RESULTS OF STATISTICAL RESEARCH OF UNUSABLE BULLET - SHAPED CLAWS

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ABSTRACT

In the article, the bending of the cultivator paws interaction of variables in the study issues of determining statistical relationships studied. It's razor sharp with the size of the case and the statistic between the back chamfer corners very weak correlation (r0.0403 and r0.0632), i.e. found to be non-linear. The width of the back bevel with the size of the work, the blade of the razor according to the width and thickness of the blade and statistical correlations between bending the higher the correlation coefficients values range from r0.91 to 0.96. Work many parameters or factors in the developed program also in studying the connections between can be used successfully emphasized.

KEYWORDS

Soil, average mathematical values, average quadratic deviation, interval, repetition rate, mathematical deviation, mathematical deviation, resource, Kolmgorov criterion, coefficient of variation, pointed paw, abrasive wear, working body, wear dynamics.

1. INTRODUCTION

One of the pressing issues today is the extensive application of mathematical methods and modern computers across various fields of human activity. In most experimental studies, there are two types of partitioning-functional and statistical connections between different number and quality symbols.

In functional relationships , each value of one variable corresponds to an exact value of another variable , i.e. , a proportional change is produced in relation to each other.

A statistical relationship is a relationship in which it is difficult to determine how a character and a second character change compared to the first character . For this, a lot of information is first planned , then a deep analysis is made, and a certain legitimacy is determined between them . The advantage of using statistical methods is that with their help, it is possible to study the interrelationship of many signs in one and the same thing. The degree of dependence (level) and specificity can be determined by calculating statistical characteristics.

Mathematical statistics methods allow to study the relationship between a large number of signs, in which correlation analysis methods are used.

2. RESEARCH CONDUCTED IN JIZZAKH REGION

If there are several experimental results in the article , it is recommended to analyze them using the pair correlation coefficient . In this context, the correlation relationships between the results

of the conducted experiments can be direct or inverse, as well as linear or nonlinear. High-quality processing during the growing season of cotton and other crops is essential. To meet the demands of technological processes, it is necessary to use working bodies that are manufactured according to technical condition requirements. Micrometering work was carried out on the dimensions of the parameters of the arrow-shaped claws shown in Fig. 1

Micrometrized bullet-shaped pans is 100 pieces. In farms belonging to Pakhtakor and Zafarabad districts of Jizzakh region, micrometering works were carried out on unusable bullet - shaped claws.

The parts were measured at normal ambient temperature and the instrument settings are reported in Table 1.

