

Reactions of special bread wheat crossing block materials to leaf and yellow rust

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Purpose. One of the limiting factors for wheat production is the presence of fungal diseases, including leaf rust (caused by *Puccinia triticina* (*Pt*)) and yellow rust (caused by *Puccinia striiformis* f.sp. *tritici* (*Pst*)) diseases. Improve of resistant cultivars and use of genetic resistance are very important to control of the leaf and yellow rust diseases. The goal of this research 149 special bread wheat crossing block materials were evaluated for adult plant reactions for leaf rust Edirne (Merkez location) and for yellow rust Ankara (Ikızce location) in the 2014 season.

Methods. Test materials were sown in 3 replications with a one-meter row. The genotypes were inoculated with local *Pst* populations (virulent on *Yr 2, 6, 7, 8, 9, 25, 27, Sd, Su* and *A*, resistance genes). The genotypes were screened under natural epidemic condition for *Pt* (virulent on *Lr1, 2c, 3a, 16, 26, 3ka, 11, 17a, 30, B, 10, 14a, 18, 3bg* and *14b* resistance genes). **Results.** Leaf and yellow rust development on each entry were scored using the modified Cobb scale when the susceptible checks cv. Little Club, Morocco (for *Pst*), Gьn-91 and Thatcher (for *Pt*) had reached 80S infection severity in June, 2015. Coefficients of infections were calculated and values below 20 were considered to be resistant. Thirty-six (24%) and 140 (94%) genotypes were resistant to *Pt* and *Pst*, at the adult plant stage, respectively. **Conclusions.** The resistance sources to leaf and yellow rust were determined with this research.

Keywords: Bread wheat, leaf rust, yellow rust, reaction test, adult plant reaction

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Rust reactions of genotypes in a wheat yield trials developed by Central Research Institute for Field Crops in 2015

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Purpose. Stripe rust (caused by *Puccinia striiformis* f. sp. *tritici* (*Pst*)) and Brown rust (caused by *Puccinia triticina* (*Pt*)) are most important foliar wheat disease in Turkey. Stripe rust and brown rust can cause important yield and quality loss when susceptible cultivars are. The purpose of this research study 24 bread wheat genotypes (19

Yield Trials - Bread Wheat and 5 cultivars ('Bayraktar 2000', 'Demir 2000', 'Tosunbey', 'Bezostaja 1', 'Kenanbey') were evaluated for seedling stage reactions in January-February 2015. The experiment was carried out under greenhouse conditions in Central Research Institute for Field Crops in Yenimahalle/Ankara location. **Methods.** The

test materials were grown 15-20°C under greenhouse condition. The test materials were inoculated with urediniospores in mineral oil (Soltrol 170®) suspension on Zadoks growth stage-11 or 12. The test materials were incubated at 9°C (*Pst*) and 16°C (*Pt*) with % 100 humidity during 24 hours after inoculation then materials moved to 15-20°C greenhouse conditions. ITs, based on a 0 to 9 scale (*Pst*), 0 to 4 scale (*Pt*) were used for scoring af-

ter 14 days. **Results.** Stripe rust populations are virulent on Yr2, 6, 7, 8, 9, 25, 27, Sd, Su and Avs resistance genes and brown isolate is avirulent on Lr9, Lr19, Lr24 and Lr28 resistance genes. ITs on the susceptible checks (for stripe rust; Little Club and Morocco, for brown rust; Гьл-91 and Thatcher) were high (IT = 8 (*Pst*) and 3+ (*Pt*)) scores. 3 (13%) were resistant to the local stripe rust populations. 3 (13%) were resistant to the brown rust. **Conclusions.** As a result of this research yield trials bread wheat resistant genotypes have been selected as resistant disease both for advance yield trial and select for stripe and brown rust disease breeding programme.

Keywords: *Bread wheat, stripe rust, brown rust, reaction test, seedling stage reaction*

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Bighead carp (*Hypophthalmichthys nobilis*, Richardson, 1845) (Pisces: Cyprinidae) as host of new parasite species *Dactylogyrus aristichthys* (Long & Yu, 1958) in Macedonian waters

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The purpose of this study was to determine the presence of parasite fauna, prevalence, mean intensity, as well as, seasonal dynamic of parasite species in bighead carp (*Hypophthalmichthys nobilis* Richardson, 1845) from one of the largest cyprinid aquaculture facilities in Macedonia. A total of 53 specimens of bighead carp from one of the most significant and larger cyprinid aquaculture facilities in Macedonia were subjected on para-

sitological investigation, by seasons. Monogenea *Dactylogyrus aristichthys* (Long & Yu, 1958) was found on gills in bighead carp, in spring and autumn. Parasite identification was performed morphologically, based on the character of significant organs, using referent keys for determination. In total, the prevalence with *Dactylogyrus aristichthys* in bighead carp was 18.87%, while the mean intensity 70.00. Our findings of *Dactylogyrus aristichthys* in bighead carp are first recorded in Macedonia. At the same time, bighead carp represent a new host for *Dactylogyrus aristichthys* in Macedonian waters.

Keywords: *monogenea, parasites, mean intensity, prevalence, aquaculture*

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