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“CLEANER PRODUCTION FOR ACHIEVING SUSTAINABLE DEVELOPMENT GOALS”

## Organic Alternatives for the Achievement of Cleaner Strawberry Production in Pamplona Norte de Santander

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### Abstract

The strawberry crop is the third in importance in Pamplona, Norte de Santander. The plantations receive indiscriminate applications of fertilizers and chemical pesticides. The objective of the study was to evaluate organic control alternatives for foliar and soil diseases, slugs, and to replace the lack of phosphorus with a view to achieving cleaner strawberry production. Four trials were developed in strawberry fields, one for the control of diseases of the aerial part, the second for the control of diseases of the roots, the third for the phosphoric nutrition and the fourth for the control of slugs. In the first three, different bioproducts produced locally with efficient microorganisms were evaluated and in the last one the diatomaceous earth. The Caldo Rizósfera and ME bioproducts showed similar results to the Dithane protective fungicide against *Ramularia* spot, the anthracnose on leaves, flowers and fruits, *Botrytis* rot and bacterial spot, while Caldo Rizósfera, ME and M6 were similar to the fungicide Benomil and Sodium Phosphite for the control of root diseases caused by *Fusarium* spp. and *Phytophthora fragariae*. Caldo Rizósfera and M6 decreased the incidence and severity of phosphorus deficiency and favored a higher concentration of phosphorus in the leaves. Diatomaceous earth demonstrated efficacy for the control of slugs with two applications, doses between 4 and 8 kg/ha

**Keywords:** pesticides, fertilizers, environment