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In Article conducted analysis methods zameshyvanyya process control tests, rassmotrenы Main factors, vlyyayuschye on testoobrazovanyya process. Proposals matematycheskaya model zameshyvanyya test process, and New konstruktyvnыe solutions for testomesylnыh machines kotorыe yntensyfytsyrovat permit process and zameshyvanyya povыsyt Quality test.

Process zameshyvanyya test, humidity test, testoobrazovanye, quality control methods test rabochaya camera testomesylnoy Machines, Factor inhomogeneities, plastyfykatsyya test.

The paper analyzes methods of process control kneading, the main factors that affect the formation of dough. A mathematical model of the process of kneading, and new design solutions for giving shaft mixer machines that will intensify the process of mixing and improve the quality dough.

Process of kneading, dry dough, dough formation, quality control procedures dough mixing machine working chamber, coefficient of heterogeneity, plasticizing dough.

UDC 631,356

TECHNICAL AND TECHNOLOGICAL BACKGROUND FODDER BEET HARVESTING

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The substantiation process breakdown field fodder beet zahinky in their mechanical harvesting and means for its implementation.

Fodder beet harvesting technology breakdown field korenenapryamnyk.

Problem. The mechanization of harvesting fodder beet carried hychkozbyralnoyu MBC-2.7 and

root crop MKK-6 and RCM-6-03. This method is used separate collection, during the implementation of which there are some difficulties with Beet headland and mizhzahinnyh passages that make up an average of 10 ... 13% of the total area of the field [1].

Difficulties characterized by the fact that the width of the line is sometimes fodder beet 25 cm, While the wheels of vehicles rozchavlyuyetsya about 50% beet which knocked out in the process hychkozbyralnoyi machines or significant deviations from the center line of the line of crops [2]. Manual cleaning headland - a time-consuming operation, while for manual cleaning 1 ha beet zatrachuyetsya 240 or more man-hours.

Therefore, improvement of fodder beet harvesting technology is an important task in terms of further development of the agricultural sector of Ukraine.

Analysis of recent research. Analysis known works [3, 4, 5, 6], which are devoted to research of fodder beet harvesting technologies showed that they did not sufficiently set out to cut down losses and damages fodder beet during their mechanical harvesting. Most known papers describing only basic general provisions of the process collecting basic fodder beet acreage, and the question of splitting field for zahinky solved in general aspects, which contributed to conduct these studies.

The purpose of research. The purpose of these studies is to improve methods of collecting fodder beet.

Results. The first stage of the proposed technology is gathering fodder beet harvesting main body tops available in the economy means followed by loading it into a vehicle for spreading or harvested field, which can be performed complexes trailer hychkozbyralnyh machines (MTZ 80/82 + ILO-6, DOLE 80 / MBC-82 + 2.7; MTZ 80 / + 82 mGy-6, DOLE 80/82 + MHSH-6, or self-propelled machines hychkozbyralnymy leading companies in the world).

Picking tops begin with butt aisle on a return to the band or mizhzahinnomu pass in two circles when moving hychkozbyralnoho unit

"to collapse" and scattered on the tops of uncollected field, that is picking tops with 4 passes 6th Row hychkozbyralnoyi machine.

In the second phase dig roots fodder beet root crop improved machine ISC-6. Scheme of fodder beet harvesting shown in Fig. 1. Improvement of root crop machinery is as follows - before the front wheels machines installed device for removal of roots (Fig. 2).

