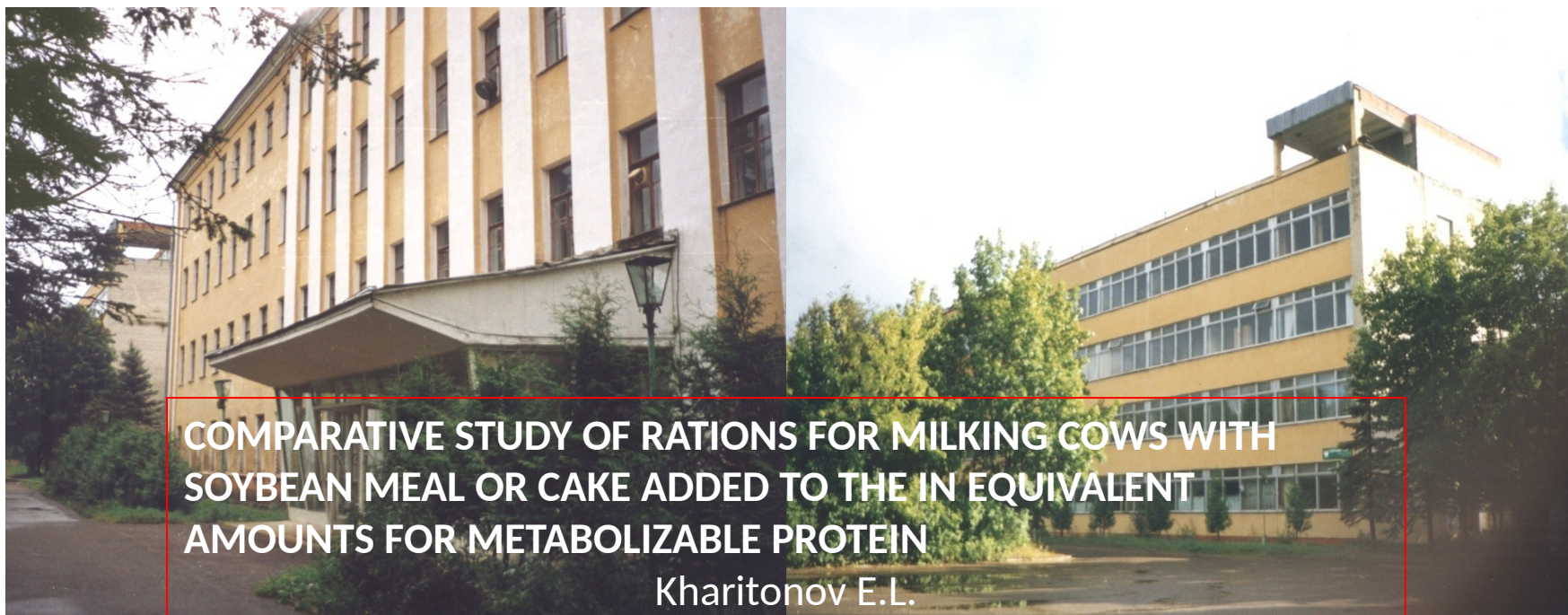


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# Protein value of feed

<b>Feeds</b>	<b>Protein content, g / kg</b>	<b>Conditional price, RUB / kg</b>	<b>Price 1 g of raw protein, RUB.</b>	<b>Content of digestible protein (UB), g / kg</b>	<b>Price 1 g UB, RUB.</b>
<b>soybean meal</b>	<b>49,5</b>	<b>12</b>	<b>0,024</b>	<b>189</b>	<b>0,063</b>
<b>soybean cake</b>	<b>40,4</b>	<b>10</b>	<b>0,024</b>	<b>235</b>	<b><u>0,042</u></b>
<b>sunflower meal</b>	<b>40,0</b>	<b>5</b>	<b>0,012</b>	<b>78,2</b>	<b>0,064</b>
<b>Soyprot</b>	<b>47,9</b>	<b>25</b>	<b>0,052</b>	<b>397</b>	<b>0,063</b>

Parameters of protein nutritional value studied forages

feeds	Crude protein, (SP)%	Effective degradability SP, % at k=0.08	Digestibility of non-degradation SP, %	Availability for assimilation,%	Metabolizable protein (g), per 100 g of feed
soybean meal	46,3	59,9	90,2	51,8	17,1
	49,5	59,32	94,03	38,26	18,93
	50,3	54,69	96,88	43,90	22,07
soybean cake	42,5	42,69	92,79	53,18	22,63
	40,4	40,03	96,93	58,13	23,52
	42,45	55,72	96,55	42,76	18,13
	40,8	62,16	93,97	35,56	14,53
	43,75	45,15	92,3	50,62	22,08
	43,7	30,9	92,8	64,1	28,0
	36,7	32,5	92,7	62,5	22,9

Parameters of protein nutritional value of the studied forages of natural moisture

Groups	Crude protein, (SP)%	Effective degradability SP, % at k=0.08	Digestibility of non-degradation SP, %	Availability for assimilation,%	Metabolizable protein (g), per 100 g of feed
I- soybean meal	47,7	42,5	90,2	51,8	24,7
II - soybean cake-	36,7	32,5	92,7	62,5	22,9