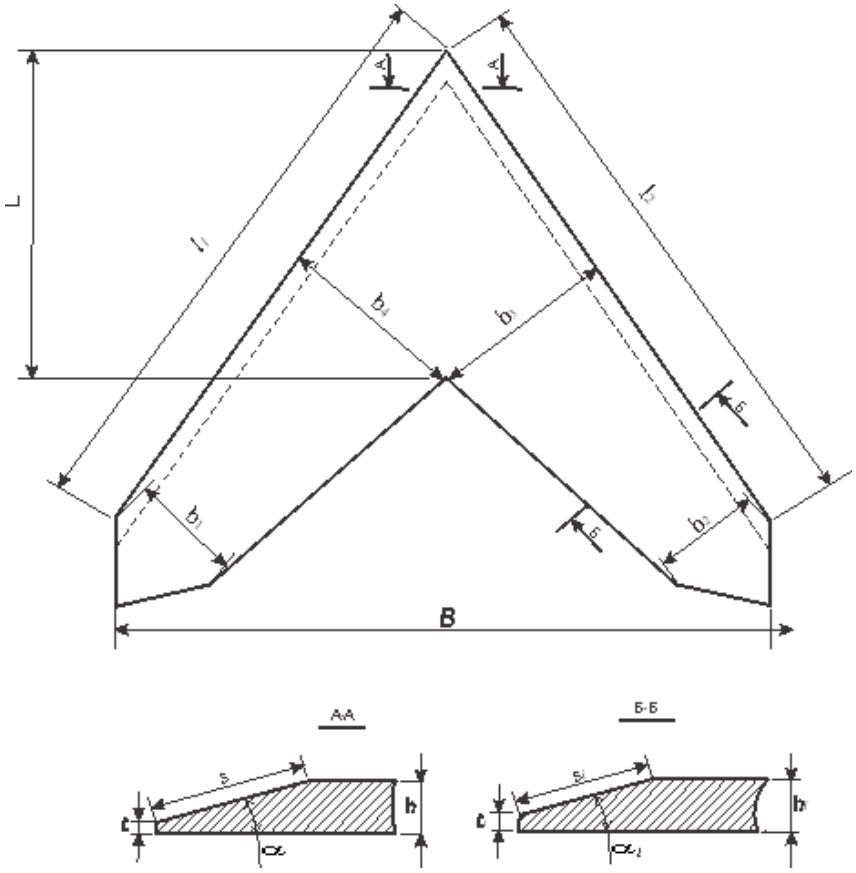

Figure 1. Micrometric parameters of the cylindrical grid
Measured values and measuring instruments of obsolete spherical fins

Table 1. Heading and text fonts.

Measured part name	**Designation**	**A hunting club**	**of measured value**		**Hunting tool**	**Accuracy of measuring instruments**
			name-nal	Oh my gosh		
1	2	3	4	5	6	7
Width of coverage	***V***	mm	260	±5	Stan-gentsir-kul	0.05
Wingspan left right	l_1 l_2	mm mm	184 184	± 2.5 ± 2.5		
The wingspan is the middle part of the left wing Left wing tail section middle part of the right wing right wing tail section	b_1 b_2 b_3 b_4	mm mm mm mm	70 45 70 45	+ 0.74		0.05
The length of the face formed when the muzzle is bent middle part of the left wing left wing tail section middle part of the right wing right wing tail section	***S*** S_1 S_2 S_3 S_4	mm mm mm mm mm	15 15 15 15 15	± 1.5 ± 1.5 ± 1.5 ± 1.5 ± 1.5		
Snout length	***L***	mm	143	+ 1		
The thickness of the end of the pointed part of the needle left wing middle left wing tail section middle part of the right wing right wing tail section	***h*** h_1 h_2 h_3 h_4	mm mm mm mm mm	1.2 1.2 1.2 1.2 1.2	+ 0.25 + 0.25 + 0.25 + 0.25 +0.25	Micro-meter	0.01
The thickness of the tip of the muzzle middle part of the left wing left wing tail section middle part of the right wing right wing tail section	***t*** t_1 t_2 t_3 t_4	mm mm mm mm mm	0.5 0.5 0.5 0.5 0.5			0.01
Angle of refraction of the tip of the muzzle middle part of the left wing left wing tail section middle part of the right wing right wing tail section	***a*** a_1 a_2 a_3 a_4	grad grad grad grad grad	23 23 23 23 23	± 3 ± 3 ± 3 ± 3 ± 3	Angler	15

The results of data processing obtained as a result of these statistical studies are presented in tables 2, 3, 4, 5, 6, 7.

The analysis of the data shows that the distribution of the values of the controlled parameters of the paws obeys the normal distribution law (Fig. 2, 3, 4, 5, 6, 7).

