Environmental and Agriculture Benefits of Direct Seeding of Wheat in Setif High Plains (North East of Algeria)

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Abstract. Direct seeding of wheat in the Setif region reduces fuel consumption and machinery. It enables also the rehabilitation soil and the reduction of environmental pollution.

Keywords: sustainable agriculture, direct seeding, wheat, pollution, soil rehabilitation.

INTRODUCTION

Direct seeding is an important element of sustainable agriculture. The aim of this study is to identify and analyse the environmental and agriculture effects of direct seeding of wheat that was recently adopted in Setif high plains.

MATERIALS AND METHODS

The Setif region is characterized by a semi-arid climate with mean rainfall of 40 cm. In generally, the soil is classified as a steppic brown soil with a basic pH. The fallow-winter cereals rotation occupy every year more than 80% of cultivated land.

RESULTS AND DISCUSSION

The results of this study show that direct seeding, relatively to conventional till, can reduce the use of fuel by 50 to 70%, machinery requirements by 60%, resulting in a decrease in production costs (Guedez, 2001). Economic yields of cereals are better in direct seeding. In addition to these benefits, the observations recorded in fields show many other advantages such as environmental rehabilitation of the soil by improving the permeability, the water storage and the rate of organic matter, and the reduction of environmental pollution by reducing the rate of CO₂ buildup in the atmosphere (Mrabet, 2004).

CONCLUSIONS

These results are the tools needed to convince farmers in Algeria to adopt this technique and allow the use of fallow land, representing nearly three million hectares of farmland each year, and produce at lower cost and environmentally.

REFERENCES