

631.811.93

« / (4732) 537-656 , 98; 394087, »

[4].

5,5.

( -226, -232, -40, -134, 137, -90) - 90 / .

5-14 / , 5-22 / 3-4

2003 « 2003-2009

27

15%; FeO 6,5%), (  $\text{Fe}_2\text{O}_3$  - 3,2-5,0%) , (  $\text{MgO}$  / ), (77 2,0-3,0%), ( - 0,6-2,0%), (  $\text{SiO}_2$  = 21,3 - /100 (6,1%), ( + Mg 81,2%, 8,0%), 8,2. 2003 , 4,95. 2003 ,

3%

[1, 2].

[3].

2003, 2004 2009 . 1.

1.

(2003, 2004, 2009)

|                             | -    |           |             |           |      |            |             |           |      |            |             |           |      |
|-----------------------------|------|-----------|-------------|-----------|------|------------|-------------|-----------|------|------------|-------------|-----------|------|
|                             |      |           |             |           |      | -2,5 /     |             |           |      | -5,0 /     |             |           |      |
|                             |      | I -2003 . | VIII 2004 . | VI 2009 . |      | I - 2003 . | VIII 2004 . | VI 2009 . |      | I - 2003 . | VIII 2004 . | VI 2009 . |      |
| 1. $\text{Fe}_2\text{O}_3$  | /    | 65        | 61          | 60        | 44   | 57         | 75          | 79        | 81   | 48         | 55          | 70        | 83   |
| 2. $\text{MgO}$             | /    | 71        | 50          | 56        | 52   | 51         | 46          | 88        | 92   | 45         | 53          | 89        | 96   |
| 3. $\text{SiO}_2$           |      | 4,8       | 4,8         | 5,0       | 5,1  | 5,1        | 5,0         | 5,3       | 5,1  | 5,0        | 5,2         | 5,4       | 5,1  |
| 4. $\text{FeO}$             | /100 | 5,48      | 5,61        | 4,92      | 4,60 | 5,03       | 4,92        | 3,96      | 4,30 | 4,32       | 3,82        | 3,62      | 4,41 |
| 5. $\text{Fe}_2\text{O}_3$  | -/-  | 21,0      | 21,5        | 21,0      | 20,5 | 21,6       | 22,5        | 22,8      | 24,0 | 23,6       | 24,7        | 25,5      | 25,3 |
| 6. $\text{FeO} + \text{Mg}$ | -/-  | 24,3      | 25,0        | 24,7      | 24,0 | 25,0       | 27,2        | 27,5      | 27,7 | 25,0       | 26,2        | 27,8      | 28,0 |

