2021 Caribbean Division Meeting Abstracts

Abstracts presented at the APS Caribbean Division meeting held virtually, September 22–23, 2021. The recommended format for citing division meeting abstracts, using the first abstract below as an example, is as follows:

Carlini, R. B., Andrada, N. R., Micca Ramirez, M. V., and Riglos, M. 2022. Relationship in severity of *Puccinia sorghi*, climatological and ecophysiological variables of corn in the semiarid of San Luis, Argentina. (Abstr.) Phytopathology 112:S1.1. https://doi.org/10.1094/PHYTO-112-3-S1.1

The abstracts are published as a supplement to *Phytopathology* for citation purposes. They were not reviewed by the *Phytopathology* Editorial Board and were not edited by the APS editorial staff.

https://doi.org/10.1094/PHYTO-112-3-S1.1

Relationship in severity of *Puccinia sorghi*, climatological and ecophysiological variables of corn in the semiarid of San Luis, Argentina

R. B. Carlini (1), N. R. ANDRADA (1), M. V. Micca Ramirez (1), M. Riglos (2)
(1) FICA-UNSL, San Luis, Argentina; (2) AER INTA Guatraché, La Pampa, Argentina

In the semi-arid region, the critical period (CP) of late corn is located in times with less evapotranspiration and greater availability of water in the soil, and the filling period of grain at times of low temperature (T) and solar radiation. This promotes poor assimilation that affects grain size, even more so with foliar diseases. To evaluate this relationship, in Villa Mercedes from 2017 to 2019, in random blocks of 3 repetitions, 5 treatments were established with different chemical management. The following were evaluated in VE, V13-15, R1, R2, and R6: pustule number (PN), T, relative humidity (RH), precipitations (PP), grain number and weight (NG-WG), total shoot biomass (B), harvest index (HI), yield (Y), radiation use efficiency (RUE) and the variables were correlated using the R software. The environmental conditions explained the variability in intensity between years. PN peaks correlated with high HR peaks from 2 days before. The PN ranged between 219.9 in 2019 and 2.6 in 2017. The average T and RH were 20ºC and 70%. The Y values ranged from 1044 to 96.3 g/m^2 and those for B between 2941.22 to 790 g DM/m^2 in the three years. PN was correlated with BP and CR. The HI ranged from 0.6 to 0.1, NG from 3348.48 to 887.04 g/m^2, RUE 6.4 to 2.02 g/MJ. and WG from 513.3 to 119.18 mg correlated with PN. The results obtained, approached as an integral part of the epidemiological system of corn, are contributions to future impact studies for the production of the crop.

***Nakatea oryzae-Sclerotium oryzae* in the rachis of rice panicles in Entre Ríos, Argentina**

M. ASSELBORN (1), M. V. Pedraza (1)
(1) EEA INTA C. del Uruguay, Entre Ríos, Argentina

Rice stem rot (*Sclerotium oryzae*) is the most frequent rice crop disease in Argentina, affecting lower leaf sheaths and stems. In Entre Ríos, Argentina, plants of a rice breeding line at physiological maturity, with panicle rachis necrosis, black lesions with irregular shape in flag leaf sheaths, leaves with chlorotic margins, and water-soaked blades were observed. Typical stem and sheath lesions at the waterline were detected and panicle grains appeared well-filled. Numerous black and globose sclerotia, 290-322 µm in diameter, black mycelium and three septate conidia slightly curved, 11.6 × 31.2 µm in size, with apical cell larger and less pointed than the basal cell, were observed in the rachis. Pathogen isolations from rachis, leaf sheaths, and stems were performed. Colonies of pure cultures on rice bran agar were initially white and turned dark gray 3 weeks later. The hyphal width ranged from 4.5 to 6.2 µm. Numerous small and globose sclerotia were observed on the surface of colonies 3 days after subculturing. The sclerotia were white at first and then turned black over time and ranged from 0.31 to 0.54 µm in diameter (average 0.41 µm, n = 50). Based on these characteristics, the pathogen was preliminarily identified as *Nakatea oryzae* (conidial state) and *S. oryzae* (sclerotial state). Koch's postulates and molecular analysis are being performed. To our knowledge, this is the first report of *N. oryzae-S. oryzae* affecting the main rice panicle rachis in Argentina.

using BLAST, resulting in higher homology (99.56%) to *P. mediterranea* (Accession No. MT520147.1). According to the symptoms, morphology, pathogenicity test, and detection by PCR and sequence analysis, the presence of *P. mediterranea* in tomato plants in the province of Corrientes was confirmed.