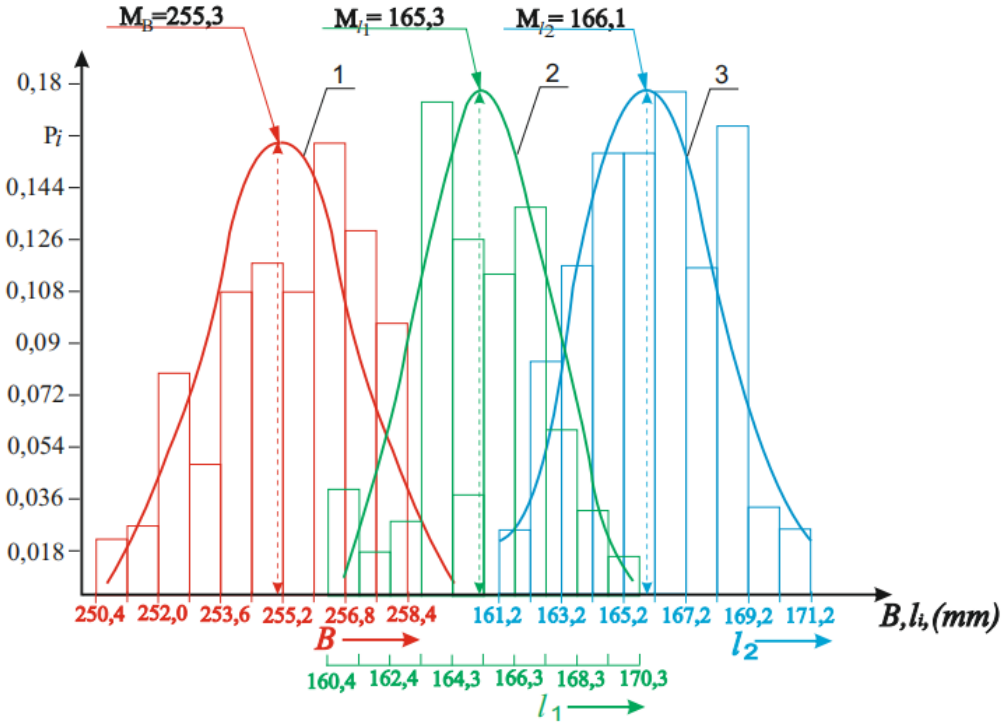

Figure 2. Arrow -shaped wing a coverage width and wings length
1-coverage width; 2nd left wing length; 3rd right wing length.

Of the cylindrical claws does not have deviations of more than ± 5 mm from the permissible value. At the same time, there is an average deviation of 11% from the permissible value along the length of the left wing, and an average deviation of 11.4% from the permissible value along the length of the right wing (Table 2).

Table 2. Statistics of wingspan and wingspan

Statistical indicators	Span and wingspan		
	B	l_1	l_2
Mathematical mean value, M_{α_i}	255.3	165.3	166.1
Mean squared deviation, σ_i	1.8	1.94	2.12
Coefficient of variation, V_i,%	0.705	1,179	1,276
Interval Repetition (Frequency) P_{t_i}	0.7	0.12	0.13
Kolmogorov criterion, $P(\lambda)$	0.0397	0.7112	0.3275

The distribution frequencies of the length of the beak and the width of the wings of the eagle claws also correspond to the requirements. There is a 3-4% deviation in the width of the paw wings in the middle section, and a 10-16% deviation in the tail section (Fig 3).

