Canadian Food Inspection Agency
Executive Vice-President
Ottawa, Ontario
K1A 0Y9

Agence canadienne d'inspection des aliments
Première vice-présidente
Ottawa (Ontario)
K1A 0Y9

EVP 015576

OCT 2 2 2015

Mr. Petr Plikhin
Chargé d'Affaires, a.i.
Embassy of the Russian Federation in Canada
285 Charlotte Street
Ottawa, Ontario K1N 8L5

Dear Mr. Plikhin:

As a follow up to my letter dated September 2, 2015, I am pleased to provide you with the information that you requested on August 24, 2015, regarding pest free areas for quarantine pests specified by the Russian Federation concerning seeds and plants for planting.

The attached table, prepared by the Canadian Food Inspection Agency's (CFIA) Plant Health Risk Assessment Unit, summarizes the requested information.

Should Mr. Sergey Strokov have any questions about the material provided, Mr. Gregory Wolff, the CFIA's Chief Plant Health Officer, would be pleased to discuss it with him. Mr. Wolff may be contacted through his Executive Assistant, Ms. Julie Day, at 613-773-7691 or at julie.day@inspection.gc.ca.

I trust that this will be of assistance.

Sincerely,

Carolina Giliberti

Attachment

Canada

Canadian Food Inspection Agency
Agence canadienne d'inspection des aliments

BIOLOGICAL INFORMATION

REVIEW OF QUARANTINE ORGANISMS OF THE RUSSIAN FEDERATION

REQUEST: 2015-71

Plant Health Risk Assessment Unit and
Plant and Biotechnology Risk Assessment Unit
Plant Health Science Division
Ottawa, Ontario
Date: October 8, 2015

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The purpose of this assessment is to provide information on the distribution of quarantine pests of the Russian Federation, provided by the Ministry of Agriculture on August 24, 2015. The list includes insects, fungi, bacteria, viruses and nematodes and is divided under different commodity groups.

Pathology assessment: There are 68 pathogenic organisms (fungi, bacteria, viruses, nematodes) listed as quarantine pests by the Russian Federation. Of these 67 pathogens, 38 are present in Canada with varying distributions. These 38 organisms are: *Atropellis pinicola, Atropellis piniphila, Ceratocystis fimbriata, Chrysomyxa arctostaphyli, Cronartium quercuum, Diaporthe helianthi, Didymella ligulicola, Endocronartium harknessii, Gymnosporangium yamadae, Melampsora medusa, Monilinia fructicola, Mycosphaerella dearnessii, Phellinus weirii, Phialophora cinerescens, Phytophthora fragaria, Synchytrium endobioticum, Clavibacter michiganesis* subsp. *sepedonicus, Erwinia amylovora*, *Pantoea stewartii, Xylella fastidiosa, Cherry little cherry closterovirus, Cherry rasp leaf nepovirus, Chrysanthemum stunt pospoviroid, Impatiens necrotic spot tospovirus, Peach latent mosaic viroid, Peach rosette mosaic nepovirus, Plum pox potyvirus, Potato spindle tuber viroid, Raspberry ringspot nepovirus, Tobacco ringspot nepovirus, Tomato ringspot nepovirus, Tomato spotted wilt tospovirus, Strawberry latent C virus, Bursaphelenchus xylophilus, Ditylenchus destructor*, *Ditylenchus dipsaci, Globodera pallida* and *Globodera rostochiensis.* The distribution and major infected hosts of these pathogens in Canada are provided.

Literature reports also indicate that of these 68 quarantine pathogens, 28 are present in Russia.

Entomology assessment: There are 69 insect and mite species listed as quarantine pests by the Russian Federation. Of these 69 species, 41 are present in Canada with varying distributions. These 41 species are: *Acleris gloverana*, *Acleris variana*, *Amauromyza maculosa* (=*Nemorimyza maculosa*), *Anoplophora glabripennis*, *Anthonomus signatus*, *Bemisia tabaci*, *Callosobruchus* spp., *Choristoneura conflictana*, *Choristoneura fumiferana*, *Choristoneura occidentalis*, *Choristoneura rosaceana*, *Conotrachelus nenuphar*, *Cydia packardi*, *Cydia prunivora*, *Dryocosmus kuriphilus*, *Epitrix tuberis*, *Frankliniella occidentalis*, *Grapholita molesta*, *Hyphantria cunea*, *Liriomyza huidobrensis*, *Liriomyza sativae*, *Liriomyza trifolii*, *Malacosoma americanum*, *Malacosoma disstria*, *Melanotus communis*, *Monochamus carolinensis*, *Monochamus marmorator*, *Monochamus mutator*, *Monochamus notatus*, *Monochamus obtusus*, *Monochamus scutellatus*, *Monochamus titillator*, *Pissodes nemorensis*, *Pissodes strobi*, *Pissodes terminalis*, *Popillia japonica*, *Quadraspidiotus perniciosus*, *Rhagoletis cingulata*, *Rhagoletis pomonella*, *Spodoptera frugiperda* and *Viteus vitifoliae*.

Literature reports also indicate that of these 69 quarantine insect species, 18 are present in Russia.

BACKGROUND

The Embassy of the Russian Federation made a request to the Canadian Food Inspection Agency to provide updated official information about areas, places and production sites that are free of quarantine pests specified by the Russian Federation regarding seeds and plants for planting. The International Phytosanitary Standards Section of the Plant Protection Division at the Canadian Food Inspection Agency requested a review of the distribution of the listed pests in Canada and an update of the Plant Health Risk Assessment Unit (PHRA) records of the pests' distribution in Russia.

Distribution information for many of the pests has already been compiled in PRA 2011-76, *Insects, Diseases and Plants of Quarantine Significance to the Russian Federation*; PRA 2014-08, *Review of Quarantine Organisms of Russian Federation*; and PRA-2015-28*, Review of the Quarantine Organisms of the Russian Federation.* The existing data have been copied into the newly revised list and updated where necessary.

PEST INFORMATION

Abbreviations: BC - British Columbia; AB - Alberta; SK - Saskatchewan; MB - Manitoba; ON - Ontario; QC - Quebec; NB - New Brunswick; NS - Nova Scotia; PE- Prince Edward Island; NL- Newfoundland & Labrador; YT - Yukon; NT - Northwest Territories; NU - Nunavut.

