and to fix it with the cottar (the marker is not symmetric if it is installed correctly)

Preparation seeder to work includes setting up of the sowing rate, holes amount per 1 meter of the row, depth of ploughshare motion and space between rows.

- To set up seeds sowing rate it is necessary to fix rotary disc in a rear part of the bin at a proper position according to seeds kind and agrotechnical recommendations.
- To set up the holes amount per 1 meter of the row (2 or 4) it is necessary to install the rotary disc of a valve drive at the right position.
- To set up a dotted sowing it is necessary to fix the valve in the open position by means of the stop.

Note!

You can check correctness of the sowing rate settings rolling the seeder on a smooth surface without the ploughshare.

- To install the depth of ploughshare motion you need to put rolling wheel on the stand equal to the recommended depth of seeds covering minus 0.5 cm on a smooth horizontal surface and then holding the seeder in this position turn off the fixing ear nut of a ploughshare. Let ploughshare down to the contact with surface and then fix it by nut.
- The space between rows is set up by marker moving and fixing on the bar.

The final correctness of seeder adjustment is checked in the soil by test passes across the testing plot!

Seeder operation

When you work with a seeder do not load it too much, move it smoothly with even speed. To avoid ploughshare blocking on the turn one should raise it from the soil.

Always control and be attentive to uncharacteristic rattling and strange noise. When they appear, stop the seeder and remove the defect cause.

Seeder technical service

Technical service of the seeder includes daily cleaning from dust, dirt, rest of soil and systematic control of bolt connections.

If you change the sowing crop you need to clean the bin for seeds and seeding unit brush.

Once a season you need to oil the axle of support-driving wheel and the seeder unit hub by lubricating grease.

Once during the season tighten the driving chain (the sagging of the lower path must be 5 to 10 mm) and oil it by some drops of a motor oil.

After the finishing of a season you need to clean and oil the seeder, paint over the parts where the paint has been peeled off. The seeder must be stored in a dry room.

Probable seeder breakdowns and the methods of their elimination

Probable breakdowns	Cause and methods of elimination
Seeds do not get into the soil	Seeds pipe is clogged. Clean seeds pipe.
Real sowing rate is less than it has been set up	Support-driving wheel skips because of extreme clods content in the soil. Make soil presowing preparation once again.

Seeder transportation

Being folded (without handles) the seeder may be placed in a boot or a passenger compartment of a car or carried by a public transport.

Manufacturing data
The seeder is produced according to Ukrainian Technical Conditions 30952138-001-2004

Producer _____PE SPC “Rosta”

Date of producing «___» _____ 20 .

Date of packing «___» _____ 20

Packer _____