The International Conference of the University of Agronomic Sciences and Veterinary Medicine of Bucharest
AGRICULTURE FOR LIFE, LIFE FOR AGRICULTURE
June 6 – 8, 2019, Bucharest, Romania

POSTHARVEST PATHOLOGY OF ORGANIC APPLES FROM ROMANIA. PRELIMINARY STUDY

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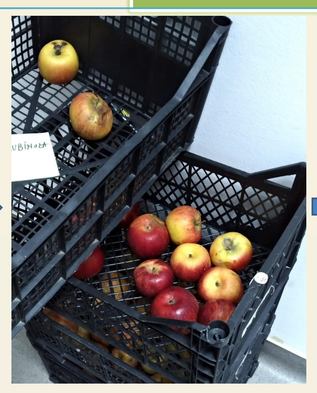
Keywords: *Fungal pathogens, organic production, post-harvest, Romania, apple*

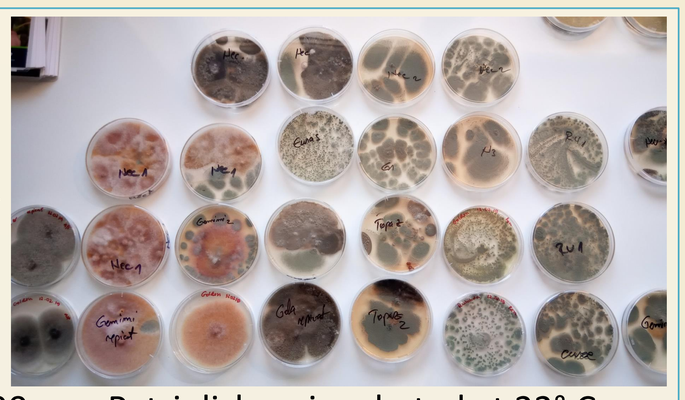
INTRODUCTION

Apple is one of the most important fruit species in the Northern hemisphere. As apple production is seasonal, the disparities between production and consumption may be balanced by storing the fruits with or without controlled atmosphere. By this, locally produced apples are kept fresh, in good condition, until the next production season. Pathogens may cause considerable losses during storage, quantitative and qualitative, both by degrading the appearance and fruits taste and by producing mycotoxins, a major food safety issue that becomes increasingly important for the consumer. The pathogens enter the fruit tissues in the early stages of growth and remain hidden there during maturation, while the symptoms will only be visible after harvesting and during storage (Passey et al., 2017, Louw and Korsten, 2014). Symptoms of disease can occur in different phenological phases during vegetation, but many pathogens have affecting fruits during storage can be collected from the field or already present in the storage area (Ammar and El-Naggar, 2014, Sever et al., 2012). These damages are probably the major cause for the loss of fresh products (Köhl et al., 2015). Consequently, fungal pathogens associated with postharvest rots of pears and apples can be separated into two main groups: “latent infection” (e.g., *Neofabraea* spp.) and “wound” pathogens (e.g., *Botrytis* spp., *Penicillium* spp.), (Wenneker and Köhl, 2013)

MATERIALS AND METHODS

Apple varieties: Robinola, Topaz, Gemini, Renoir.
Storage conditions: 1 ˚C, humidity 95 %.





PDA cultures, 90 mm Petri dishes, incubated at 22° C.
Observations were made at 3, 9 and 12 days.

RESULTS AND DISCUSSIONS

Gloeosporium spp., *Penicillium* spp., *Fusarium* spp. were observed.

Variety	The pathogen		
	Gloeosporium spp.	*Penicillium* spp.	*Fusarium* spp.
Rubinola	-	+	+
Topaz	+	+	+
Gemini	+	+	+
Renoir	-	+	+

Pathogens isolated on stored apples in 2018 - 2019

These results are in concordances with those obtained by Chira et al. (2014) that noted mainly *Gloeosporium album* developed better in low temperature conditions and high relative humidity, after 140 storage days.

CONCLUSIONS

Observations on the incidence of micromycetes detected on apples in 2018 show that:

- ✓ *Penicillium* spp. and *Fusarium* spp. were present on all apple varieties studied.
- ✓ *Penicillium* spp. and *Fusarium* spp. has been detected on all 4 apple varieties,
- ✓ *Gloeosporium* spp. has been found on the Topaz and Gemini varieties.

ACKNOWLEDGEMENTS

This work was supported by a grant of the Romanian Ministery of Research and Inovation, CCCDI – UEFISCDI, project number PN-III-P1-1.2-PCCDI-2017-0662 ECOTEHNOPOM - Proiect component P4, within PNCDI III.

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