TABLE I. DISTRIBUTION OF QUARANTINE ORGANISMS OF THE RUSSIAN FEDERATION IN CANADA

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
Insects		
Acleris gloverana (Walsingham) Western blackheaded budworm Lepidoptera: Tortricidae	No (CABI 2015).	Present, in AB, BC and YK (CABI 2015).
Acleris variana (Fernald) Eastern blackheaded budworm; Hemlock budworm Lepidoptera: Tortricidae	No (EPPO 2015).	Present, widespread in Canada. Occurs in all provinces (CABI 2015).
Aculops fuchsiae Keifer Fuchsia gall mite Acariformes: Prostigmata: Eriophyidae	No (Baker et al. 2014; CABI/EPPO 2009a).	Absent (CABI 2015).
Aeolesthes sarta Sols. City longhorn beetle Coleoptera: Cerambycidae	No. However, present in Central Asian countries of the former USSR, such as Kyrgyzstan and Uzbekistan (EPPO 2015; CABI 2015).	Absent (CABI 2015).
Aleurocanthus spiniferus Quaint. Orange spiny whitefly Hemiptera: Aleyrodidae	No (EPPO 2015).	Absent, occurs in tropical and subtropical areas (CABI 2015).
Aleurocanthus woglumi Ashby Citrus blackfly Hemiptera: Aleyrodidae	No (EPPO 2015).	Absent, occurs in tropical and subtropical areas (CABI 2015).

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
Nemorimyza maculosa (Malloch) Syn: *Amauromyza maculosa* (Malloch) Chrysanthemum leaf miner; burdock leaf miner Diptera: Agromyzidae	No (Hill 2008; Weems Jr. and Dekle 1999; Spencer 1981).	Present, in ON (EPPO 2015) and more specifically Ottawa, ON (Spencer 1981).
Anoplophora chinensis (Forster) Black and white citrus longhorn Coleoptera: Cerambycidae	No (CABI/EPPO 2008; CABI 2015).	Absent (CABI 2015).
Anoplophora glabripennis (Motschulsky) Asian longhorned beetle Coleoptera: Cerambycidae.	No (Kimoto and Duthie-Holt 2004).	Present and under official control. Restricted in distribution to Mississauga, ON (CFIA 2013a).
Anthonomus signatus Say Strawberry bud weevil Coleoptera: Curculionidae	No (CABI 2015).	Present, in most Canadian provinces from coast to coast (Bousquet et al. 2013).
Bactrocera dorsalis Hend. Oriental fruit fly Diptera: Tephritidae	No (CABI 2015; EPPO 2015).	Absent (CABI 2015; EPPO 2015; Weems and Heppner 2012).
Bemisia tabaci (Gennadius) Tobacco whitefly; sweet potato whitefly Hemiptera: Aleyrodidae	Yes (MARF 2014).	Present, reported in greenhouses from several provinces, including BC, AB, ON, QC, NB and NS. It may also be found outdoors, in the vicinity of greenhouses during the summer and fall (Broadbent et al. 1989).
Cacoecimorpha pronubana Hubn. Carnation tortrix; Mediterranean carnation leafroller Lepidoptera: Tortricidae	No (EPPO 2015).	Absent (CABI 2015). This species occurs in Washington and Oregon (USA), and it was recorded from BC (Hill 1987), however this record has not been substantiated. Quarantine pest for Canada.

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
Callosobruchus spp. Coleoptera: Chrysomelidae: Bruchinae	No (CABI 2015).	Present, recorded from NS, NL, ON, PE, QC and SK (Bousquet et al. 2013). Members of this genus do not survive in the wild in Canada and have occasionally been imported as stored-product pests of legumes (Majka and Langor 2011).
Carposina niponensis Walsingham Lepidoptera: Carposinidae	Yes (MARF 2014).	*Carposina niponensis* has two subspecies – *C. niponensis niponensis* and *C. niponensis ottawana*. Only *C. niponensis ottawana* is recorded from Canada (EPPOa), and is not considered to be a pest (Davis 1969).
Choristoneura conflictana Walk. Large aspen tortrix; Aspen borer Lepidoptera: Tortricidae	No, only recorded from North America (CABI 2015; EPPO 2015).	Present, widespread in Canada (CABI 2015).
Choristoneura fumiferana (Clemens) Spruce budworm Lepidoptera: Tortricidae	No, only recorded from North America (CABI 1971; EPPO 2015).	Present, widespread in Canada (EPPO 2015).
Choristoneura occidentalis Freeman Syn: *Choristoneura freemani* Razowski Western spruce budworm Lepidoptera: Tortricidae	No, only recorded from North America (EPPO 2015).	Present, in BC (Alfaro et al. 2014; EPPO 2015).
Choristoneura rosaceana Har. Oblique banded leaf roller; rosaceous leaf roller Lepidoptera: Tortricidae	No, only recorded from North America (CABI 2015).	Present, in AB, BC, NB, NS, ON and QC (CABI 2015).

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
Conotrachelus nenuphar (Herbst) Plum curculio Coleoptera: Curculionidae.	No (CABI 2015).	Present, in BC, MB, NB, NL, NS, ON, PE, QC and SK (Bousquet et al. 2013; CABI 2015).
Cydia packardi Zell. Syn: *Grapholitha packardi* Zeller Cherry fruitworm Lepidoptera: Tortricidae	No, only recorded from North America (EPPO 2015; CABI 2015).	Present, in BC, NS and ON (CABI 2015).
Cydia prunivora Wals. Syn: *Grapholitha prunivora* (Walsh) Lesser appleworm; plum moth Lepidoptera: Tortricidae	No (EPPOb).	Present, in BC, MB, NB, NS, ON and QC (EPPO 2015).
Dryocosmus kuriphilus Yas. Oriental chestnut gall wasp Hymenoptera: Cynipidae	No (CABI 2015).	Present, recorded in ON from the Niagara region. This is the first record of this species in Canada (Huber and Read 2012).
Epitrix tuberis Gentner Tuber flea beetle Coleoptera: Chrysomelidae	No (CABI 2015).	Present, reported from BC, AB and SK (Bousquet et al. 2013; Kabaluk and Vernon 2000).
Frankliniella occidentalis (Pergande) Western flower thrips Thysanoptera: Thripidae	Yes (MARF 2014).	Present, native to western North America. In Canada, this species has been recorded from BC, MB and ON, both in glasshouses and outdoors (CABI 2015; EPPO 2015).
Grapholita molesta (Busck) Oriental fruit moth Lepidoptera: Tortricidae	Yes (MARF 2014).	Present, in ON and QC (CFIA 2013b; CABI 2015). Regulated pest for Canada and under official control.

