

## Express PRA for *Earias vittella* – Interception –

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**Initiation:** Interception of okra (*Abelmoschus esculentus*) from India by the Federal State of Hesse

Express PRA	<i>Earias vittella</i> Fabricius 1794		
Phytosanitary Risk for Germany	high <input type="checkbox"/>	medium <input type="checkbox"/>	low <input checked="" type="checkbox"/>
Phytosanitary Risk for EU-MS	high <input checked="" type="checkbox"/>	medium <input type="checkbox"/>	low <input type="checkbox"/>
Certainty of Assessment	high <input type="checkbox"/>	medium <input checked="" type="checkbox"/>	low <input type="checkbox"/>
<b>Conclusion</b>	<p>The moth <i>Earias vittella</i>, endemic to south-eastern Asia and some parts of Oceania, is not found in Germany or the EU. At present, it is neither listed in the annexes to Directive 2000/29/EC nor at the EPPO.</p> <p><i>Earias vittella</i> infests mallows (Malvaceae), such as cotton and okra, but also ornamental plants such as the common hollyhock (<i>Alcea rosea</i>) and hibiscus. <i>Earias vittella</i> is a significant pest in respect of cotton and okra. It demonstrates high levels of resistance to the insecticides used and is difficult to control.</p> <p>It is to be assumed that the moth could colonise certain areas of the Mediterranean, particularly where cotton growing predominates (e.g. Greece and Spain), due to suitable climatic conditions.</p> <p>Germany's climatic conditions and host-plant specialisation means that the phytosanitary risk in Germany is low. However, the pest probably constitutes a high phytosanitary risk for southern Member States, in particular those that grow cotton.</p> <p>Due to this risk analysis, it must be assumed that although the pest would not establish in Germany, it could establish in other Member States in the Mediterranean region and cause damage to cotton and mallow plants. Measures should therefore be taken to avert the risk of introducing this potential quarantine pest as per Section 4a of the (PBVO) Plant Inspection Ordinance. The intercepted consignment should therefore be destroyed as per Section 4a of the Plant Inspection Ordinance (PBVO).</p>		
<b>Have the conditions for an Express PRA been met?</b>	<p>Yes, <i>Earias vittella</i> is oligophagous and may cause damage to plants of the mallow family, such as okra and cotton. The moth is not listed either in the annexes of Directive 2000/29/EC or at the EPPO, and has thus far not been found in the area covered by</p>		

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	the reporting plant protection organisation.
<b>Taxonomy, Trivial name, Synonyms</b>	Lepidoptera, Noctoidae, Nolidae (Anonymous 2015a, Anonymous 2015b) <i>Earias vittella</i> Fabricius 1794; Trivial name: Spotted bollworm (Anonymous 2015c)
<b>Does a relevant earlier PRA exist?</b>	No
<b>Distribution and biology</b>	South-eastern Asia and some parts of Oceania: Pakistan, India, Sri Lanka, Bangladesh, Myanmar, Indonesia, New Guinea and Fiji (Anonymous, 2015c; Anonymous 2015d)
<b>Presence of host plants in the PRA area - which species?</b>	Germany: Malvaceae, such as common hollyhock ( <i>Alcea rosea</i> ) and hibiscus (Syed et al. 2011); however, the host plants are not usually capable of hibernating in open air and the possibility of this animal surviving winter can probably be excluded as well (Anonymous 2015d) EU: Malvaceae, see above and above all cotton ( <i>Gossypium hirsutum</i> ) (Syed et al. 2011) as an agricultural crop in the Mediterranean area: 300,000 ha in Greece (80 %) and in Spain (20 %) (Anonymous 2015e)
<b>Transfer of the pest from the consignment → to a host plant</b>	Particularly with infested okras that are discarded; the moth is quite capable of flying and could reach its host plants in the vicinity
<b>Is a vector/another plant needed to alternate host? Which vector/plant? Distribution?</b>	No
<b>Climate in range of distribution comparable with PRA area?</b>	<i>E. vittella</i> is endemic to tropical and sub-tropical areas; Germany: no establishment possible in open air EU: establishment possible locally in the Mediterranean area
<b>If not, are there host plants being cultivated in protected conditions?</b>	Yes, ornamental plants such as <i>Hibiskus rosa-sinensis</i> are important indoor plants in a number of Member States
<b>Expected damage in the PRA area?</b>	Germany: no damage is expected EU: to cotton in Greece and Spain; in India, <i>E. vittella</i> is a major pest regarding cotton and has a high resistance to insecticides (Karanthi et al. 2002)
<b>Is an infestation easy to eradicate?</b>	No information available; an infestation would probably be difficult to eradicate, due also to the high level of resistance to insecticides.
<b>Remarks</b>	Controlling infestations using insecticides would probably cause significant problems due to the high level of resistance to

