**Annex 1: *Cydalima perspectalis* (box tree moth) pest module**

A domestic movement certificate is required to move *Buxus spp*. plants for planting material from a regulated area to a non-regulated area in Canada (excluding British Columbia). CFIA inspection of a facility must be completed as part of the review process of the pest module and the review of preventive control plan (PCP) and pest module. CFIA inspection of a shipment may also be required. A facility requesting a domestic movement certificate must have a:

•  CFIA-accepted systems approach such as the United States-Canada Greenhouse-Grown Plant Certification Program (GCP), the Canadian Nursery Certification Program (CNCP), or the Canadian Nursery Certification Institute’s (CNCI) Clean Plants Program with a *C*. *perspectalis* pest module in place

Once the pest module has been developed by the facility, it is to be submitted to the local CFIA office. The pest module will be reviewed and accepted by the CFIA when all requirements of the system are met. An additional inspection of the facility may be conducted to confirm the ability of the facility to follow the written procedures.

or

•  For facilities not on a systems approach (GCP, CNCP, Clean Plants), the facility is required to submit written procedures (PCP) (Annex 2) and the pest module to the local CFIA office

The PCP and pest module will be reviewed and accepted by the CFIA when all requirements of the system are met, and an inspection of the facility must be conducted to confirm the ability of the facility to follow the written procedures.

The pest module and/or PCP should be reviewed on an ongoing basis (minimum once per year) by the facility to ensure that the procedures and processes effectively address the risk associated with *C*. *perspectalis*. If major changes affecting the delivery of the program are made, the pest module must be reviewed by the CFIA.

The sections of the pest module follow a sequence of general facility information (sections A.1 and A.2), a summary of the pest biology and associated risks (A.3), an evaluation of the specific risks for the pest at the facility (A.4), and sections A.5-A.8 where the facility identifies the measures specific to the management of box tree moth (BTM). These measures are in addition to the systems-approach measures already in place at a facility within the systems approach framework. Alternate measures implemented by the facility to mitigate identified risks must be detailed within the pest module and may require acceptance by the CFIA. Section B includes facility commitment and approval verification. To support the development and implementation of the pest module, please refer to the companion document and the best management practices developed by the industry found at the [clean plants website](http://www.cleanplants.org/box-tree-moth-certification-program.html).

|  |  |
| --- | --- |
| **A.1. Contact Information** | |
| **Name of Company/Facility** | **Name of Contact Person** *(Certification Manager, GCP Manager, owner)* |
| **Phone** | **Email** |
| **Facility Mailing Address** |  |
| **Facility Address where Module will be Implemented** | **Specific blocks/farm locations** |
| **Additional Address(es) where Module will be Implemented** *(add more rows as needed)* | **Specific blocks/farm locations** |
| **Does your facility participate in a CFIA-accepted or a third-party audited Systems Approach phytosanitary program?**  *If not, the facility must also complete Section A.2.* | CNCP (certification #: \_\_\_\_\_\_\_\_\_\_\_\_)  GCP (certification #: \_\_\_\_\_\_\_\_\_\_\_\_)  Clean Plants Certified  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_  No |

|  |  |
| --- | --- |
| **A.2. Systems Approach** | |
| ***FACILITIES NOT CNCP/GCP AUTHORIZED or CLEAN PLANTS CERTIFIED*** | * For more information on the industry-led Clean Plants program (phase-In guidance and template), consult: the clean plants website [link to this website: https://www.cleanplants.org/] * For more information on the GCP program, consult: D-16-02: Administration of the United States – Canada Greenhouse-Grown Plant Certification Program (GCP) * For more information on the CNCP program, consult: D-04-01: Canadian Nursery Certification Program (CNCP)   Our facility is not participating in a systems- approach program (CNCP, GCP, or Clean Plants).  Contact CFIA for additional requirements to move host plants within Canada. |

|  |  |
| --- | --- |
| **A.3. BTM-Specific Risk Factors to Consider** | |
| ***Biological Classification*** | Flying insect |
| ***Natural Range*** | Up to 10km/year |
| ***Artificial/Assisted Spread Pathway*** | Via movement of host plants (eggs, larvae, pupae) |
| ***Host(s)*** | *Buxus* spp. |
| ***Life stage/form with spread risk*** | Adult (flight) |
| ***Life stage/form with host damage risk*** | Larvae (defoliation) |
| ***Geographical region that affects the degree of management*** | Within the BTM regulated area (Appendix 1 of D-22-04)  Outside the regulated area |
| *The pest life cycle in the region of the facility should be considered.* | |