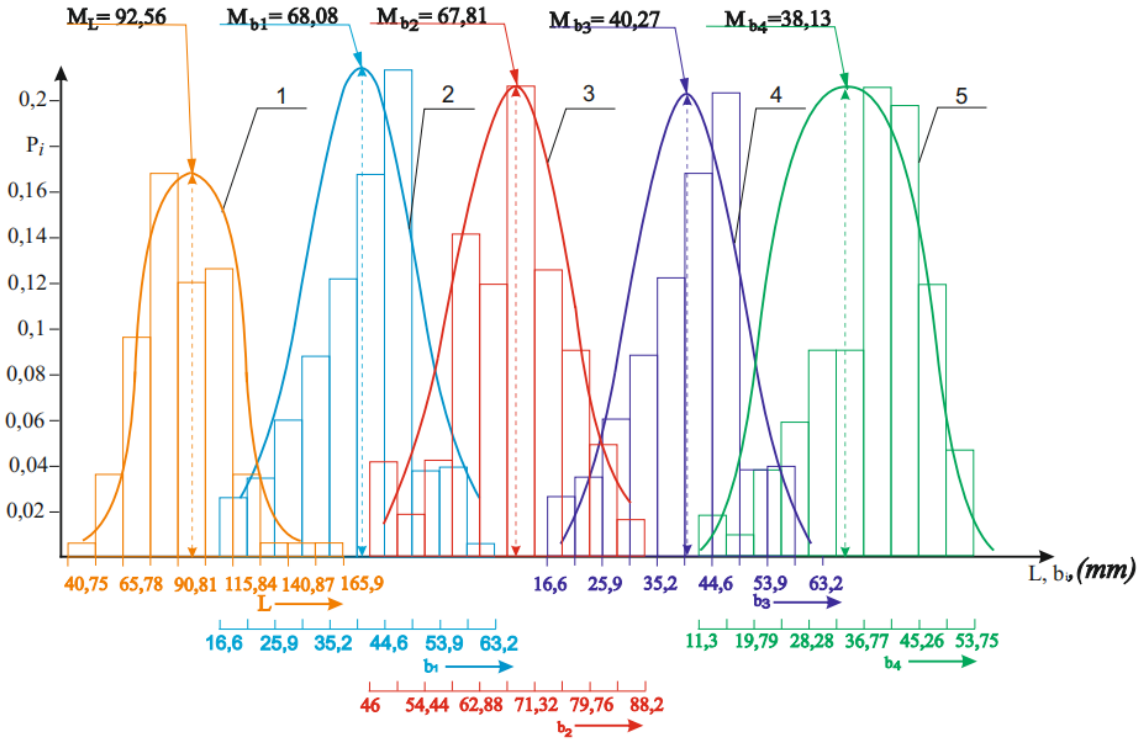

Figure 3. The length of the arrow-shaped paw beak and the width of the wings
1-the length of the bill of the ovoid claw; 2nd left wing middle part width; 3-width of the middle part of the right wing; 4th left wing tail section width; 5-right wing tail section width.

Table 3. Statistical indicators of the length of the beak of the arrow-claw and the width of the wings

Statistical indicators .	**The length of the snout and the width of the wing**				
	L	b_1	b_2	b_3	b_4
Mathematical mean value, M_{α_i}	92.56	68.08	67.81	40.27	38,13
Mean squared deviation, σ_i	19.51	8.25	8.63	8.69	8.43
Coefficient of variation, V_i,%	21.08	12,11	12.73	21.57	22.11
Interval Repetition (Frequency) P_{t_i}	2.11	1.21	1.27	2.16	2.21
Kolmogorov criterion, $P(\lambda)$	0.27	0.0003	0.9228	0.3275	0.012

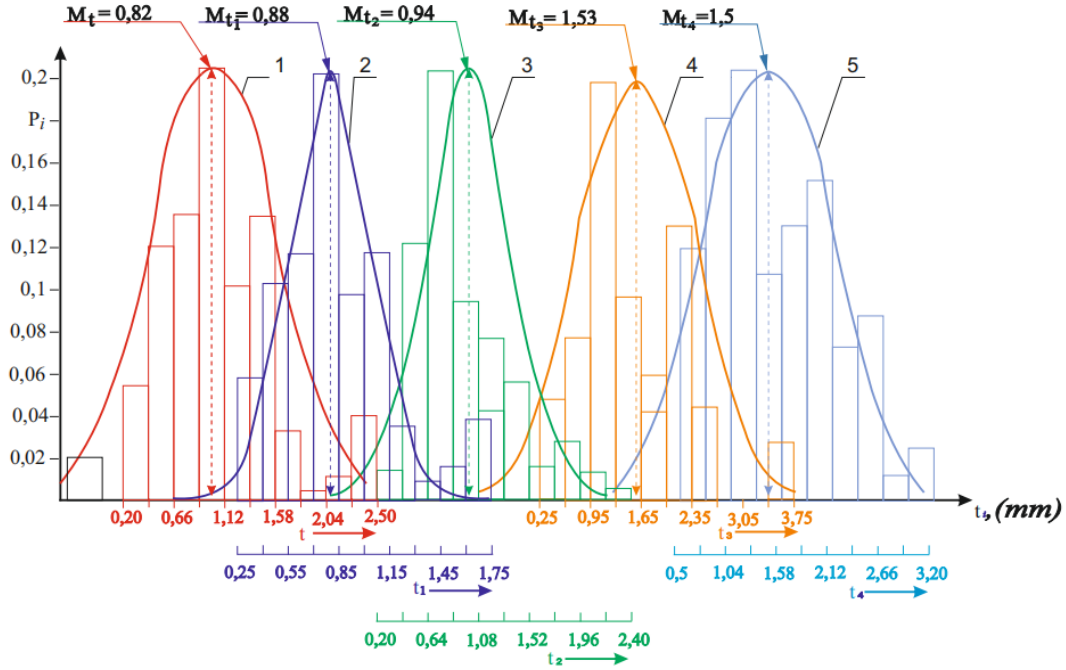

Figure 4. The thickness of the blades of the curved claw razors
1- beak part of of the blade thickness ; 2- left wing medium part of of the blade thickness ; 3- right wing medium part of of the blade thickness ; 4- left wing tail part of of the blade thickness ; 5- right wing tail part of of the blade thickness