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
Hyphantria cunea (Drury) Mulberry moth; fall webworm Lepidoptera: Arctiidae	Yes (MARF 2014).	Present, in BC, MB, NB, NS, ON, QC, and SK (CABI 2015; Sourakov and Paris 2014).
Liriomyza huidobrensis Blanchard Serpentine leafminer; pea leafminer Diptera: Agromyzidae	No (CABI 2015).	Present, restricted distribution in ON (CABI 2015).
Liriomyza sativae Blanchard Vegetable leafminer; cabbage leaf miner; melon leaf miner Diptera: Agromyzidae.	No (CABI 2015).	Present, occurs sporadically in greenhouses in ON (CABI 2015; Howard et al. 1994).
Liriomyza trifolii Burgess American serpentine leafminer; Chrysanthemum leafminer Diptera: Agromyzidae	Yes, restricted distribution (CABI 2015).	Reported in greenhouses in AB, NL, NS, ON and QC (CABI 2015; Howard et al. 1994). It can also occur sporadically in the out-of-doors during spring and summer months.
Lopholeucaspis japonica (Cockerell) Japanese baton shaped scale; Japanese long scale Hemiptera: Diaspididae	Yes (MARF 2014).	Absent (CABI 2015; EPPO 2015).
Maconellicoccus hirsutus Green Pink hibiscus mealybug Hemiptera: Pseudococcidae	No (CABI 2015; Ben-Dov et al. 2015).	Absent (CABI 2015; Ben-Dov et al. 2015).
Malacosoma americanum Fabr. Eastern tent caterpillar Lepidoptera: Lasiocampidae	No (CABI 2015; CABI/EPPO 2004a).	Present, restricted distribution in AB, MB, NB, NS, ON, PE, QC and SK (CABI 2015; CABI/EPPO 2004a).
Malacosoma disstria Hub. Forest tent caterpillar Lepidoptera: Lasiocampidae	No (CABI 2015; CABI/EPPO 2004b).	Present, widespread in Canada (CABI 2015; CABI/EPPO 2004b).

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
Malacosoma parallella Staud. Mountain ring silk moth Lepidoptera: Lasiocampidae	Yes, in North Caucasus – Dagestan and Chechnya (OEPP/EPPO 2005b; CABI 2015).	Absent (CABI 2015).
Margarodes vitis (Philippi) Syn: *Sphaeraspis vitis* (Philippi) Ground Pearls Hemiptera: Margarodidae	No (CABI 2015; CABI/EPPO 2000a).	Absent (CABI 2015; CABI/EPPO 2000a). Only occurs in South America.
Melanotus communis Gyll. Common wireworm; corn wireworm Coleoptera: Elateridae	No, only recorded from North America (CABI 2015; OEPP/EPPO 2005a).	Present, in ON and QC (CABI 2015; Bousquet et al. 2013).
Monochamus alternatus Hope Japanese pine sawyer Coleoptera: Cerambycidae	No (EPPO 2015).	Absent. This species only occurs in Asia, mainly in China and Japan (Sj et al. 2013; EPPO 2015). Quarantine pest for Canada.
Monochamus carolinensis (Olivier) Pine sawyer; Carolina sawyer Coleoptera: Cerambycidae	No (CABI 2015; EPPO 2015).	Present, in NB, ON and QC (CABI 2015; Bousquet et al. 2013).
Monochamus marmorator Kirby Balsam fir sawyer Coleoptera: Cerambycidae	No, only recorded from North America (CABI 2015; EPPO 2015).	Present, in MB, NB, NS, ON and QC (Bousquet et al. 2013; CABI 2015).
Monochamus mutator Le Conte Spotted pine sawyer Coleoptera: Cerambycidae	No (CABI 2015; EPPO 2015).	Present, in AB, MB, NT, ON, QC and SK (Bousquet et al. 2013).
Monochamus notatus (Drury) Northeastern sawyer Coleoptera: Cerambycidae	No (CABI 2015; EPPO 2015).	Present, widespread in Canada (Bousquet et al. 2013; CABI 2015).

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
Monochamus obtusus Casey Obtuse sawyer Coleoptera: Cerambycidae	No, only recorded from North America (CABI 2015; EPPO 2015).	Present, in BC (Bousquet et al. 2013; CABI 2015).
Monochamus scutellatus (Say) Whitespotted sawyer Coleoptera: Cerambycidae	No, only recorded from North America (CABI 2015; EPPO 2015).	Present, widespread across Canada (Bousquet et al. 2013; CABI 2015; Morewood et al. 2002).
Monochamus titillator (Fabricius) Southern pine sawyer Coleoptera: Cerambycidae	No, only recorded from North America (CABI 2015; EPPO 2015).	Present, in ON and MB (Bousquet et al. 2013; CABI 2015).
Numonia pyrivorella Mats. Pear fruit moth Lepidoptera: Pyralidae	Yes, present in Far East Russia (EPPOc; Shutova 1977; EPPO 2015).	Absent (EPPOc; EPPO 2015). Quarantine pest for Canada.
Oligonychus perditus Pritchard & Baker Acariformes: Prostigmata: Tetranychidae	No (CABI 2015; CABI/EPPO 2000b).	Absent (CABI 2015; CABI/EPPO 2000b).
Opogona sacchari Bojer Banana moth Lepidoptera: Tineidae	Yes (Izhevskii 2008; Cheraghian 2013; CABI 2015).	Absent (Cheraghian 2013; CABI 2015).
Phthorimaea operculella (Zeller) Potato tuber moth Lepidoptera: Gelechiidae	Yes (MARF 2014).	Absent (CABI 2015; CABI/EPPO 2012).
Pissodes nemorensis Germ Northern pine weevil Coleoptera: Curculionidae	Yes, present in Far East Russia (Kulinich and Orlinskii 1998; CABI 2015).	Present, in MB, ON, QC, NB, NS, PE and NL (Bousquet et al. 2013; CABI 2015).
Pissodes strobi (Peck.) Sitka spruce weevil; white pine weevil Coleoptera: Curculionidae	No, only recorded from North America (EPPOd; CABI 2015).	Present, widespread in Canada (Bousquet et al. 2013; EPPOd).

