

**Faculty of Agriculture
Goce Delcev University - Stip**



**1st INTERNATIONAL MEETING
AGRISCIENCE & PRACTICE (ASP 2018)**

BOOK OF ABSTRACTS

**10th - 11th May 2018
Stip, Republic of Macedonia**

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**1st INTERNATIONAL MEETING AGRISCIENCE & PRACTICE
ASP 2018**

Organized by

**FACULTY OF AGRICULTURE
GOCE DELCEV UNIVERSITY - STIP, REPUBLIC OF MACEDONIA
10-11 May 2018, Stip, Republic of Macedonia**

In the past ten years the educational, research and applicative activities of the Faculty of Agriculture – Stip, Goce Delcev University – Stip, contributed to the development of agriculture sector in the country and broader region.

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The 1st International Meeting Agriscience & Practice (ASP 2018) is organized with intention to bring together all agricultural stakeholders for sharing their knowledge, experience and obstacles. One of the main aims is to link research and field work in agricultural sector in the country and broader, giving it an international dimension.

The main goal of the Meeting is to connect and promote scientific achievements and practical knowledge presented in different thematic areas.

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Plant protection

**DETECTION OF *Pectobacterium carotovorum* subsp. *carotovorum*,
BACTERIAL STALK AND HEAT ROT DISEASE ON SUNFLOWER SEEDS**

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Abstract

The important protection measurement in sunflower production is to check the quality status of the seeds, by health control. The most spread diseases on sunflower transmitted by seeds or during the season are stalk rot (*Sclerotinia sclerotiorum*) and downy mildew (*Plasmopara halstedii*), which were the only quarantine pathogens observed on the fields in Macedonia. Many sunflower pathogens have never been reported in Macedonia, such as bacterial diseases. Although, the diseases can reduce yield and seed quality, they occur only intermittently and seldom are of any economic concern. *Pectobacterium* (formerly *Erwinia*) *carotovorum* subsp. *carotovorum* is a Gram-negative plant-specific pathogen, and also catalase positive, oxidase negative and pectolytic. In our observation this bacteria damages the sunflower seeds before seedling season, during checking the health condition of seeds in UNILAB (laboratory for plant health control), in the season 2018. Biochemical laboratory analyses were done to confirm *Pectobacterium*, but also the morphological status of bacteria was viewed with SEM (scanning electron microscopy). This is the first paper about *Pectobacterium carotovorum* subsp. *carotovorum* on sunflower seeds which damages the seed and it is known as a bacterial stalk and head rot in the field.

Key words: sunflower, health control, *Pectobacterium*, gram-negative, SEM.

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