



inoculation treatment. As few as 8.5% of strains isolated from inoculated nodules had DNA fingerprints similar to the commercial inoculant. Rhizobia isolated from inoculated legume nodules displayed genetically distinct nodC sequences from inoculants, suggesting that applied inoculant strains were not present in host nodules.

PP108: Effect of sowing date and seed treatment on food legume insects

K El Fakhouri¹, M El Bouhssini¹, A Sabraoui¹ and S Lhaloui²

¹International Center for Agricultural Research in the Dry Areas (ICARDA), Rabat, Morocco; ²Regional Center for Agricultural Research, INRA, Settati, Morocco. *(k.el-fakhouri@cgiar.org)

In Morocco food legume crops are attacked by a number of insect pests. Among the important pests are Sitona weevil and Stem borer on faba bean and pea aphid on lentil. Seed treatment with systemic insecticides is becoming an important component of integrated pest management. In this context we tested the efficacy of a liquid formulation of the seed dressing insecticide Celest ®Top (a.i. Difenconazole + Fludioxonil+ Thiamethoxam) with three doses (1.5 cc, 2 cc, 2.5 cc), and of planting date on the control of Sitona weevil and Stem borer on faba bean and of pea aphid on lentil, under field conditions during the cropping seasons 2013-2014 and 2014-2015. The results showed that foliage damage caused by Sitona weevil was reduced by thiamethoxam with highest dose (2,5cc) compared to untreated control for both years, with a visual damage score of 3 (1-25%) of the leaflet damage for first date, and reduced nodules infestation of about 75% for second planting date. For faba bean stem borer, the seed treatment reduced the infested plants to about 35% with highest dose (2,5cc) for both sowing dates. The highest dose of the same product (2,5cc) did reduce significantly pea aphid infestation on lentil by about 44%. The results of this study showed that seed treatments with neonicotinoid (thiamethoxam) provided good level of protection against the three pests and thus could be used as one of the IPM components for the management of food legumes insect pests.

PP109: Test of post-emergence herbicide for the control of weeds in food legumes in Sais region, Morocco

A Hamal¹, S Ahmed², M El Bouhssini², A Ramdani¹, S El Haloui³, K Daoui⁴ and M Karrou²

¹Institut National de Recherche Agronomique (INRA), URPP, CRRA, Meknes, Morocco; ²International Center for Agricultural Research in the Dry Areas (ICARDA), Rabat Morocco ; ³INRA, URPP, CRRA, Settati, Morocco ; ⁴INRA, URAPH, CRRA, Meknes, Morocco. *(ahamal58@yahoo.fr)

Legumes leave significant residual nitrogen in growing in association or in rotation. Among the problems of food legumes, the unavailability of post-emergence herbicides for the control of weeds. The objective of this study was to test new active ingredients as post-emergence herbicides for weed control in food legumes (bean, chickpea, peas and lentil. This study was conducted at the experimental station of Douyet during the 2014-2015. Six herbicide treatments were tested and compared to a control treated by a super Gallant herbicide and weeded twice: Bentazone 480 g / l (1.5 l/ha), Glyphosate under salt Isopropylamine (0.5 l/ha), Linuron (0.5 l/ha), mixing Linuron + Glyphosate under salt applied at a dose of (0.5 + 0.5 l/ha); (1 + 1 l/ha) and (1.5 + 1.5 l/ ha), respectively. The results showed that Bentazone 480 g/l (1.5l/ha), Glyphosate under salt isopropylamine (0.5 l / ha), the technique of hoeing combined with anti-grass herbicide, Haloxypoph-R Methyl Ester 104 g/l (0.5 l / ha) ensured a good level of weed control. The mixture of Linuron (0.5 l/ha) + Glyphosate under salt Isopropylamine (0.5 l/ha) also provided an acceptable level of weed control and low phyto-toxicity in chickpea and lentil. Also, Glyphosate under salt Isopropylamine (0.5 l / ha), the technique of hoeing combined with anti-grass herbicide Haloxypoph-R Methyl Ester 104 g/l (0.5 l / ha), also gave a good level of weed control on lentil. Among the tested