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Recurrent invasions of fall armyworm (*Spodoptera frugiperda*) (J.E. Smith) on rice in the Philippines: A need for early preparedness for its ecological management

Evelyn Valdez¹, Ravindra Joshi¹, Genaro Rillon¹, Kennedy dela Cruz¹, Dindo King Donayre¹, Edwin Martin¹, Femia Sandoval¹, Eduardo Jimmy Quilang¹, Minda Flor Aquino², Jose, Jr. Mariano², Maria Katrina Pascual², Muhammad Faheem³, Sivapragasam Annamalai³

1 Philippine Rice Research Institute, Maligaya, Science City of Muñoz, Nueva Ecija, 3119, Philippines. 2 Department of Agriculture-Regional Crop Protection Center 2, Ilagan, Isabela, 3300, Philippines. 3 Centre for Agriculture and Biosciences International, PO box 210, 43400 UPM Serdang, Selangor, Malaysia

Considered a global invasive pest of corn, the polyphagous fall armyworm (FAW) first reported damage to corn in the Philippines was on June 2019 in Piat, Cagayan and spread all over the country. DNA Barcoding revealed that both FAW strains: corn strain (C-strain) and rice strain (R-strain) damaged corn. However, little is known on its host preference and damage to rice which has been reported as one of its key host in other countries. This project was initiated in 2021 towards early preparedness and mitigation measures to counter any possible FAW incursions on rice. The first record of FAW on rice in the Philippines was documented on May 2021 in Pateng, Gonzaga, Cagayan and subsequently in 13 other municipalities in Region 2 infesting rice seedlings in seedbeds and direct-seeded rice during 2021 wet season. There was reinvasion on May 2022 in Barangay Flourishing, Gonzaga, Cagayan, and infestations in 8 and 1 other barangays (villages) of Gonzaga and Santa Ana, respectively. DNA Barcoding by CABI-UK confirmed that some FAW larvae collected from rice belonged to C-strain, while some of those collected from corn were R-strain, suggesting the existence of a mixture of two strains in both the ecosystems. In June 2022, FAW damaged direct-seeded rice was reported in Porais, San Jose City, Nueva Ecija. With the non-stop FAW invasions, now there is enough evidence in the Philippines that FAW is extending its distribution and is damaging rice in the new areas planted with both inbred and hybrid rice varieties. In most areas due to lack of adequate knowledge on its management, pesticide misuse is common among rice farmers. Two hymenopterous parasitoids, *Brachymeria lasus* (Family: Chalcididae) and *Copidosoma floridanum* (Family: Encyrtidae) emerged from the field-collected FAW larvae reared in the laboratory. To our knowledge, both parasitoids are new host records on FAW in the Philippines. The vegetation analysis studies in rice and corn areas recorded 70 weed species that could serve as alternate hosts of FAW. Amongst the dominant weed species screened for host suitability, FAW preferred to feed and oviposit their eggs on *Dactyloctenium aegyptium*, *Digitaria ciliaris* and *Eleusine indica*.

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