

# RUST FUNGI SPECIES ON WEEDS OF EGGPLANT FIELDS IN DIYARBAKIR, TURKEY

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**Abstract -** This study was carried out to determine the rust fungi species affecting the weeds of eggplant field in Dicle University Campus in Diyarbakır, Turkey during 2012-2013. Five different rust fungi species were detected on five different weed species. The observed rust fungi species were; *Puccinia xanthii* Schwein, *P. montana* Fuckel, *P. malvacearum* Bertero ex Mont., *Uromyces glycyrrhizae* (Rab.) Magn. and *U. acetosae* Schroet. were detected on respective hosts vis, *Xanthium strumarium* L., *Centaurea balsamita* Lam., *Malva* sp., *Glycyrrhiza glabra* L. and *Rumex crispus* L.

**Key words:** eggplant, weed, rust fungi, Diyarbakır, Turkey

## I. INTRODUCTION

The most important problem in vegetable gardening is the yield decrease due to weeds. Weeds compete with eggplant for water, nutrients and aeration; impair growth and development of eggplant. Additionally, weeds also serve as alternative hosts for diseases, thus negatively affect eggplant production. Therefore, effective weed control in eggplant is inevitable to sustain crop yield. The diagnosis of host weeds and their natural enemies is the foundation stone of a successful biological control program (Özaslan, 2016). There are some reports on weeds of fungal plant pathogens in Turkey (Göbelez, 1963, 1964; Erciş and İren, 1993; Özrenk and Tepe, 1999; Bahçecioğlu and Gjaerum, 2003; Sert and Sümbül, 2003; Kırbağ, 2004; Sert, 2009; Erdoğan et al., 2010; Özaslan, 2011; Ekici et al., 2012; Özaslan et al., 2013, 2015; Erdoğan and Hüseyin, 2013; Özaslan, 2015; Özaslan, 2016).

In this study, rust fungi on weeds in eggplant were identified.

## MATERIALS AND METHODS

Specimens of rust fungi species were collected eggplant field in Dicle university Campus in Diyarbakır, Turkey, during 2012-2013. Weed specimens were prepared according to established herbarium techniques. Dried herbarium material was examined under light microscopy and rust diseases identified after reference to Ulijanishchev *et al.*, (1985) and Özaslan (2015). All specimens are deposited in the Agriculture Faculty, Dicle University, Diyarbakır, Turkey.p

## RESULTS AND DISCUSSIONS

The list of rust fungi species with their host plant are presented below.

| Rust Fungi                                   | Weed Species               |
|--|----------------------------|
| <i>Puccinia malvacearum</i> Bertero ex Mont. | <i>Malva</i> sp.           |
| <i>Puccinia montana</i> Fuckel               | <i>Centaurea balsamita</i> |
| <i>Puccinia xanthii</i> Schwein              | <i>Xanthium strumarium</i> |
| <i>Uromyces acetosae</i> Schroet.            | <i>Rumex crispus</i>       |
| <i>Uromyces glycyrrhizae</i> (Rab.) Magn.    | <i>Glycyrrhiza glabra</i>  |

## CONCLUSIONS

Five different rust fungi species have been identified in the current study on five different weed species. These rust fungi species can be potential biological control agent of these weed species. However, detailed studies on host specificity and potential of these species needs to be explored in detailed studies. Rust fungi in Turkey are contained in the reports of Göbelez (1963), Erciş *et al.*, (1993), Özaslan, (2011), Bahçecioğlu & Kabaktepe, (2012), Özaslan *et al.*, (2013), Özaslan *et al.*, (2015), Özaslan, (2016).

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