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
Pissodes terminalis Hopp. Lodgepole pine terminal weevil Coleoptera: Curculionidae	No, only recorded from North America (EPPOe; CABI 2015).	Present, in AB, BC, MB, NT and SK (Bousquet et al. 2013; EPPOe).
Popillia japonica Newman Japanese beetle Coleoptera: Scarabaeidae	Yes (CFIA 2014a; CABI 2015).	Present, in ON, QC, NB, NS and PE (British Columbia Ministry of Agriculture 2013; CFIA 2014a). Regulated pest for Canada and under official control.
Premnotrypes spp. *P. latithorax* (Pierce); *P. suturicallus* Kuschel; *P. vorax* (Hustache) Andean weevil; Andean potato weevil Coleoptera: Curculionidae	No (EPPOf; CABI 2015).	Absent (CABI 2015). Members of this genus only occur in South America (EPPOf).
Pseudaulacaspis pentagona (Targioni-Tozzetti) Mulberry scale; white peach scale Hemiptera: Diaspididae	Yes (CABI 2015; EPPO 2015; CABI 1996). This scale insect only lives indoors (e.g., greenhouses), in countries with colder climates.	Absent (EPPO 2015). Formerly present in ON but has been eradicated (CABI 2015).
Quadraspidiotus perniciosus (Comstock) Syn: *Diaspidiotus perniciosus* (Comstock) San José scale Hemiptera: Diaspididae	Yes (MARF 2014).	Present, in southern BC, ON and QC (CABI 2015).
Rhagoletis cingulata Loew. Cherry fruit fly; cherry maggot Diptera: Tephritidae	No (CABI/EPPO 2009c; CABI 2015).	Present, in ON, QC and SK (CABI 2015; EPPO 2015; CABI/EPPO 2009b).
Rhagoletis pomonella Walsh Apple maggot Diptera: Tephritidae	No (CABI 2015).	Present in PE, NB, NS, QC, ON, MB, SK, and coastal areas of BC (CFIA 2012). Regulated pest for British Columbia, under official control.

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
Ripersiella hibisci (Kawai & Takagi) Syn: *Rhizoecus hibisci* Kawai & Takagi Root mealybug Hemiptera: Pseudococcidae	No (CABI 2015; EPPO 2015).	Absent (CABI 2015; EPPO 2015).
Scirtothrips dorsalis Hood Chilli thrips; yellow tea thrips Thysanoptera: Thripidae	No (EPPOg; CABI 2015).	Absent (EPPOg; CABI 2015).
Spodoptera eridania (Cramer) Southern Armyworm Lepidoptera: Noctuidae	No (EPPOh; CABI 2015).	Absent (EPPOh; CABI 2015).
Spodoptera frugiperda (Smith) Fall Armyworm Lepidoptera: Noctuidae	No (EPPOi; CABI 2015; EPPO 2015).	Present, in MB, NB, NS, ON, PE, and QC (EPPOi; CABI 2015).
Spodoptera littoralis (Boisduval) Cotton leafworm; Egyptian cottonworm Lepidoptera: Noctuidae	No (CABI 2015).	Absent (CABI 2015).
Spodoptera litura (Fabricius) Taro caterpillar; tobacco cutworm Lepidoptera: Noctuidae	Yes, in Central Russia, Russian Far East, Southern Russia and Western Siberia (CABI 2015).	Absent (CABI 2015; EPPO 2015).
Thrips palmi Karny Melon thrips Thysanoptera: Thripidae	No (CABI 2015; EPPO 2015).	Absent (CABI 2015; EPPO 2015).
Trogoderma granarium Everts Khapra beetle Coleoptera: Dermestidae	No (CABI 2015).	Absent (Canadian Grain Commission 2015). Quarantine pest for Canada.
Tuta absoluta Povolny Tomato Leafminer Lepidoptera: Gelechiidae	Yes (CABI 2015; EPPO 2015).	Absent (CFIA 2014b; CABI 2015). Quarantine pest for Canada.

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
Viteus vitifoliae (Fitch) Grapevine phylloxera; grape leaf louse Hemiptera: Phylloxeridae	Yes (MARF 2014).	Present, in BC, MB and ON (CABI 2015; EPPOj). Regulated pest for Canada and under quarantine control.
Zabrotes subfasciatus Boh. Mexican bean weevil Coleoptera: Bruchidae	No (CABI 2015; Sperandio and Zucoloto 2009).	Absent (CABI 2015; Sperandio and Zucoloto 2009).
Fungi		
Atropellis pinicola Zeller & Goodding Twig blight of pine	No (CABI 2015; EPPO 2015)	Restricted distribution - reported on *Pinus* spp. and *Tsuga heterophylla* in BC (AAFC 2011).
Atropellis piniphila (Weir.) Twig blight of pine	No (CABI 2015; EPPO 2015)	Reported on *Pinus* spp. and *Tsuga heterophylla* in AB, BC, SK, NT and YT (AAFC 2011).
Ceratocystis fagacearum (Bretz.) Hunt Oak wilt	No (CABI 2015; EPPO 2015)	Absent (AAFC 2011; CABI 2015). It is a quarantne pest for Canada.
Ceratocystis fimbriata Ellis & Halsted f.sp. *platani* Walter Ceratocystis blight	No (CABI 2015)	Reported on *Betula papyrifera* in MB and *Populus* spp. in AB, BC, MB, ON, QC, SK and YT (AAFC 2011).
Chrysomyxa arctostaphyli Dietel Spruce broom rust	No (CABI 2015)	Present - widespread in Canada and reported on *Abies* spp., *Picea* spp. and other species (AAFC 2011).
Cronartium fusiforme Hed. & Hunt ex Cum. Southern fusiform rust	No (CABI 2015). Farr and Rossman (2015) consider this species a synonym of *C. quercuum*.	Absent (AAFC 2011; CABI 2015).
Cronartium quercuum (Berkeley) Miyabe ex Shirai Pine oak rust	Yes (CABI 2015; Farr and Rossman 2015)	Present – widespread in Canada and reported on *Pinus* spp. and *Quercus* spp. (AAFC 2011).

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
Diaporthe helianthi Munt. Cvet. et al Syn: *Phomopsis helianthi* Munt. Cvet. et al. Stem canker of sunflower	Yes (MARF 2014)	Restricted distribution - MB. Only a single record of this fungus occurring in Canada was found. It was reported from sunflower in 2003 (Desjardins et al. 2003)
Didymella ligulicola (KY. Haker, Dimock & Davis) von Arx Syn: *Ascochyta chrysanthemi*, *Mycosphaerella ligulicola*, *Phoma chrysanthemi*, *Phoma ligulicola* Ray (flower) blight of chrysanthemum	Uncertain There is some conflicting information regarding the presence of *D. ligulicola* in Russia. Some sources state that *D. ligulicola* is not present (CABI 2015), or is absent, intercepted only (EPPO 2015). However, the occurrence of *D. ligulicola* was reported in Russia (Skripka et al. 2004), but details regarding this report are unknown. It is possible that this report may represent the interception event.	Restricted distribution – reported on chrysanthemum in BC and ON (AAFC 2011).
Endocronartium harknessii (J.P. Moore) Western gall rust	No (CABI 2015; Farr and Rossman 2015)	Present – widespread in Canada and reported on *Pinus* spp. and other minor hosts (AAFC 2011; CABI 2015).
Gymnosporangium asiaticum Miyabe ex Yamada Japanese pear rust	Restricted distribution (CABI 2015)	Absent – formerly present (CABI 2015).
Gymnosporangium yamadae Miyabe ex Yamada Japanese apple rust	Restricted distribution (CABI 2015)	Reported on apple in ON (CABI 2015; Hambleton et al. 2011). It is a quarantne pest for Canada.
Melampsora medusae Thumen Poplar leaf rust	No (CABI 2015)	Present - widespread in Canada and reported on many tree species (AAFC 2011; CABI 2015).
Monilinia fructicola (Winter) Honey	No (CABI 2015; Farr and	Present – widespread in Canada