Effect of fungicidal applications against peanut blight caused by *Sclerotinia minor*

D. F. Giordano (1), S. Mortigliengo (2), M. Rosso (3), J. Danielle (4), C. Reinero (4), C. Crenna (5), C. ODDINO (5)
(1) IMICO, UNRC-CONICET, Córdoba, Argentina; (2) Morel Viullez, Córdoba, Argentina; (3) Criadero El Carmen, Criadero El Carmen; (4) FAV-UNRC, Córdoba, Argentina; (5) FAV-UNRC IMICO, Córdoba, Argentina

Sclerotinia blight caused by *Sclerotinia minor*, is one of the most important diseases affecting peanut (*Arachis hypogaea*) in Argentina. The strategies mainly used for its control are soil tillage and crop rotation. Also, it is important to have tools that can be used in the crop when the disease starts. Thus, the objective of this work was to evaluate the control efficiency of some fungicides on the disease. Granoleico variety seeds were sown, and after 90 days, inoculation with *S. minor* was done. The fungicides evaluated belonged to two groups, A (protectant, applied 48 h before inoculation): 1) Iprodione (500 g ai/ha), 2) stable copper (580 g ai/ha) and 3) chlorothalonil (1008 g ai/ha); and B (systemic and mesostemic, applied 48 h after inoculation): 4) Difenoconazole (100 g ai/ha), 5) Pyraclostrobin + epoxiconazole (99,75+37,5 g ai/ha), 6) Fluxapyroxad + epoxyconazole + pyraclostrobin (60+60+97,2 g ai/ha) and 7) Difenoconazole + pydiflumetofen (87,5+52,5 g ai/ha); and a control without fungicides (8). The disease showed high intensity, reaching incidence values of 26%. All fungicidal treatments decreased the incidence compared to the control, without differences between both groups, with values of 10–22%. This information shows that chemical control could constitute a useful strategy for disease management. Hence, it is necessary to continue the assays in order to establish the consistency of results, trying new active ingredients, doses, and application times.

Evaluation of cocoa (*Theobroma cacao*) clones at the artificial inoculation of *Moniliophthora roreri* in Tingo María, Perú

R. PAREDES-ESPINOSA (1,2), R. A. Ríos R. (1), G. Egoávil J. (1), J. A. Chia-Wong (1)
(1) National Agrarian University of the Jungle, Tingo Maria, Peru; (2) INIA-DRGB-SDB, Peru

The objective of the study was to evaluate the reaction of *Theobroma cacao* clones to the artificial inoculation of *Moniliophthora roreri*, at the Tulumayo Experimental Station, Tingo María. Eleven "S" clonal hybrids and 3 "C" farmer collection clones were studied. Conidia of *M. roreri* were inoculated into 65-day-old fruits, protected for 48 h in a humid chamber. Incidence, external severity (SE) according to fruit damage in degrees were evaluated weekly, 0: healthy fruit, 1: hydrosis, 2: swelling, 3: necrosis, 4: mycelium that covers ¼ part of the stain and 5: mycelium that covers more than ¼ part of the stain, and internal severity (SI): percentage of necrotic grain in each fruit, the clones being compared by ANOVA and Tukey's test ($\alpha = 0.05$). The results show a high incidence in all the clones, with values of 91.67 to 100%. Clone S-19 showed the lowest SE, which was 2.64, while clones S-01, S-08, S-09, S-11, S-13, S-15, S-22; S-24, S-26, S-28, C-02, C-03, and C-29 reported values between 3.64 and 5. The SI, fluctuated from 4.18 to 5 in all the clones evaluated. It is concluded that the clones are classified as susceptible to *M. roreri*, however, despite the fact that clone S-19 succumbed to the disease, it was able to delay the disease and the production of spores, an important character in the field that allows increasing the interval of fruit removal and fungicide applications, reducing production costs, negative environmental effects and improving work efficiency.

Characterization of the horizontal resistance of coffee (*Coffea arabica*) to yellow rust (*Hemileia vastatrix*) in the field and laboratory

R. PAREDES-ESPINOSA (1), P. J. Mansilla-Córdova (3), R. Y. G. Abad (1), D. L. Gutiérrez-Reynoso (2), J. C. Guerrero-Abad (2), G. Egoávil J. (4)
(1) INIA Pichanaki, Peru; (2) INIA, Lima, Peru; (3) FCA-UNAC, Callao, Peru; (4) National Agrarian University of the Jungle, Tingo Maria, Peru

Between 2011–2013, yellow rust unleashed one of the most important phytosanitary crises in the coffee sector in Peru, causing a negative impact on the rural family economy. One of the factors associated with the intensification of the disease was the predominance of susceptible cultivars in agricultural systems. Faced with the need to rehabilitate the coffee park with new cultivars, the National Institute for Agrarian Innovation (INIA) has managed the installation of basic coffee germplasm for the development of the yellow rust resistance program, which is made up of 169 introductions from the departments of Pasco, Junín, Huánuco, Ucayali, Cajamarca, and Amazonas and obtained from 2015. The objective of the study was to evaluate the incidence and severity of epidemic conditions in the field and characterize the components of horizontal resistance, using the method of inoculations of *H. vastatrix* in separated coffee leaves in the laboratory. The epidemiological results collected from the field indicate that 12.43 and 20.71% of the genotypes showed complete and incomplete resistance, respectively; 66.86% showed high susceptibility to the pathogen. Three of the outstanding genotypes gave a typical horizontal resistance reaction when artificially inoculated with uredinospores on separated coffee leaves kept in a humid chamber.

Comparison of *in vitro* analysis protocols for *Ascochyta rabiei* detection in chickpea seeds

S. PASTOR (1,2), A. Perez (3), B. Pugliese (1,2), M. Bustamante (4), C. Crociara (1,2), L. Valetti (1,2), E. Spring (3)
(1) IPAVE INTA, Córdoba, Argentina; (2) UFYMA CONICET, Córdoba, Argentina; (3) FCA UNC, Córdoba, Argentina; (4) Fund. ArgenINTA, Argentina