Table 4. Statistical indicators of blade thicknesses of arrow -shaped claw razors

Statistical indicators	**The thickness of the blades**				
	t	t_1	t_2	t_3	t_4
Mathematical mean value, M_{α_i}	0.82	0.88	0.94	1.53	1.5
Mean squared deviation, σ_i	0.32	0.38	0.41	0.71	0.62
Coefficient of variation, V_i,%	39.02	43.2	43.6	46.4	41.3
Interval Repetition (Frequency) P_{t_i}	0.4	0.43	0.44	0.46	0.41
Kolmogorov criterion, $P(\lambda)$	0.012	0.0032	0.0001	0.0005	0.0005

According to the technical conditions presented in table 4 , the thickness of the blade formed as a result of grinding should be in the range of 0.5 ... 0.8 mm, but the thickness of the blade in the obsolete arrow-shaped claws is In p cases, the arrow-shaped claw is equal to the thickness of the prepared material (sheet) , (Fig. 4.26.1,2,3,4,5) 1.2 ... 2.35 times more than allowed . The same is observed in the thickness of the blade in Fig. 4.25.1,2,3,4,5. Here, instead of the thickness of 0.5 ... 0.8 mm, it is 6.3 ... 11 of the permissible value, It has a value that exceeds 4 times.

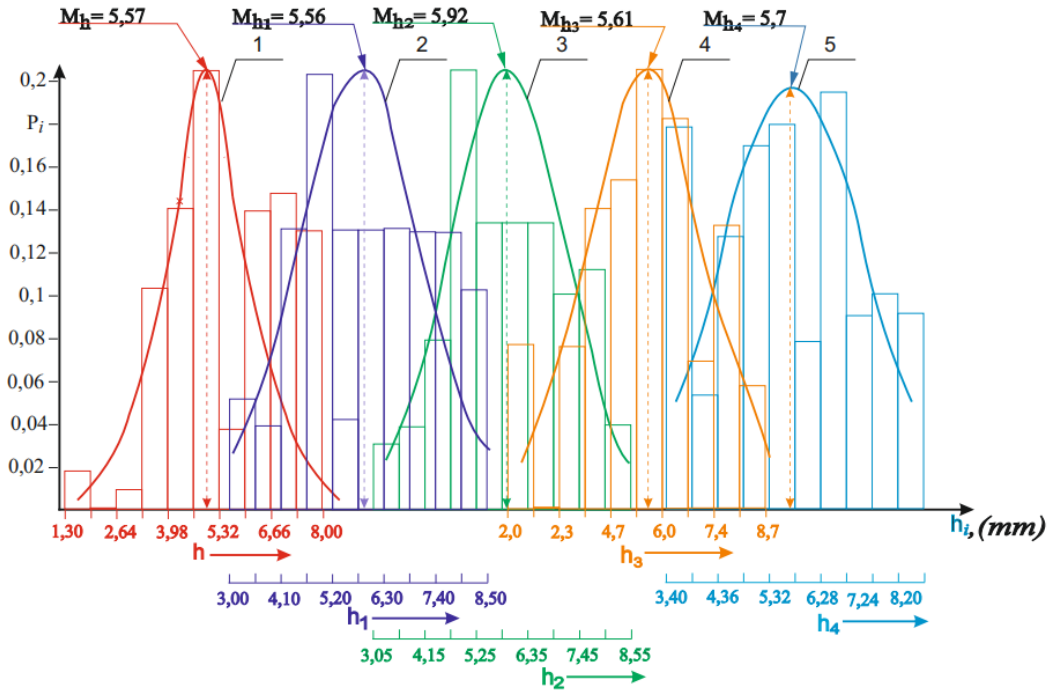

Figure 5. The thickness of the end of the bevel of the arrow -shaped razors
1- beak part face the end thickness ; 2- left wing medium part face the end thickness ; 3- right wing medium part face the end thickness ; 4- left wing tail part face the end thickness ; 5- right wing tail part face the end thickness.

Figure 5 shows that if no sharpening is done, the thickness of the end of the sharpening chamfer of the successive claw 6 , 5-8 , 4 times greater than the thickness of the edge of the blade . This difference is explained by the fact that, under the same technical conditions, the blade part is allowed to be hammered to form a blade instead of sharpening . However, studies have shown that the geometric parameters of the arrow-shaped claw cannot be sharpened by itself, and good results in terms of service life cannot be achieved.