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
Brown rot	Rossman 2015)	and reported on *Prunus* spp., *Malus* spp. and other minor hosts (AAFC 2011; CABI 2015).
Mycosphaerella dearnessii M.E.Bar. Brown spot needle blight	No (CABI 2015)	Reported on *Picea* spp. and *Pinus* spp. in AB, MB and ON (AAFC 2011; CABI 2015).
Mycosphaerella gibsonii H.C. Evans Needle blight of pine	No (CABI 2015)	Absent (AAFC 2011; CABI 2015).
Mycosphaerella laricis-leptolepidis K. Ito, K. Sato & M.Ota Needle cast of Japanese larch	No (CABI 2015)	Absent (AAFC 2011; CABI 2015).
Phellinus weirii (Murrill) R.L. Gilbertson Laminated root rot	Yes (CABI 2015)	Present, reported on *Abies* spp. *Picea* spp., *Pseudotsuga* spp. and other tree species only in BC (AAFC 2011; CABI 2015).
Phialophora cinerescens (Wollenweber) van Beyma Phialophora wilt	Yes (CABI 2015; Farr and Rossman 2015)	Only one record on *Dianthus caryophyllus* in ON (AAFC 2011; CABI 2015).
Phoma andigena Turkensteen Black blight of potatoes	No (CABI 2015; Farr and Rossman 2015)	Absent (CABI 2015; Farr and Rossman 2015).
Phytophthora fragariae Hickman Strawberry red stele root rot	Yes (MARF 2014)	Widespread distribution – reported on *Fragaria* spp. and *Rubus* spp. in AB, BC, NS, NB, PE, QC and ON (AAFC 2011; CABI 2015).
Puccinia horiana Henn. Chrysanthemum white rust	Yes (CABI 2008; CABI 2015)	Absent. Interception only. Pest eradicated from BC and ON (CABI 2015; EPPO 2015). It is a quarantne pest for Canada.
Stenocarpella macrospora (Earle) Sutton Syn: *Diplodia macrospora* Earle Dry rot of maize	No. Formerly present (CABI 2015; EPPO 2015)	Absent (AAFC 2011; CABI 2015).

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
Synchytrium endobioticum (Scheilb,) Percival Potato wart	Yes (MARF 2014)	Restricted distribution – few occurrences in NF and PE. The pest is under official control in these areas (AAFC 2011; CABI 2015).
Thecaphora solani Thirum et O'Brien Syn: *Angiosorus solani* Thirum et O'Brien Potato smut	No (CABI 2015; EPPO 2015)	Absent (AAFC 2011; CABI 2015). It is a quarantne pest for Canada.
Neovossia indica (Mitra) Mundkur Syn: *Tilletia indica* Mitra Karnal bunt of wheat	No. Intercepted only (CABI 2003; CABI 2015; EPPO 2015)	Absent (AAFC 2011; CABI 2015; EPPO 2015). It is a quarantne pest for Canada.
Bacteria and Phytoplasma		
Burkholderia caryophylli (Burkholder) Yabuuchi et al. Bacterial wilt of carnation	No (CABI 2015)	Absent (AAFC 2011; CABI 2015).
Candidatus Phytoplasma vitis Syn: Grapevine flavescence doree phytoplasma	No (CABI 2015; EPPO 2015; Ivanova 2009)	Absent (CABI 2015; EPPO 2015).
Clavibacter michiganesis subsp. *sepedonicus* (Spieckermann & Kotthoff) Devisetal. Goss's bacterial wilt and leaf blight	Yes (MARF 2014)	Reported across Canada (AAFC 2011; CABI 2015). Zero tolerance on seed potatoes (under eradication).
Erwinia amylovora (Burill.) Winslow et al. Fireblight	Yes (MARF 2014)	Present – reported on a number of host species in all provinces (AAFC 2011).
Pantoea stewartii (Smith) Mergaert et al. Syn: *Erwinia stewartii* (Smith) Dye Stewart's wilt of corn	No. Formerly present (CABI 2009; CABI 2015; EPPO 2015)	Restricted distribution – ON (AAFC 2011); absent, formerly present in AB and BC (CABI 2015).
Ralstonia solanacearum (Smith) Yabuuchi et al. (=*Pseudomonas solanacearum* (Smith) Smith Bacterial wilt of potato	Yes (CABI 2015)	Absent (CABI 2015). Race 3 of the species was once intercepted on greenhouse geranium plants in QC in 2003 and eradicated (Gilbert et al.

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
		2003). Race 3 of this pathogen is a quarantne pest for Canada.
Xanthomonas campestris pv. *hyacinthi* (Wakker) Dovson. Hyacinth yellows	Yes. Restriction (CABI 2015)	Absent (CABI 2015).
Xanthomonas oryzae pv. *oryzae* (Takahashi et al.) Swings et al. Rice leaf blight; kresek disease	No. Formerly present in Far East and Southern Russia (CABI 2015; EPPO 2015)	Absent (AAFC 2011; CABI 2015).
Xylella fastidiosa Wells et al. Pierce's disease of grapevines	No (CABI 2015)	Restricted distribution, reported on *Ulmus Americana* in AB, ON and SK (AAFC 2011). It is a regulated pest for Canada.
Xylophilus ampelinus (Panagopoulus) Willems et al. Syn: *Xanthomonas ampelina* (Panagopoulus) Canker of grapevine	No (CABI 2015; EPPO 2015; Ivanova 2009)	Absent (AAFC 2011; CABI 2015). It is a quarantne pest for Canada.
Viruses and viroids		
Beet necrotic yellow vein benyvirus	Yes (MARF 2014)	Absent (AAFC 2011; CABI 2015).
Cherry little cherry closterovirus (non-European)	No (CABI 2015)	Reported on *Prunus avium* in BC only (AAFC 2011; CABI 2015).
Cherry rasp leaf nepovirus	No (CABI 2015)	Restricted distribution – reported on cherry in BC and ON (few occurrences) (AAFC 2011). It is a quarantne pest for Canada.
Chrysanthemum stem necrosis tospovirus	No (CABI 2015)	Absent (AAFC 2011; CABI 2015).
Chrysanthemum stunt pospoviroid	No (CABI 2015)	Report on Chrysanthemum in AB, NS and ON (CABI 2015).
Impatiens necrotic spot tospovirus	Yes (MARF 2014)	Widespread in Canada and reported on many host species (AAFC 2011).
Peach latent mosaic viroid	No (CABI 2015)	Restricted distribution - BC However, the viroid is likely