|  |  |
| --- | --- |
| **A.4. Facility Risk Analysis** | |
| **In which geographical region is your facility located?** | BTM Regulated Area (Appendix 1 of D-22-04): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Non-regulated Area: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Indicate the type of production area(s) for host plants present at the facility** | Protected environment  Outdoor  Pest exclusion barrier |
| **Risk Analysis:** Identify the risks at your facility from inputs and production activities at your facility. The type of production also impacts the risk analysis. Example risk points (critical control points) are listed below. The risk points identified here will determine the scope of the additional measures required at your facility to mitigate the risk of introduction and spread of BTM. For example, if your facility has indoor production, an extended scouting period is required. If your facility is within the BTM regulated area, one way to prevent BTM from infesting host plants would be to implement pest exclusionary barriers – you will need to describe how your barrier is set up and what you’re doing to maintain it to justify shipments outside of the BTM regulated area.  Inputs:   * Water * Media * Starter Plants/propagative material/liners * Nursery Pots/Containers   Production:   * Propagation * Potting/Planting/Seeding * Plant Maintenance (with plant debris) * Movement of:   + Plants   + People   + Equipment * Harvesting, Shipping & Receiving periods * Returns   Production System:   * Protected environment * Pest exclusion barrier * Outdoor | |
| **Attach a map of your facility that illustrates the farm locations and specific blocks where host plants will be produced (the specific blocks/fields or farm locations listed in Section A.1), as well as identifying the border areas. Your current CNCP/GCP/Clean Plants maps may already include this information. Note: specified fields or blocks must be separated by at least 3 m (10’).** | |

