

• • • • • , • • • • • , • • • • • , • • • • • ,

4-11 () .

1).

1.				
	(1991-2003)		(1991-2008)	
	18,6	18,9	3,9	4,3
	23,8	20,4	2,7	3,5
	21,6	21,1	1,9	2,5
-	-	34,6	-	18,2

20%

3,5-4,0⁰

45-50%

1

1991-2008 .577
-918
690 766 .

16%

37%.

32%

1986 .

3,5-4,0⁰ 5

14%

$$492 \cdot 10^3 + 8,4^0 \cdot 10^3$$
$$\left(\frac{3200}{3100} - 1 \right) = 3,2\%$$

– 42 / .
– 3,80-3,83%.

0,16-0,18%,
377-397 / .

– 20%, – 0%, – 60%,

- 20%; - 10%, - 20%,
 - 50%, - 20%; - 0%,

– 40%, – 40%, –

20%.

2,5);

).

$$): 0) \quad -$$
$$; 1) \quad - 5 \quad + N_{46 \cdot 24 \cdot 30}$$
$$\begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}; 2) \quad -8 \quad + N_{84 \quad 30 \quad 48} \\ \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}.$$

22%,
10%.

2,5

121

146 /

72-82 88-104

52-86 /

47-67

2. (%) (/)					
	1986	–	3,83	3,82	3,80
	2006	0	3,58	3,57	3,71
		2	3,72	3,88	4,08
	1986	–	17,3	16,8	18,8
2 5	2006	0	23,8	29,1	24,8
		2	47,3	44,8	50,2
2	1986	–	377	393	397
	2006	0	304	273	281
		2	330	325	339

()

(. 3).

3. , . / (1991-2008 .)			
	0	1	2
	26,5	34,4	36,2
	32,4	38,0	42,2
	30,4	36,8	40,0

170 /).

(. 2).

20 –

(0,28 . %)

40% ()

20% ,

(0,17 . %)

10% 20%

05

1,4-2,4, - 1,3-2,3, () - 9,6-69,0.

22%, – 32%.

1991-2008

- 1,2-4,3, -

Soil Fertility in Crop Rotations on Erodible Slopes

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Summary. Field crop rotations on erodible chernozem slopes can be highly productive if they are reliably protected from erosion and have the system of organic and mineral fertilizers capable of providing the necessary level of soil fertility and ecological safety in the agriculture.

Key words: field crop rotations, erodible slopes, soil fertility, organic and mineral fertilizers.