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
		more widespread (Garland and Cree 1999). There is an invalid record in AAFC database.
Peach rosette mosaic nepovirus	No (CABI 2015)	Restricted distribution - ON (CABI 2015, AAFC 2011). It is a quarantne pest for Canada.
Plum pox potyvirus	Yes (MARF 2014)	Reported on *Prunus* spp. in ON (AAFC 2011). Restricted distribution in the Niagara peninsula under regulatory control.
Potato Andean latent tymovirus	No (CABI 2015. This virus was transferred from A2 to A1 list after investigations in 2002 (Smetnik 2003).	Absent (AAFC 2011; CABI 2015). It is a quarantne pest for Canada.
Potato Andean mottle comovirus	No (CABI 2015)	Absent (AAFC 2011; CABI 2015). It is a quarantne pest for Canada.
Potato black ringspot nepovirus	No (CABI 2015)	Absent (AAFC 2011; CABI 2015).
Potato spindle tuber viroid	Yes (MARF 2014)	Reported in a number of locations but was eradicated (CABI 2015).
Potato T trichovirus	No (CABI 2015)	Absent (AAFC 2011; CABI 2015). It is a quarantne pest for Canada.
Potato yellow dwarf nucleorhabdovirus	No (CABI 2015)	Absent (CABI 2015).
Potato yellow vein crinivirus	No (CABI 2015)	Absent (AAFC 2011; CABI 2015). It is a quarantne pest for Canada.
Potato yellowing alfamovirus	No (CABI 2015)	Absent (AAFC 2011; CABI 2015). It is a quarantne pest for Canada.
Raspberry ringspot nepovirus	Yes (MARF 2014)	Reported on *Fragaria vesca* and *Rubus* spp. in BC (AAFC 2011).
Strawberry latent C virus	No (CABI 2015)	Restriction distribution – Reported on *Fragaria chiloensis* var. *ananassa* in BC, and on *Fragaria vesca* in NS and ON (AAFC 2011).
Tobacco ringspot nepovirus	Yes (MARF 2014)	Reported on a number of host species in BC, ON, NS and QC

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
		(AAFC 2011). It is a quarantne pest for Canada.
Tomato ringspot nepovirus	Yes (MARF 2014)	Reported on a number of host species in BC, MB, NB, ON and QC (AAFC 2011).
Tomato spotted wilt tospovirus	Yes (MARF 2014)	Widespread in Canada and reported on many host species but it is not associated with potato crop (AAFC 2011).
Nematodes		
Aphelenchoides besseyi Christie Rice leaf nematode	Yes (CABI 2015)	Absent (AAFC 2011; CABI 2015).
Bursaphelenchus xylophilus (Steiner et Buhrer) Nickle Pine wood nematode	Yes (Sonin 2004)	Widespread in Canada and reported on *Abies* spp., *Picea* spp., *Pinus* spp. and a few other tree species (AAFC 2011).
Ditylenchus dipsaci Filipjev Stem and bulb nematode	Yes (MARF 2014)	Reported on a number of host species in AB, BC, ON, PE, SK and QC but potato strain is not present in Canada (AAFC 2011, CABI 2015). It is a quarantne pest for Canada.
Ditylenchus destructor Thorne Potato tuber nematode	Yes (MARF 2014)	A few reports in ON (e.g. on garlic), eradicated in PEI (CABI 2015). It is a regulated pest for Canada.
Globodera pallida (Stone) *Bebrens* Pale potato cyst nematode	YES? PCN is widespread, reported from 51 provinces in 1998 (Makovskaya 1975; Vasyutin and Yakovleva 1998). Reported from the Vyborg area near Saint Petersburg (Makovskaya 1975). CABI (2015) indicates this nematode is “absent, unreliable record”.	Only present in NL (AAFC 2011), under regulatory control.
Globodera rostochiensis (Woll.) Behrens. Golden nematode	Yes (MARF 2014)	NF and a specific area of QC under official control; Under eradication in AB and BC

Pest Name	Present in Russia (Yes/No)	Distribution in Canada
		(AAFC 2011).
Meloidogyne chitwoodi Golden et al. Columbia root-knot nematode	Yes. Some information indicates Meloidogyne root-knot nematodes infecting potatoes in Moscow province (Sonin 2004)	Absent (AAFC 2011; CABI 2015). It is a quarantne pest for Canada.
Meloidogyne enterolobii Yang and Eisenback Root-knot nematode	No (CABI 2015)	Absent (AAFC 2011; CABI 2015).
Meloidogyne fallax Karssen False Columbia root-knot nematode	No (CABI 2015)	Absent (AAFC 2011; CABI 2015).
Nacobbus aberrans (Thorne) Thorne & Allen (Sensu lato) False root-knot nematode	No (CABI 2015)	Absent (AAFC 2011; CABI 2015)

REFERENCES

AAFC. 2011. HostPathogen Database. Agriculture and Agri-Food Canada.

Alfaro, R. I., Berg, J. and Axelson, J. 2014. Periodicity of Western Spruce Budworm in Southern British Columbia, Canada. Forest Ecology and Management 315:72-79.

Baker, R., Bragard, C., Candresse, T., Gilioli, G., Gregoire, J.-C., Holb, I., Jeger, M. J., Karadjova, O. E., Magnusson, S. C. and Makowski, D. 2014. Scientific Opinion on the pest categorisation of *Aculops fuchsiae*. EFSA Journal 12(10):3853.

British Columbia Ministry of Agriculture. 2013. Japanese Beetle. [Online] Available: http://www.agf.gov.bc.ca/cropprot/jbeetle.htm [June, 2015].

Ben-Dov, Y., Miller, D. R. and Gibson, G. A. H. 2015. ScaleNet. [Online] Available: http://www.sel.barc.usda.gov/scalenet/scalenet.htm [June, 2015].