Since the working time is about 10...15 hectares, a wide chamfer is formed on the back side of the blade, which has a negative angle to the bottom of the pit.

Table 5. Statistical indicators of thicknesses of the end of the chamfer of arrow -shaped claw razors

Statistical indicators	**The thickness of the end of the fascia**				
	h	h_1	h_2	h_3	h_4
Mathematical mean value, M_{α_i}	5.57	5.56	5.92	5.61	5.7
Mean squared deviation, σ_i	1.45	1.32	1.25	1.54	1.33
Coefficient of variation, V_i,%	26.03	23.74	21.11	27.45	23,33
Interval Repetition (Frequency) P_{t_i}	2.6	2.37	2.11	2.74	2.33
Kolmogorov criterion, $P(\lambda)$	0.27	0.3275	0.6272	0.792	0.33

It turns out to be unfit issued Table 5 shows the micrometer measurements and their analysis of the dimensions of the arrow - shaped claws .

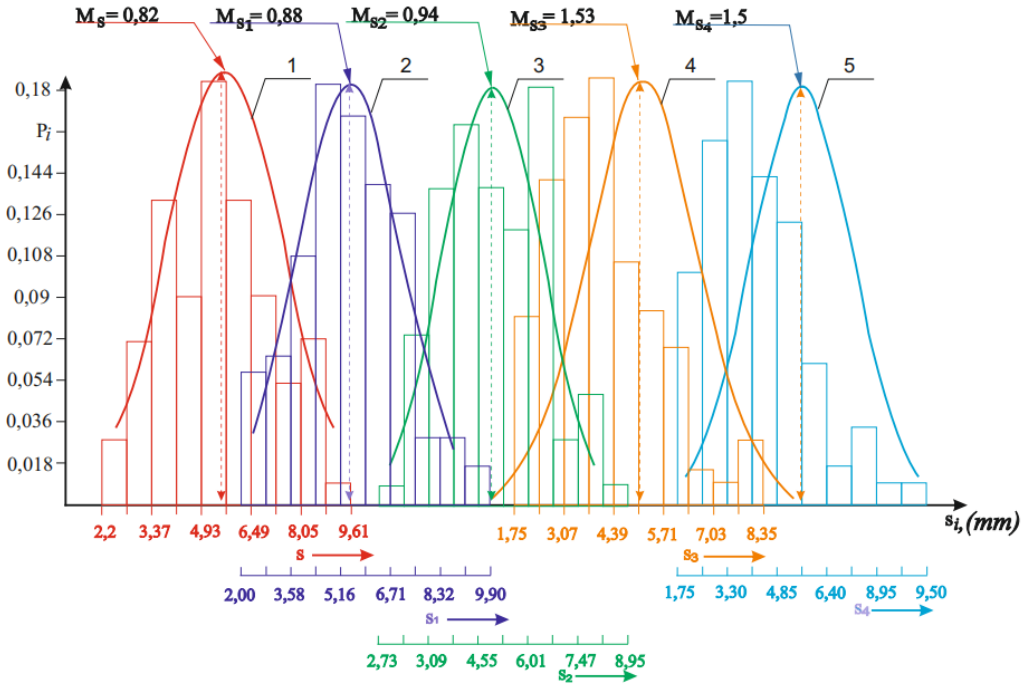

Figure 6. The length of the face of the arrow -shaped claw razors
Length of the face of the 1st muzzle; 2- the length of the middle part of the left wing; 3- the length of the middle part of the right wing; 4- the length of the tail section of the left wing; 5-right wing tail section length.

According to the technical conditions presented in Table 6, it is recommended that the length of the chamfer formed as a result of sharpening should be 15 mm ± 1.5 mm . causes an increase. R is 2.57-3.58 times different from the standard .