|  |  |
| --- | --- |
| **A.5 – A.8 BTM Specific Pest Risk Mitigation Measures at the Facility** | |
| *Use the following sections to describe the measures your facility is actually doing to prevent the introduction and spread of BTM. Check only the boxes that apply for your facility’s particular risk factors associated with BTM, and provide more detail where applicable. Specific measures are required to address identified risks. If your facility chooses not to implement some measures, other measures may be required to supplement the rigour of the program at your facility. Remember that there are 2 tiers of geographic risk to consider when filling out the following sections:*   1. *BTM regulated area (within main area of infestation or outside the main area of infestation)* 2. *non-regulated area (note: implementation of a pest module is recommended by all boxwood producers outside the regulated area, but is not mandatory)* | |
| **A.5. Administrative Controls** | |
| *Staff Designation* | The facility has clearly identified the person responsible for ensuring appropriate personnel are designated as scouts and for maintaining the list of trained personnel  The responsible person is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Designated scouts are assigned to inspect and monitor for BTM.  The list of trained personnel is readily available.  The location of the list of trained personnel:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  *Note: the facility can refer to the relevant section in the GCP/CNCP/Clean Plants plans if applicable* |
| *Training* | Designated personnel are trained to identify or detect BTM based on damage symptoms and insect biology, at receiving, through production, and at shipping.  Emphasis is placed on identifying symptoms of leaf damage and techniques for scouting for various life stages |
| *Resources* | Pest biology resources for BTM are used in the training and are available to designated personnel.  Pest information includes: morphology of various life stages, symptoms and damage exhibited, scouting techniques and other information to aid in early detection of BTM  The facility has clearly identified the person responsible for maintaining training resources  The responsible person is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  The list of trained personnel is readily available.  The location of the list of trained personnel:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  *Note: the facility can refer to the relevant section in the GCP/CNCP/Clean Plants plans if applicable* |
| *Purchasing* | Host plant material for production is:  Seed  Tissue culture  Self-propagated  Sourced from non-regulated areas where BTM is not known or known not to be present  Sourced from BTM regulated areas but from suppliers that meet import and/or domestic movement requirements  Other, provide details |
| *Inventory Control Measures for BTM* | Inventory control is adequate to identify locations of host plants and eligibility for shipping  Inventory control is in place to enable trace-backs and trace-forwards should BTM be detected at the facility  Other, provide details |
| *Records* | Facility records are maintained for at least 3 years  Required records include:   * training * staff * purchasing * inventory control |
| **A.6. Systems to Establish & Maintain Pest Freedom** | |
| *Monitoring and inspection program for facilities in BTM regulated area* | ☐ Incoming host plant material is inspected by designated scouts to check for signs of BTM life stages or damage ☐ Incoming plants are maintained outside the production area until the incoming inspection is completed ☐ The life cycle of the pest in the region as well as the type of production system are considered for the scouting program ☐ Outdoor-grown host plants are scouted every week during the active pest season (May 1 through September 30) ☐ Plants produced in a protected environment (indoor) are scouted every week between March 1 and October 31. The active pest period may start up to 2 months earlier compared to the life cycle in outdoor conditions. ☐ Plants maintained within pest exclusion barriers are inspected weekly from May 1 to September 30 or within the 48hr window prior to shipping ☐ Crop scouting techniques include:   * inspecting for signs of BTM including webbing, frass, shed head capsules, larvae, pupae or shed pupal cases * inspecting foliage for surface chewing or leaves with only the margins remaining * actively pulling apart twigs and branches to expose any infested twigs and leaves that are webbed together, inspecting for signs such as larvae or pupae * other, provide details   ☐ Traps are deployed outdoors between May 1 and  September 30 for outdoor-grown plants, (includes plants grown outdoors within pest exclusion barriers) ☐ Traps are deployed between April 1 and October 15 for plants grown in protected environments  ☐ Traps are inspected at least weekly during the deployment period. ☐ Unitraps with pheromone lures (or CFIA accepted alternatives) are used for trapping  ☐ Traps are placed around the perimeter of the host plant production area at a density of 4 traps per hectare or spaced at no less than one every 100m. ☐ Other, provide details |
| *Cultural Practices* | Maps are on file, indicating where the host plant production occurs (identify each field/block/zone noted in Section A.1)  Plant debris is managed, particularly between September and April as hibernaria may reside in the debris (provide details)  Spray program for host plants is in effect as per provincial pest management recommendations (details for during production, as well as any particular treatments applied prior to shipping)  Safeguarding – protection of crop prior to first flight period (to prevent egg-laying on blocks of plants), protection of crop once inspected and ready for shipment. Details are required - this is the safeguarding component.  Screening/pest exclusion structure(s) details (minimum requirements for these structures are detailed in the Best Management Practices (BMP) document)  Other, provide details |
| *Infrastructure Controls* | Host plant returns are not accepted from regulated areas  Host plants are shipped in sealed (closed) vehicles to prevent infestation (if being shipped through BTM regulated area)  Cross-docking of inbound and outbound host plants (having uncertified, uninspected received plants adjacent to plants ready for shipping) is avoided, or a minimum of 10’ (3 m) distance is maintained between inbound and outbound host plants  Other, provide details (for example, no shipping between May and September, outdoor-grown plants are only harvested prior to the first flight season and placed in pest exclusion barrier, other measures?) |
| **A.7. Verification that Pest Freedom has been Attained or Maintained** | |
| *Specific Records* | Receiving/inbound inspection specific for BTM  Formal scouting for BTM during the active pest period (plants, trap checks)  Shipping/outbound inspection for BTM  Pest exclusion barrier records (maintenance)  Other records as requested by CFIA |
| **A.8. Emergency Planning (what happens if you find the pest at your facility?)** | |
| *CFIA Notification* | CFIA is notified immediately when there is the presence, or suspected presence of BTM either in a shipment requiring a domestic movement certificate or within the pest exclusion barrier in a BTM regulated area, or in a non-regulated area  Other, provide details |
| *Cessation of Shipping* | If the pest is suspected or a positive BTM find occurs, shipping out of the BTM regulated area ceases until CFIA has investigated and has determined that the pest risk has been mitigated |
| *Specific Isolation, Treatment & Other Mitigation Measures for the Pest* | In the event of a pest find (suspected or positive), the actions that would be taken to isolate the pest or infested host plants include:  Chemical pest control actions  Safeguarding of other blocks of host plants (screening or pest exclusion barriers, etc.)  Other, provide details (avoid movement of staff and equipment through all host plant blocks, etc.)  Resumption of shipping following a detection: An 18-day window (or CFIA accepted alternative) post adult detection is recommended before shipping outside the regulated area may resume. Shipments may begin if: no adult BTM are caught in the traps for 14 days; larvicidal treatments are applied starting on day 15 or as soon as larvae are detected (whichever is earlier); inspections 3 days after larval treatment reveal no larvae or no live larvae.  *Analysis of the system failure – was the pest presence due to program design, or the processes implemented at the facility?*  The facility has clearly identified the person responsible for investigating, documenting actions and recommendations, and reporting.  The responsible person is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Corrective actions to address system failures are incorporated into the facility’s pest module and date of implementation is recorded |

|  |  |  |
| --- | --- | --- |
| **B. SIGNATURES FOR COMMITMENT AND APPROVAL** | | |
| **B.1. Statement of Facility Commitment** | | |
| **Our facility verifies that this application is accurate and represents the activities and/or measures in place at our facility to prevent the spread of this pest. A signature is not required if the form is submitted electronically.** | | |
| **Applicant Name** | **Signature** | **Date** |
| **B.2. Pest Module Administrative Approval (to be completed by CFIA)** | | |
| **This pest module has been reviewed and accepted by CFIA to meet requirements for domestic movement of BTM host plants within Canada.** | | |
| **Verified By (Name)** | **Date Received** | **Date Approved** |