Bousquet, Y., Bouchard, P., Davies, A. E. and Sikes, D. S. 2013. Checklist of Beetles (Coleoptera) of Canada and Alaska. Second ed. Pensoft Series Faunistica, Sofia, Moscow. 402 pp.

Broadbent, A. B., Foottit, R. G. and Murphy, G. D. 1989. Sweetpotato whitefly *Bemisia tabaci* (Gennadius) (Homoptera: Aleyrodidae), a potential insect pest in Canada. The Canadian Entomologist 121(11):1027-1028.

CABI. 1971. *Choristoneura fumiferana*. Distribution Maps of Plant Diseases: Map No. 283.

CABI. 1996. *Pseudaulacaspis pentagona*. Distribution Maps of Plant Pests: Map No. 58.

CABI. 2003. *Tilletia indic*a. Distribution Maps of Plant Diseases: Map No. 173.

CABI. 2008. *Puccinia horiana*. Distribution Maps of Plant Diseases: Map No. 403.

CABI. 2009. *Pantoea stewartii*. Distribution Maps of Plant Diseases: Map No. 41.

CABI. 2015. Crop Protection Compendium. www.cabi.org/cpc. [Online].

CABI/EPPO. 2000a. *Sphaeraspis vitis*. Distribution Maps of Plant Pests: Map No. 608.

CABI/EPPO. 2000b. *Oligonychus perditus*. Distribution Maps of Plant Pests: Map No. 613.

CABI/EPPO. 2004a. *Malacosoma americanum*. Distribution Maps of Plant Pests: Map No. 662.

CABI/EPPO. 2004b. *Malacosoma disstria*. Distribution Maps of Plant Pests: Map No. 663.

CABI/EPPO. 2008. *Anoplophora chinensis*. Distribution Maps of Plant Pests: Map No. 595.

CABI/EPPO. 2009a. *Aculops fuchsiae*. Distribution Maps of Plant Pests: Map No. 716.

CABI/EPPO. 2009b. *Monochamus sutor*. Distribution Maps of Plant Pests: Map No. 726.

CABI/EPPO. 2009c. *Rhagoletis cingulata*. Distribution Maps of Plant Pests: Map No. 768.

CABI/EPPO. 2012. *Phthorimaea operculella*. Distribution Maps of Plant Pests: Map No. 10 (2nd revision).

Canadian Grain Commission. 2015. Khapra Beetle, *Trogoderma granarium* Everts. Canadian Grain Commission (CGC). [Online] Available: http://www.grainscanada.gc.ca/storage-entrepose/pip-irp/kb-tg-eng.htm [June, 2015].

CFIA. 2012. *Rhagoletis pomonella* (Apple Maggot) - Fact Sheet. [Online] Available: http://www.inspection.gc.ca/plants/plant-protection/insects/apple-maggot/fact-sheet/eng/1330366145611/1330366375524 [June, 2015].

CFIA. 2013a. Asian Long-horned Beetle found in Mississauga, Ontario. [Online] Available: http://www.inspection.gc.ca/about-the-cfia/newsroom/news-releases/2013-09-20/eng/1379685062894/1379685078216 [June, 2015].

CFIA. 2013b. *Grapholita molesta* (Oriental Fruit Moth) - Fact Sheet. [Online] Available: http://www.inspection.gc.ca/plants/plant-protection/insects/oriental-fruit-moth/fact-sheet/eng/1326379318439/1326379457330 [June, 2015].

CFIA. 2014a. *Popillia Japonica* (Japanese Beetle) - Fact Sheet. [Online] Available: http://www.inspection.gc.ca/plants/plant-protection/insects/japanese-beetle/fact-sheet/eng/1328165101975/1328165185309 [June, 2015].

CFIA. 2014b. *Tuta absoluta* (Tomato Leafminer) - Fact Sheet. [Online] Available: http://www.inspection.gc.ca/plants/plant-protection/insects/tomato-leafminer/fact-sheet/eng/1328634442933/1328887251933 [June, 2015].

Cheraghian, A. 2013. A guide for diagnosis and detection of quarantine pests. Banana moth, *Opogona sacchari* Bojer, Lepidoptera: Tineidae. Available: http://www.ppo.ir/uploads/english/articles/insect/banana-moth-opogona-sacchari.pdf.

Davis, D. R. 1969. A revision of the American moths of the family Carposinidae (Lepidoptera: Carposiidea). Bulletin of the United States National Museum 289:1-105.

Desjardins, M. L., Kaminski, D. A., Northover, P. R. and Shinners-Carnelley, T. C. 2003. 2002 Manitoba Crop Diagnostic Centre Laboratory Submissions. Canadian Plant Disease Survey 83:19-27.

EPPO. 2015. PQR database. Paris, France: European and Mediterranean Plant Protection Organization. http://www.eppo.org. [Online].

EPPOa. Data Sheets on Quarantine Pests: *Carposina niponensis* Available: http://www.eppo.int/QUARANTINE/insects/Carposina_sasakii/CARSSA_ds.pdf [June, 2015].

EPPOb. Data Sheets on Quarantine Pests: *Cydia prunivora*. Available: http://www.eppo.int/QUARANTINE/insects/Cydia_prunivora/LASPPR_ds.pdf [May, 2015].

EPPOc. Data Sheets on Quarantine Pests: *Numonia pirivorella*. Available: http://www.eppo.int/QUARANTINE/insects/Numonia_pyrivorella/NUMOPI_ds.pdf [June, 2015].

EPPOd. Data Sheets on Quarantine Pests: *Pissodes strobi*. Available: http://www.eppo.int/QUARANTINE/insects/Pissodes_strobi/PISOST_ds.pdf [June, 2015].

EPPOe. Data Sheets on Quarantine Pests: *Pissodes terminalis*. Available: http://www.eppo.int/QUARANTINE/insects/Pissodes_terminalis/PISOTE_ds.pdf [June, 2015].

EPPOf. Data Sheets on Quarantine Pests: *Premnotrypes* spp. (Andean). Available: http://www.eppo.int/QUARANTINE/insects/Premnotrypes_latithorax/PREMSP_ds.pdf [June, 2015].

EPPOg. Data Sheets on Quarantine Pests: *Scirtothirps dorsalis*. Available: http://www.eppo.int/QUARANTINE/insects/Scirtothrips_dorsalis/SCITDO_ds.pdf [June, 2015].

EPPOh. Data Sheets on Quarantine Pests: *Spodoptera eridania* Available: http://www.eppo.int/QUARANTINE/insects/Spodoptera_eridania/PRODER_ds.pdf [June, 2015].