|    |      |                      |                      |                      |                       |                      |                      |                      |                      |                      |                      |                      |                      |
|----|------|----------------------|----------------------|----------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 7. | %    | 6,41                 | 6,20                 | 5,80                 | 5,70                  | 6,20                 | 6,01                 | 5,72                 | 5,60                 | 6,09                 | 6,04                 | 5,72                 | 6,00                 |
|    | /    | <u>0,55</u><br>39,0  | <u>0,79</u><br>41,5  | <u>0,50</u><br>46,4  | <u>0,50</u><br>48,9   | <u>0,50</u><br>38,2  | <u>0,91</u><br>45,0  | <u>0,43</u><br>47,0  | <u>0,20</u><br>51,9  | <u>0,55</u><br>32,7  | <u>0,73</u><br>41,5  | <u>0,40</u><br>48,0  | <u>0,27</u><br>54,3  |
|    | -//- | <u>1,40</u><br>12,5  | <u>2,00</u><br>15,5  | <u>2,30</u><br>15,6  | <u>2,03</u><br>15,0   | <u>0,80</u><br>13,3  | <u>2,00</u><br>14,9  | <u>1,30</u><br>11,5  | <u>0,32</u><br>13,6  | <u>1,70</u><br>11,4  | <u>2,00</u><br>16,2  | <u>2,00</u><br>10,6  | <u>0,65</u><br>14,6  |
|    | -//- | <u>0,35</u><br>16,0  | <u>0,14</u><br>15,4  | <u>0,20</u><br>15,8  | <u>0,18</u><br>15,4   | <u>0,35</u><br>15,9  | <u>0,14</u><br>15,4  | <u>0,23</u><br>16,8  | <u>0,07</u><br>15,9  | <u>0,27</u><br>13,7  | <u>0,14</u><br>15,6  | <u>0,20</u><br>15,9  | <u>0,06</u><br>17,3  |
|    | -//- | <u>0,33</u><br>35,0  | <u>3,00</u><br>20,0  | <u>1,30</u><br>33,7  | <u>1,21</u><br>33,7   | <u>0,35</u><br>37,0  | <u>2,00</u><br>20,0  | <u>1,40</u><br>28,3  | <u>0,15</u><br>23,9  | <u>0,33</u><br>33,5  | <u>2,00</u><br>22,0  | <u>1,60</u><br>28,3  | <u>0,15</u><br>24,2  |
|    | -//- | <u>0,54</u><br>14,2  | <u>0,50</u><br>17,0  | <u>0,60</u><br>17,0  | <u>0,04</u><br>17,9   | <u>0,30</u><br>17,4  | <u>0,50</u><br>17,2  | <u>0,70</u><br>16,4  | <u>0,03</u><br>10,0  | <u>0,54</u><br>17,32 | <u>0,76</u><br>15,9  | <u>0,70</u><br>17,5  | <u>0,21</u><br>10,9  |
|    | -//- | <u>3,80</u><br>12500 | <u>4,00</u><br>15400 | <u>3,90</u><br>18800 | <u>3,30</u><br>162700 | <u>2,40</u><br>17700 | <u>4,50</u><br>15500 | <u>3,30</u><br>18600 | <u>2,50</u><br>13500 | <u>2,00</u><br>16400 | <u>3,50</u><br>15400 | <u>3,30</u><br>19500 | <u>2,60</u><br>14400 |
|    | -//- | <u>7,20</u><br>403   | <u>5,50</u><br>500   | <u>14,0</u><br>565   | <u>11,8</u><br>363    | <u>5,00</u><br>352   | <u>5,80</u><br>496   | <u>14,5</u><br>570   | <u>13,7</u><br>374   | <u>4,40</u><br>350   | <u>4,40</u><br>521   | <u>12,6</u><br>540   | <u>11,40</u><br>471  |
| *  | -//- | 0,86                 | 1,00                 | 2,00                 | 1,64                  | 0,62                 | 1,20                 | 1,80                 | 0,89                 | 0,62                 | 1,20                 | 1,80                 | 0,57                 |
| ** | -//- | 0,16                 | 0,17                 | 0,20                 | 0,17                  | 0,16                 | 0,17                 | 0,13                 | 0,04                 | 0,13                 | 0,13                 | 0,12                 | 0,03                 |

\* ; \*\*

5 / -  
( 6,09 6,0%).  
( 5,1-5,2  
5,3-5,4), 2009 .  
2.  
6,41 5,70% ( 2009 ), 2,5 / - 6,20 5,60%,

| 2. , / , |     |        |     |        |     |    |        |     |    |      |     |        |   |        |     |    |   |
|----------|-----|--------|-----|--------|-----|----|--------|-----|----|------|-----|--------|---|--------|-----|----|---|
| 2003 .   |     | 2004 . |     | 2005 . |     |    | 2006 . |     |    | 2007 |     | 2008 . |   | 2009 . |     |    |   |
| —        | —   | —      | —   | —      | —   | —  | —      | —   | —  | —    | —   | —      | — | —      | —   | —  | — |
| 16,8     |     | 20,0   |     | 26,0   |     | 86 | 28,1   |     | 90 | 21,4 |     | -      | - | 32,3   |     | 82 |   |
| 22,8     | 6,0 | 28,0   | 8,0 | 30,7   | 4,7 | 63 | 35,3   | 7,2 | 70 | 26,2 | 4,8 | -      | - | 36,5   | 4,2 | 75 |   |
| 23,1     | 6,3 | 29,5   | 9,5 | 31,8   | 5,8 | 67 | 37,2   | 9,1 | 73 | 27,2 | 5,8 | -      | - | 38,9   | 6,6 | 75 |   |
| 1,30     |     | 1,47   |     | 1,11   |     |    | 1,93   |     |    | 1,15 |     |        |   | 1,42   |     |    |   |
| 1,18     |     | 1,52   |     | 1,14   |     |    | 1,29   |     |    | 1,11 |     |        |   | 1,27   |     |    |   |

( , )  
5 / .  
1. . . . .  
1954.- .44.- .263-280. 2. . . . .  
2001. 3. . . . .  
2004.- 2 - .13-16. 4. . . . .  
1986.- .77-79.

## GLAUCONITES AND THE FERTILITY OF VORONEZH CHERNOZEMS

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A positive effect of glauconites on the fertility of Voronezh chernozems was shown.  
Keywords: glauconites, chernozem, fertility dynamics, yielding capacity.