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	insecticides.
Literature	<p>Anonymous 2015: Wikipedia – <i>Earias vittella</i>.  <a href="https://de.wikipedia.org/wiki/Kahneulchen">https://de.wikipedia.org/wiki/Kahneulchen</a> (accessed on 18. 11. 2015)</p> <p>Anonymous 2015: eol – encyclopedia of life.  <a href="http://eol.org/pages/546850/names">http://eol.org/pages/546850/names</a> (accessed on 18. 11. 2015)</p> <p>Anonymous 2015c: Wikipedia – Bollworm.  <a href="https://en.wikipedia.org/wiki/Bollworm">https://en.wikipedia.org/wiki/Bollworm</a> (accessed on 18. 11. 2015)</p> <p>Anonymous 2015d: Okra – Major – Pest of Shoot and Fruit borer. Development of e Courses for B.sc (Agriculture).  <a href="http://images.google.de/imgres?imgurl=http://agridr.in/tnauEAgri/eagri50/ENTO331/lecture23/images/Earias%252520vittella%252520-520-Bionomics%2525201.jpg&amp;imgrefurl=http://agridr.in/tnauEAgri/eagri50/ENTO331/lecture23/okra/001.html&amp;h=203&amp;w=203&amp;tbnid=hIVwf1qSBHSrHM:&amp;docid=IszBGMd7unkr1M&amp;ei=BHZNVubbMcrYabegt8AO&amp;tbnid=isch&amp;iact=rc&amp;uact=3&amp;page=1&amp;start=0&amp;ved=0CD8QrQMwC2oVChMI5u3LsPebyQIVSmwaCh030A3o">http://images.google.de/imgres?imgurl=http://agridr.in/tnauEAgri/eagri50/ENTO331/lecture23/images/Earias%252520vittella%252520-520-Bionomics%2525201.jpg&amp;imgrefurl=http://agridr.in/tnauEAgri/eagri50/ENTO331/lecture23/okra/001.html&amp;h=203&amp;w=203&amp;tbnid=hIVwf1qSBHSrHM:&amp;docid=IszBGMd7unkr1M&amp;ei=BHZNVubbMcrYabegt8AO&amp;tbnid=isch&amp;iact=rc&amp;uact=3&amp;page=1&amp;start=0&amp;ved=0CD8QrQMwC2oVChMI5u3LsPebyQIVSmwaCh030A3o</a> (accessed on 19. 11. 2015)</p> <p>Anonymous 2015e: EU - Agriculture and Rural Development Cotton  <a href="http://ec.europa.eu/agriculture/cotton/index_de.htm">http://ec.europa.eu/agriculture/cotton/index_de.htm</a> (accessed on 19. 11. 2015)</p> <p>Kranthi , K. R.; Jadhav, D. R.; Kranthi, S.; Wanjari, R. R.; Ali, S. S. and Russell, D. A. 2002: Insecticide resistance in five major insect pests of cotton in India. Crop Protection, Vol. 21, Issue 6, July 2002, pp. 449–460.</p> <p>Syed , T. S.; Abro, G. H.; Khanum, A. and Sattar, M. 2011: Effect of Host Plants on the Biology of <i>Earias vittella</i> (Fab) (Noctuidae: Lepidoptera) Under Laboratory Conditions. Pakistan J. Zool., Vol. 43(1), pp. 127-132.</p>



Fig. The *Earias vittella* caterpillar (source: Plant protection service of the Federal State of Hesse, Willig).