**Cow feeding diets during the experiment**

<b>Feed</b>	<b>Groups</b>	
	<b>I</b>	<b>II</b>
<b>Hay grain, kg</b>	<b>0,5</b>	<b>0,5</b>
<b>Mixed silage, kg</b>	<b>13,7</b>	<b>13,7</b>
<b>Corn silage, kg</b>	<b>33,7</b>	<b>33,7</b>
<b>Concentrates, kg</b>	<b>8,5</b>	<b>8,5</b>
<b>Gluten feed, kg</b>	<b>2</b>	<b>2</b>
<b>Molasses, kg</b>	<b>1</b>	<b>1</b>
<b>Soybean meal (tasted), kg</b>	<b>1,4</b>	<b>-</b>
<b>Soybean cake, kg</b>	<b>-</b>	<b>1,5</b>
<i>The diet contains</i>		
<b>Metabolizable energy, MJ</b>	<b>200,0</b>	<b>201,1</b>
<b>Dry matter, kg</b>	<b>21,2</b>	<b>21,3</b>
<b>Crude protein, g</b>	<b>3022</b>	<b>2963</b>
<b>Degradation protein, g</b>	<b>1849</b>	<b>1827</b>
<b>Undegradation protein, g</b>	<b>1173</b>	<b>1135</b>
<b>Crude fat, g</b>	<b>635</b>	<b>760</b>
<b>Neutral-detergent fiber, g</b>	<b>7413</b>	<b>7495</b>
<b>Crude fiber, g</b>	<b>3133</b>	<b>3256</b>

**Parameters of enzymatic microbiological processes in cows rumen in the experiment (M±SE, n= 5)**

<b>Parameters</b>	<b>Groups</b>	
	<b>I</b>	<b>II</b>
<b>pH</b>	<b>6,75±0,13</b>	<b>6,5±0,05</b>
<b>NH<sub>3</sub> Mean, mg dl<sup>-1</sup></b>	<b>7,48±0,68</b>	<b>8,1±1,3</b>
<b>Total VFA, mM</b>	<b>8,1±0,89</b>	<b>9,6±0,7</b>
<b>Acetate, molar % of VFA</b>	<b>60,7±1,27</b>	<b>62,0±1,5</b>
<b>Propionate, molar % of VFA</b>	<b>24,3±0,42</b>	<b>22,8±2,8</b>
<b>Butyrate, molar % of VFA</b>	<b>14,9±1,23</b>	<b>10,4±2,2</b>
<b>Bacterium 10<sup>6</sup> ml<sup>-1</sup></b>	<b>10,2±1,16</b>	<b>11,9±0,1</b>
<b>Protozoa, x 10<sup>5</sup> ml<sup>-1</sup></b>	<b>368,3±30,8</b>	<b>296±57,5</b>
<b>Amylolytic activity, E dl<sup>-1</sup></b>	<b>29,9±2,2</b>	<b>31,7±2,5</b>
<b>Fibrolytic activity,%</b>	<b>15,8±0,31</b>	<b>16,1±0,3</b>

**Indicators of blood cows in the experiment (M±SE, n= 5)**

<b>Parameters</b>	<b>Groups</b>	
	<b>I</b>	<b>II</b>
<b>Amine nitrogen, mg%</b>	<b>4,94±0,17</b>	<b>4,98±0,126</b>
<b>Urea, mg%</b>	<b>22,7±5,79</b>	<b>23,7±1,74</b>
<b>Glucose, mmol/L</b>	<b>3,17±0,35</b>	<b>2,5±0,32</b>
<b>The sum of ketone bodies, mg%</b>	<b>3,6±0,66</b>	<b>3,4±0,58</b>
<b>Triglycerides, mg%</b>	<b>13,0±3,45</b>	<b>10,5±0,91</b>
<b>Cholesterol, mg%</b>	<b>162±12,2</b>	<b>100,3±1,55</b>

**Average daily yield of cows in the period of experience (M±SE, n=10)**

<b>Groups</b>	<b>Before the experiment (28th day of lactation)</b>	<b>On the 15th day from the beginning of the experiment (45th day of lactation)</b>	<b>On the 45th day from the beginning of the experiment (75th day of lactation)</b>	<b>On the end of the experiment (100th day of lactation )</b>	<b>On the 130th day of lactation</b>	<b>On the 160th day of lactation</b>
<b>I</b>	<b>26±1,25</b>	<b>28,3±2,84</b>	<b>29,6±3,71</b>	<b>29,0±2,1</b>	<b>26,6±3,2</b>	<b>24,3±2,8</b>
<b>II</b>	<b>25,8±1,3</b>	<b>33,2±2,2</b>	<b>30,7±2,88</b>	<b>30,1±1,9</b>	<b>23,6±4,2</b>	<b>22,3±3,9</b>



**Composition of milk and the release of fat and protein with milk during the experiment (M±SE, n= 10)**

<b>Parameters</b>	<b>Groups</b>	
	<b>I</b>	<b>II</b>
<b>Fat,% (15 days of experience)</b>	<b>3,79±0,54</b>	<b>3,52±0,18</b>
<b>milk fat production , g</b>	<b>1045±69,9</b>	<b>883,5±104</b>
<b>Fat,% (45 days of experience)</b>	<b>3,56±0,12</b>	<b>3,45±0,13</b>
<b>milk fat production , g</b>	<b>1054±120,6</b>	<b>1044±66,7</b>
<b>Protein,% (15 days of experience)</b>	<b>3,15±0,012</b>	<b>3,2±0,11</b>
<b>milk protein production , g</b>	<b>891±93,5</b>	<b>1062±54,3</b>
<b>Protein,% (45 days of experience)</b>	<b>3,12±0,066</b>	<b>3,3±0,12</b>
<b>milk protein production , g</b>	<b>923,5±109,8</b>	<b>1013±109</b>
<b>Urea, mg%</b>	<b>28,4±3,6</b>	<b>26,9±1,86</b>