EPPOi. Data Sheets on Quarantine Pests: *Spodoptera frugiperda*. Available: http://www.eppo.int/QUARANTINE/insects/Spodoptera_frugiperda/LAPHFR_ds.pdf [June, 2015].

EPPOj. Data Sheets on Quarantine Pests: *Viteus vitifoliae*. Available: http://www.eppo.int/QUARANTINE/insects/Viteus_vitifoliae/VITEVI_ds.pdf [June, 2015].

Farr, D. F. and Rossman, A. Y. 2015. Fungal Databases, Systematic Mycology and Microbiology Laboratory, ARS, USDA. Retrieved from http://nt.ars-grin.gov/fungaldatabases.

Garland, J. A. and Cree, L. A. 1999. Review of Distribution Maps of Quarantine Pests for Europe. PRA 99-39. Canadian Food Inspection Agency.

Gilbert, G., Hamel, D. and Lacroix, M. 2003. Diseases diagnosed on commercial crops submitted to the MAPAQ diagnostic laboratory in 2002. Canadian Plant Disease Survey 84:28-42.

Hambleton, S., Liu, M., Parmelee, J. A., Celetti, M. J. and Llewellyn, J. 2011. New Canadian records for *Gymnosporangium sabinae* and *G. yamadae*. Annual Meeting 2010: The Canadian Phytopathological Society, Canadian Journal of Plant Pathology 33(2):278-279.

Hill, D. S. 1987. Agricultural insect pests of temperate regions and their control. Cambridge University Press Archive, Cambridge UK. 659 pp.

Hill, D. S. 2008. Major tropical crop pests, chapter 9. Pages 115-509. Pests of Crops in Warmer Climates and Their Control.

Howard, R. J., Garland, J. A. and Seaman, W. L. 1994. Diseases and pests of vegetable crops in Canada: an illustrated compendium. Entomological Society of Canada & Canadian Phytopathological Society.

Huber, J. T. and Read, J. 2012. First record of the oriental chestnut gall wasp, *Dryocosmus kuriphilus* Yasumatsu (Hymenoptera: cynipidae), in Canada. Journal of the Entomological Society of Ontario 143:125-128.

Ivanova, N. 2009. Quarantine diseases of grape. Zashchita i Karantin Rasteniĭ(2):40-41.

Izhevskii, S. S. 2008. Invasion of alien pests of plants into the European part of Russia continues. Zashchita i Karantin Rastenii 6:25-28.

Kabaluk, J. T. and Vernon, R. S. 2000. Effect of crop rotation on populations of *Epitrix tuberis* (Coleoptera: Chrysomelidae) in potato. Journal of Economic Entomology 93(2):315-322.

Kimoto, T. and Duthie-Holt, M. 2004. Exotic forest insect guidebook. Plant Pest Survey Unit, Canadian Food Inspection Agency.

Kulinich, O. A. and Orlinskii, P. D. 1998. Distribution of conifer beetles (Scolytidae, Curculionidae, Cerambycidae) and wood nematodes (*Bursaphelenchus* spp.) in European and Asian Russia. EPPO Bulletin 28(1-2):39-52.

Majka, C. G. and Langor, D. W. 2011. The bean weevils (Coleoptera: Chrysomelidae: Bruchinae) of Atlantic Canada.(This article is freely available online at the Journal of the Acadian Entomological Society at http://www.acadianes.ca/journal. html).

Makovskaya, S. A. 1975. Pale potato nematode. Zashchita Rastenii 2:49.

MARF (Ministry of Agriculture, Russian Federation). 2014. Order No. 501. On Approval of the List of Quarantine Pests. December 15, 2015.

Morewood, W. D., Hein, K. E., Katinic, P. J. and Borden, J. H. 2002. An improved trap for large wood-boring insects, with special reference to *Monochamus scutellatus* (Coleoptera: Cerambycidae). Canadian Journal of Forest Research 32(3):519-525.

OEPP/EPPO. 2005a. Data sheets on quarantine pests: *Melanotus communis*. European and Mediterranean Plant Protection Organization Bulletin 35:380-382.

OEPP/EPPO. 2005b. Data sheets on quarantine pests: *Malacosoma parallela*. European and Mediterranean Plant Protection Organization Bulletin 35:431-433.

Shutova, N. N. 1977. The pear pyralid. Zashchita Rastenii 9:38.

Sj, H., Ning, T., Dy, F., Haack, R. and Zhang, Z. 2013. Dispersal of the Japanese Pine Sawyer, *Monochamus alternatus* (Coleoptera: Cerambycidae), in Mainland China as Inferred from Molecular Data and Associations to Indices of Human Activity. PLoS ONE 8(2):e57568.

Skripka, O. V., Dudchenko, I. P. and Sherokolava, N. A. 2004. Quarantine diseases of chrysanthemum. Zashchita i Karantin Rastenii 8:37-39.

Smetnik, A. I. 2003. Improvement of scientific investigations. Zashchita i Karantin Rastenii 8:30-32.

Sonin, M. D. 2004. Parasitic nematodes of plants and insects (Russian). 320 pp.

Sourakov, A. and Paris, T. 2014. *Hyphantria cunea*. Featured creatures. University of Florida. [Online] Available: http://entnemdept.ufl.edu/creatures/trees/moths/fall_webworm.htm [June, 2015].

Spencer, K. A. 1981. A revisionary study of the leaf-mining flies (Agromyzidae) of California. UCANR Publications. 1-489 pp.

Sperandio, L. A. and Zucoloto, F. S. 2009. Oviposition behavior of wild *Zabrotes subfasciatus* (Coleoptera, Chrysomelidae) females deprived of the host *Phaseolus vulgaris* (Fabaceae). Iheringia Série Zoologia 99(4):403-408.

Vasyutin, A. S. and Yakovleva, V. A. 1998. Globodera in potatoes in Russia. Kartofel' i Ovoshchi 6(29):32.

Weems, H. V. and Heppner, J. B. 2012. *Bactrocera dorsalis* (Hendel) (Insecta: Diptera: Tephritidae). Featured creatures. University of Florida. [Online] Available: http://entnemdept.ufl.edu/creatures/fruit/tropical/oriental_fruit_fly.htm [June, 2015].

Weems Jr., H. V. and Dekle, G. W. 1999. Blotch Leafminer, *Amauromyza maculosa* (Malloch) (Insecta: Diptera: Agromyzidae). Available: http://ufdc.ufl.edu/IR00004168/00001 [June, 2015].