Title: MIXTURE OF MATERIALS FOR THE USE AS ORGANIC FERTILIZER AND FOR SOIL IMPROVEMENT

Abstract: The invention comprises a mixture of materials to be used as organic fertilizer and for soil improvement, containing at least two of the components: bacillus sp, inorganic phosphite and methylene urea. Areas of application are agriculture, forestry and horticulture. The invention has the purpose to develop a new and effective agent for organic fertilization and for soil improvement. It should be inexpensive and should consist of known basic materials; the speed of the microbial reduction of the nitrate should be controllable.
AMENDED CLAIMS
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Claims

1. Mixture of materials to be used for increasing the plant vitality and the plant strength, containing at least 2 of the 3 components plant associated bacillus subtilis or bacillus amyloliquefaciens, inorganic phosphite and methylene urea.

2. Mixture of materials according to claim 1, characterized by the use of bacillus subtilis FZB24 (Registration No. DSM-ID 96-2).

3. Mixture of materials according to claim 1, characterized by the use of bacillus amyloliquefaciens FZB 42 (Registration No. DSM-ID03-1506).

4. Combination according to claim 1 comprising of bacillus subtilis or bacillus amyloliquefaciens, inorganic phosphite and methylene urea.

5. Combination according to claim 1, comprising of bacillus subtilis or bacillus amyloliquefaciens and inorganic phosphite.

6. Combination according to claim 1, comprising of bacillus subtilis or bacillus amyloliquefaciens and methylene urea.

7. Mixture of materials according to claims 4 and 5, characterized by using alkaline salts or alkaline earth salts of phosphoric acids as phosphites.

8. Mixture of materials according to claims 4 and 5, characterized by using ammonium phosphite as phosphite.

9. Mixture of materials according to claims 4 and 6, characterized by using a condensate from urea and formaldehyde as methylene urea (urea form).

10. Mixture of materials according to claim, 9 characterized by using a solid condensate from urea and formaldehyde with a polymer factor of 5 - 10.

AMENDED SHEET (ARTICLE 19)
11. Mixture of materials according to claim 9, characterized by using a liquid condensate from urea and formaldehyde with a polymer factor of 2 - 5.

12. Mixture of materials according to claims 1 - 6 characterized by mixing the components bacillus subtilis or bacillus amyloliquefaciens, phosphite/phosponate and methylene urea in equal measures.

13. Mixture of materials according to claims 1 and 4, characterized by containing 30-60 g of bacillus subtilis or bacillus amyloliquefaciens, 20-60 g of ammonium phosphite and 10-30 g of methylene urea.

14. Mixture of materials according to claim 12, characterized by being dissolved in water / as a suspension.

15. Mixture of materials according to claims 1 and 5, characterized by containing 20-80 g of bacillus subtilis or bacillus amyloliquefaciens and 10-60 g of ammonium phosphite.

16. Mixture of materials according to claims 1 and 6, characterized by containing 20-80 g of bacillus subtilis or bacillus amyloliquefaciens and 20-80 g of methylene urea.

17. Mixture of materials according to claims 1 and 11-16, characterized by containing citric acid, iminosuccinic acid, iminosuccinic acid-Na4-salt, micronutrients (B, Cu, Fe, Mn, Mo, Zn), maltodextrine, protein hydrolysate, algae extract, fine-particle silicic acid or adhesive agents as further ingredients.

18. Procedure for producing the mixture according to claims 1 - 11 by intensive mixing of the components phosphite and methylene urea followed by adding a culture of bacillus subtilis or bacillus amyloliquefaciens.