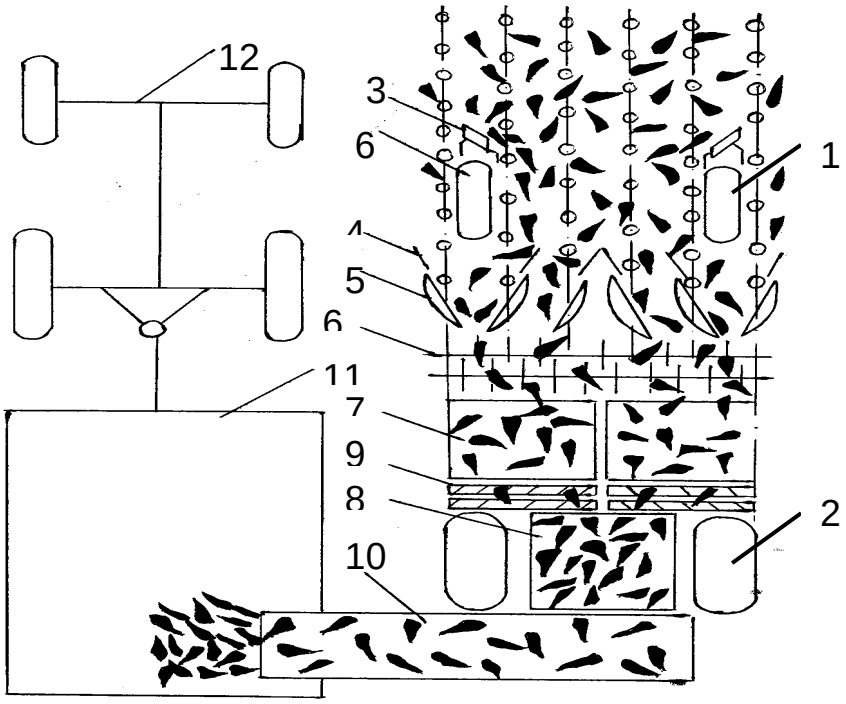

Fig. 1. Technological scheme of collecting fodder beet.

The frame of the machine (Fig. 1 not shown) mounted front and rear 1 2 wheels, 3 devices for removal of root korenenapryamnyky 4 working bodies for digging 5 and 6 rebounds root transporting units 7 and 8, 9 working bodies for the separation of impurities heap of roots, loading conveyor 10, which aims to body 11 of the vehicle 12.

The unit has 3 dump, inclined to the horizon and in the direction of the surface 13 (Fig. 2), similar to the surface peredpluzhnyka and her sock 14 and horizontal lower edge 15 rounded to the radius. Dump working body element 13 mounted on the bracket 16 and 17 through the rack and parallelogram suspension 18 is mounted on the frame of the machine. If harvesting is used tractor unit, the unit 3 is mounted to the front wheels of the tractor. 16 welded to the bracket bushing 19 of 20 klemovymy clamps, which are horizontal axis sliders 21, 22 mounted sides of the device 3. The device 3 is mounted so that its surface 13 has been installed with an inclination relative to the longitudinal axis of the harvest unit.

When working working body 13 of his sock and 14 horizontal lower edge 15 are above the soil surface. The gap between the ground plane and the horizontal lower edge 15 is controlled by turning axis 21 of the slider 22 in the sleeve 19 with subsequent fixation clamps klemovymy 20.

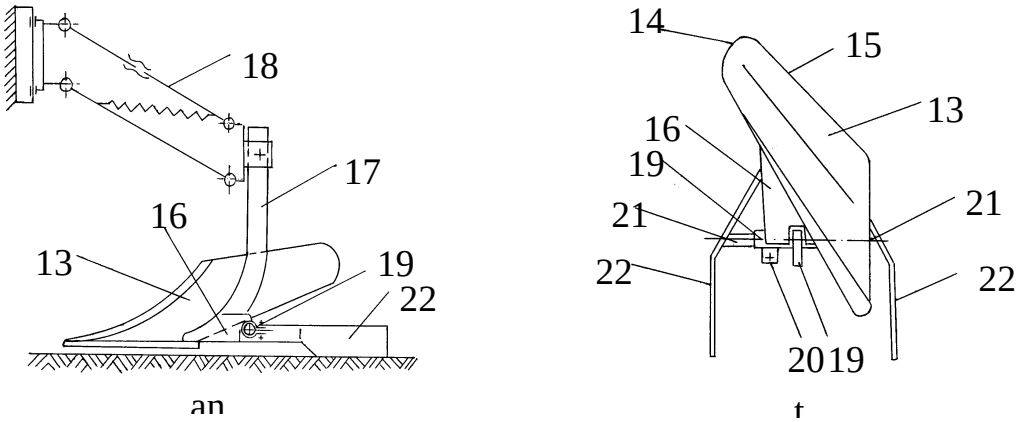

Fig. 2. Scheme diverter: a - side view; B - top view.

