



2. ()
: (), 80 / () 160 / ()
2003-2004 . (-
< 0,95 n = 3)

(qCO₂,

)

[3].

2003 .

2004 .

N₂O [6].
N₂O
(r=0,93) 2004 .
2004 . N₂O
0,3-0,5 N₂O-N/ / ()
) 0,5-1,2 N₂O-N/ / ()
(r=0,72)

N₂O 0,7-1,7 N₂O-N/ / . 2004 .
N₁₃₅ 160 / - N₉₈₄.
(. 1) , ,
N₂O , ,

(1,25%),
(IPCC),
[4].

(1,25%),
(IPCC),

1.
- 2006. - 3. . 31-36. 2. Anderson J.P.E., Domsch K.H. A
physiological method for the quantitative measurement of microbial bio-
mass in soils // Soil Biol. Biochem. - 1978. - Vol. 10. - P. 215-221. 3.
Anderson T.-H. Microbial eco-physiological indicators to access soil qual-
ity // Agriculture, Ecosystems & Environment. - 2003. - Vol. 98. - P. 285-
293. 4. Buchkina N.P., Balashov E.V., Rizhiya E.Y., Smith K.A. Nitrous
oxide emissions from a light agricultural soil of north-western Russia in
relation to applied N fertilizer and manures // Proceedings of the 17th Int.
ISTRO Conf. - 2006. - Kiel. - Germany. - P. 19-20. 5. Cambardella C.A.,
Elliott E.T. Particulate soil organic matter changes across grassland culti-
vation sequence // Soil Sci. Soc. Am. J. - 1992. - Vol. 56. - P. 777-783. 6.
Velthof G.L., Kuikman P.J., Oenema O. Nitrous oxide emission from soils
amended with crop residues // Nutrient Cycling in Agroecosystems. -
2002. - Vol. 62. - P. 249-261.

[5]. 2003 .
12,4-15,8 / ()
20,4-25,7 / (160 /). - 2004 .
- 8,0-20,0 / (+
) 24,0-51,2 / (2004 .
160 /).
(r=0,67) (r=0,75), (r=0,67).
(r=0,78).

Biological parameters of cultivated soil at the application of manure and plant residues

E.V. Balashov, N.P. Buchkina, E.Ya. Rizhiya,

Research Institute of Agrophysics, Russian Academy of Agricultural Sciences,

Grazhdanskii pr. 14, St. Petersburg, 195220 Russia

Summary. Different effects of manure and winter rye and vetch residues on the content of organic matter, microbial biomass, mineral nitrogen, and biological activity in loamy sandy soddy-podzolic soil were revealed.

Key words: manure, plant residues, CO₂ emission, N₂O.