Table 6. Statistical indicators of thicknesses of the end of the chamfer of arrow -shaped claw razors

Statistical indicators	**The length of the face**				
	s	s_1	s_2	s_3	s_4
Mathematical mean value, M_{α_i}	5.82	5.43	5.4	4.11	4.19
Mean squared deviation, σ_i	1.24	1.63	1.84	1.39	1.51
Coefficient of variation, V_i,%	20.86	29.82	27.41	31.63	35.79
Interval Repetition (Frequency) P_{t_i}	2.1	2.98	2.74	3.36	3.58
Kolmogorov criterion, $P(\lambda)$	0.27	0.046	0.018	0.068	0.012

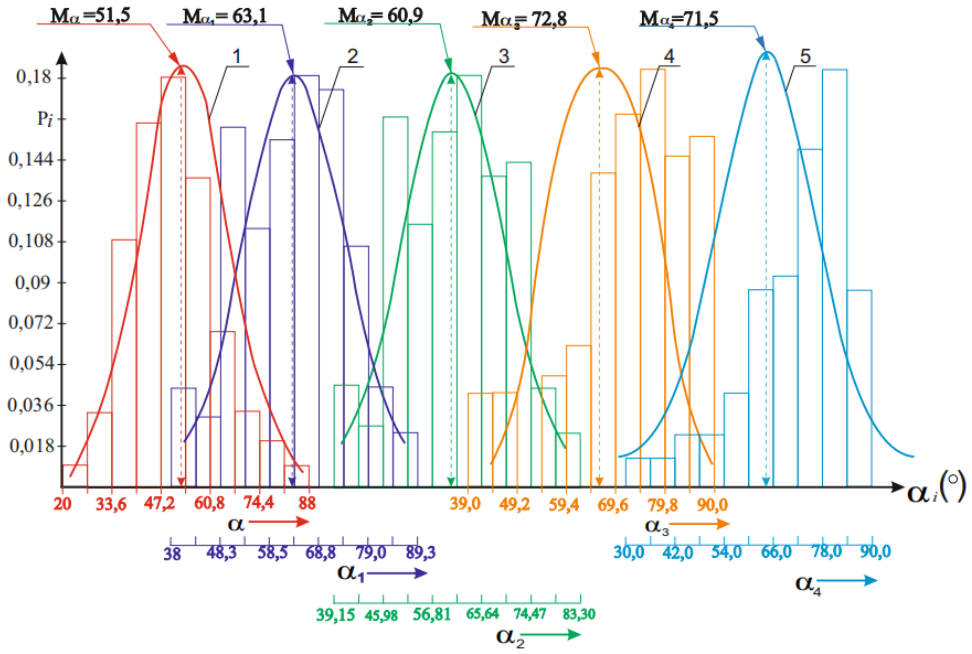

Figure 7. The angle of sharpening of the arrow-shaped claws, which has become useless

According to the technical conditions presented in table 77, it is recommended that the sharpening angle of the razor blades made by sharpening should be 23 0 ± 3 0 , but the value of this angle is 51 0 - 73 will be in the range of 0.

Table 7.Statistical indicators of the angle of sharpening of bullet-shaped claws that have become unusable

Statistic indicators	Sharpening angle				
	α	α_1	α_2	α_3	α_4
Mathematical mean value, M_{α_i}	51.48	63.14	60.96	72,76	71.52
Mean squared deviation, σ_i	12.37	10.76	9.43	11.94	12.7
Coefficient of variation, V_i ,%	6.37	6.7 6	5.74	8.68	9.08
Interval Repetition (Frequency) P_{t_i}	0.64	0.68	0.57	0.87	0.91
Kolmogorov criterion, $P(\lambda)$	0.003	0.012	0.017	0.327	0.544

An increase in this angle causes an increase in resistance. The sharpening angles of oval claw razors differ by 2, 22-3,17 times from the permissible ones .

Based on the above-mentioned materials, it can be concluded that the analysis of the results of the experiments conducted on the basis of the developed program confirms the conclusions made in theoretical studies, and the developed program is successfully used in studying the relationships between many parameters or factors. can be used.

3. CONCLUSION

The size of micrometrized bullet-shaped claws is 100 pieces. In the farms of Pakhtakor and Zafarabad districts of Jizzakh region, micrometering works were carried out on the decommissioned arrow-shaped paws. The attention was paid to the change parameters of concave claw razors, the length of the muzzle and the width of the coverage, and the results of

determining the statistical relationship between the curvature and the volume of work performed by it were presented. a total of 25 parameters of arrow-shaped claws were monitored. When the claw claws work in severe conditions, the amount of wear increases due to friction due to the resistance forces acting on it, which requires the study of the causes of their failure.

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