

SCD Probiotics®

Case Study Summary – Small leaf oriental tobacco trial in Prilep, Macedonia

Tobacco Production – Agriculture (CSS-024-2013)

Industry:	Agriculture
Application:	Soil amendment and plant protection
Where:	Prilep, Macedonia
When:	June, 2013
Products:	Customized solution of SCD Probiotics® Technology (EmFarma, Ema5, and Ema5 with tansy)
Customer:	SCD EkoProbiotika

**Products used in this study are from SCD customer, SCD EkoProbiotika.*

Background

Recent trials using SCD Probiotics Technology for soil amendment and plant protection indicated that SCD Licensee products were successfully used in the production of small-leaf oriental tobacco.

Introduction

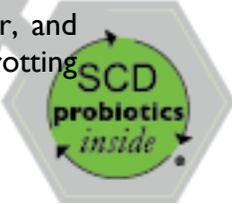
Tobacco leaves treated with SCD Probiotic products is in high demand between small-leaf aromatic oriental tobaccos that participate in the production of top-quality cigarette brands from USA and European blend cigarettes. The main objective of this study is to use SCD Probiotics Technology in oriental tobacco and observed its positive effects.

Methodology

In an area of 0.5 ha, a customized solution of SCD Probiotics, EmFarma was applied. The first treatment (applied on 27/06/13) was a dose of 20 L/ha dissolved in 300 L of non-chlorinated water. A second treatment (applied on 20/07/13) was a dose of 20 L EmFarma + 3 L Ema5/ha dissolved in 300 liters non-chlorinated water. The third treatment (applied on 20/08/13) was a dose of 20 L EmFarma + 3 L Ema5 with tansy/ha dissolved in 300 liters of water. In March 2013, a mineral fertilizer of NPK (8:16:20) and herbicide were applied. Despite the drastic weather conditions, including hail and drought (3 months without rain), aims were achieved as shown below.

Results

In terms of quality features, tobacco leaves treated with SCD Probiotics products has shown relevant results in ripening, drying, uniform gloss from golden - yellow to reddish color, and strong flavor and aroma. The leaves are soft and finely woven with lesser occurrence of rotting and mold during manipulation.



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In 2012, the tobacco harvest in the same area under normal weather conditions, without hail and drought, produced 1110 kg of tobacco leaves. In the process, fertilizers, pesticides, and herbicides were used. In 2013, under the same area of 0.5 ha, 1325 kg of high-quality tobacco leaves were produced, despite the fact that the plantation was almost destroyed from heavy hail precipitation on 24/06/13. As a result of the application of SCD Probiotics products, there were registered positive results compared with the results of the neighboring plantation on the same quality of soil, the same variety of tobacco, and same damage from hail (see Figure 1).

Figure 1: Tobacco planted in Macedonia treated with probiotics.



Conclusions

From the finished tobacco-leaf chemical analyses, it was concluded that the tobacco treated with SCD Probiotics products named EmFarma and Ema5 were excellent for smoking properties as seen from the ideal parameters of the chemical characteristics. From the results of such an extreme case of tobacco destroyed by hail, along with the other overall results from the last three years, we can conclude that the usage of SCD Probiotics Technology in the production of small-leaf Oriental tobacco gives quantitative results with 25% higher yields compared with other kinds of Oriental tobaccos regardless of the quality of soil and production conditions, with or without irrigation. From a qualitative perspective, the tobacco produced with the usage of SCD Probiotics products is the highest class of oriental tobacco with ideal chemical characteristics. This allows the tobacco to generate excellent financial results for the tobacco producers.