When harvesting beets device 3 is between rows of beets, copiers 22 on the soil surface and side surfaces of a recalcitrant body or head nevykopanu roots. Due to the parallelogram suspension 18 and the presence of 22 copiers device 3 when the labor movement copies microscopic soil. Because the gap between the ground and the horizontal edge 15 is negligible, the roots that are in rows in front of the front wheels machines (carved from the soil by working hychkozbyralnoyi machines) fall on the working surface of the device 13 and shifted to the inner, relatively machines, line unfulfilled root interact with them and thrown through nevykopani roots in adjacent rows or placed in line between nevykopanymy root crops. This device 3 through a spring-loaded parallelogram suspension 18 and copier 22 occupies a stable position and does not come from their rows.

In the first pass on a rotating unit root crop lane or passage mizhzahinnomu povzdovzh lines where there are no broken before the front wheels between the rows root device 3 is located in the transport position and pull the conveyor 10 should be the maximum lower position, and the rows should butt be located to the right of the right wheel, a line and pull the conveyor 10 is directed toward his butt aisle.

Digging 5 working bodies dug roots, feed them to the sorters 6, 7 and transporting separating device 9, which was purified from impurities Woroch. 8 0chyschenni roots conveyor and loading conveyor 10 directing them to the first passage adjacent rows and rows. During the oncoming passage (way traffic "in the collapse") cycle operations, which makes the machine repeats.

This creates mizhzahinnyy travel lane or turning on the main field.

Then I stop machine root crop in rows so that the passage was left mizhzahinnyy (way traffic "vzval"). The device 3 and digging 2 working bodies immersed in working position and lift conveyor 10 in the operating position for loading of roots in the body 11 of the vehicle 12. When the labor movement machine unit 3 is in rows in front of the front wheels combine unit shifts roots that are in these rows in adjacent lines or rows to the middle of the aisle and thus provides easy access front wheels Combine crushed aggregate and prevents damage to the Root and the front wheels. Installed before digging working bodies korenenapryamnyky 4 steering broken roots in the work zone 5 working digging bodies selected Wagons 6. At the same time digging working bodies dug uncollected 5 rows of roots, which together with the previously excavated fall on conveyors 7 and 8 and 9 separating device, and then directed and loading conveyor 10 in body 11 of the vehicle 12.

The following passage at harvest beets headland or main field of used machine makes when moving way "vzval." Cycle Operations - identical to the previous one. If the rows of the front wheels is no way knocked Root cornering hychkozbyralnoyi machine, the device 3 is installed in the transport position. When rows 45 cm mizhzahinnoho coming width is 12 rows headland - 48 lines for 6-row harvesters.

Conclusion. Thus the technology and equipment for its realization allow mechanized break field fodder beet zahinky and significantly reduce the loss and damage fodder beet root crop.

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Powered rationale of technological process razbyvky kormovoy beet fields in zahonky at s mehanyzyrovannoy Other cleaning and funds for ego implementation.

Kormovaya beet, TECHNOLOGY Other cleaning, razbyvka field kornenapravytel.

Present rationale tehnolohycheskoho process razbyvky kormovoy beet fields on zahonky in mehanyzyrovannoy's growing equipment and funds for ego implementation.

Feed beet, technology of cleaning up, lying out of the field, guider of root crops.

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ANALYSIS OF INFLUENCE OF BASIC PARAMETERS ODNOVALTSOVOYI crusher ON INDICES OF FOOD GRINDING

SE Potapov, engineer

Havedeni experimental results influence the basic parameters odnovaltsovoyi crusher for crushing parameters of quality products.

Grain feed odnovaltsova Zernodrobilka module grinding, coefficient of variation.

Problem. Ensuring the country sufficient livestock production is not possible without security industry quality feed. It is extremely important in feeding all kinds of farm animals and poultry are grain feed. As part of the mixed feed or combined feed grain cereals can range from 30-40% to 60-70% [1].

Before feeding grain to animals, as well as all types of feed raw materials, should pass certain preparatory operations, including the most common, and we can say is mandatory grinding operation [2, 3].

By grinding grain quality forage distinguish the following requirements [3]:

1) the average particle size of the feed must meet scientifically sound zootechnical requirements; in particular, provides three degrees of grinding: small (average particle size - 0,21.0 mm), Medium (1,0-1,8) and large (1,8-2.6 mm).

2) The coefficient of variation of the fractional composition of grinding products should not exceed 45-65%. The upper limit