

Vithal PSRVS, Roy S, Modak A, Venkat P.S.R.A, Vegi VR, Ramana MRSV, Rajashekar R (2012) Post fumigation product management: hygiene & infestation management in leaf operations (Himilo): An IPM system and on-line quality audit to protect fumigated tobacco stocks for long periods from cigarette beetle (*Lasioderma serricornes* (F.)). In: Navarro S, Banks HJ, Jayas DS, Bell CH, Noyes RT, Ferizli AG, Emekci M, Isikber AA, Alagusundaram K, [Eds.] Proc 9th. Int. Conf. on Controlled Atmosphere and Fumigation in Stored Products, Antalya, Turkey. 15 – 19 October 2012, ARBER Professional Congress Services, Turkey pp: 738-739

POST FUMIGATION PRODUCT MANAGEMENT: HYGIENE & INFESTATION MANAGEMENT IN LEAF OPERATIONS (HIMILO): AN IPM SYSTEM AND ON-LINE QUALITY AUDIT TO PROTECT FUMIGATED TOBACCO STOCKS FOR LONG PERIODS FROM CIGARETTE BEETLE (*LASIODERMA SERRICORNE* (F.))

Vithal P.S.R.V.S.*, Sugata Roy, Amitava Modak, Venkat P.S.R.A, Venkat Rao Vegi, Ramana Murthy R.S.V, Rajashekar R

*Hygiene and Quality Assurance, ITC Limited – Agri Business Division — ILTD, PO.Box:317, GT.Road, Guntur-522004. Andhra Pradesh, INDIA.

*Corresponding author's e-mail: psrvs.vithal@itc.in

ABSTRACT

There is a global need to protect fumigated stored products from reinfestation by developing suitable local systems with due consideration to operations flow, warehouse structure, hygiene, infestation monitoring, need based prophylactic sprays and effective and safe fumigation practices to reduce pesticide usage and residues in stored products.

The ITC Limited – Agri Business Division - ILTD has developed Hygiene & Infestation Management In Leaf Operations (HIMILO) system to protect fumigated tobacco stocks from reinfestation by Cigarette beetle (*Lasioderma serricornes* (F.)) and got it internalised up to warehouse level with training, audits and constant improvements with a policy and execution structure from senior management to warehouse level covering 19 warehouse complexes – 3.8 million sq. ft. (>350,000 m²) warehouse area - 214 unit compartments – 150 million kg of Tobacco.

Post fumigation reinfestation of fumigated tobacco stocks by Cigarette beetle (*Lasioderma serricornes* (F.)) was assessed using three scales: (i) quality audit rating system with an infestation risk level rating on a scale from 0 to 5, (ii) compliance (%) rating on critical control points (CCP) from 100 to 0, (iii) with corresponding compliance level from 5 to 0 which was developed to take into account the education, knowledge and skills of warehouse staff.

Quality (infestation) audit considered critical control points in several areas as follows: (a) Prevention: warehouse structure, mesh screening and maintenance (11 CCPs-1000 points); (b) Prevention: hygiene – Cleaning – Tobacco stacks and warehouse (12 CCPs-1000 points); (c) Monitoring: Serrico traps for Cigarette beetle monitoring (IPM) (8 CCPs-1000 points); (d) Prevention: Prophylactic insecticide spray – hard surface (Deltamethrin 2.5% WP- 90 days cycle) and space sprays (Permethrin 25% EC and Pyrethrum 1% EC - 30 days cycle) (8 CCPs-1000 points); (e) Control: Fumigation (one gram PH3/M3 -10 day exposure) (17 CCPs-2000 points); (f) Shipments: own cigarette factories (8 CCPs-850 points); and (g) Shipments: Exports (6 CCPs-650 points)(h) for a grand total of 7500 points.

Fumigated tobacco stocks can be protected effectively for long periods from Cigarette beetle (*Lasioderma serricornis* (F.)) by organization's policy and commitment of management staff to quality audit system.

Key words: Post fumigation protection, Reinfestation, Quality (infestation) audit system, Critical control points, warehouse staff, Cigarette beetle (*Lasioderma serricornis* (F.)), Protective covers, Organization policy and commitment.