

***Survey planning  
for Emerald Ash Borer  
(Agrilus planipennis)  
in Poland***

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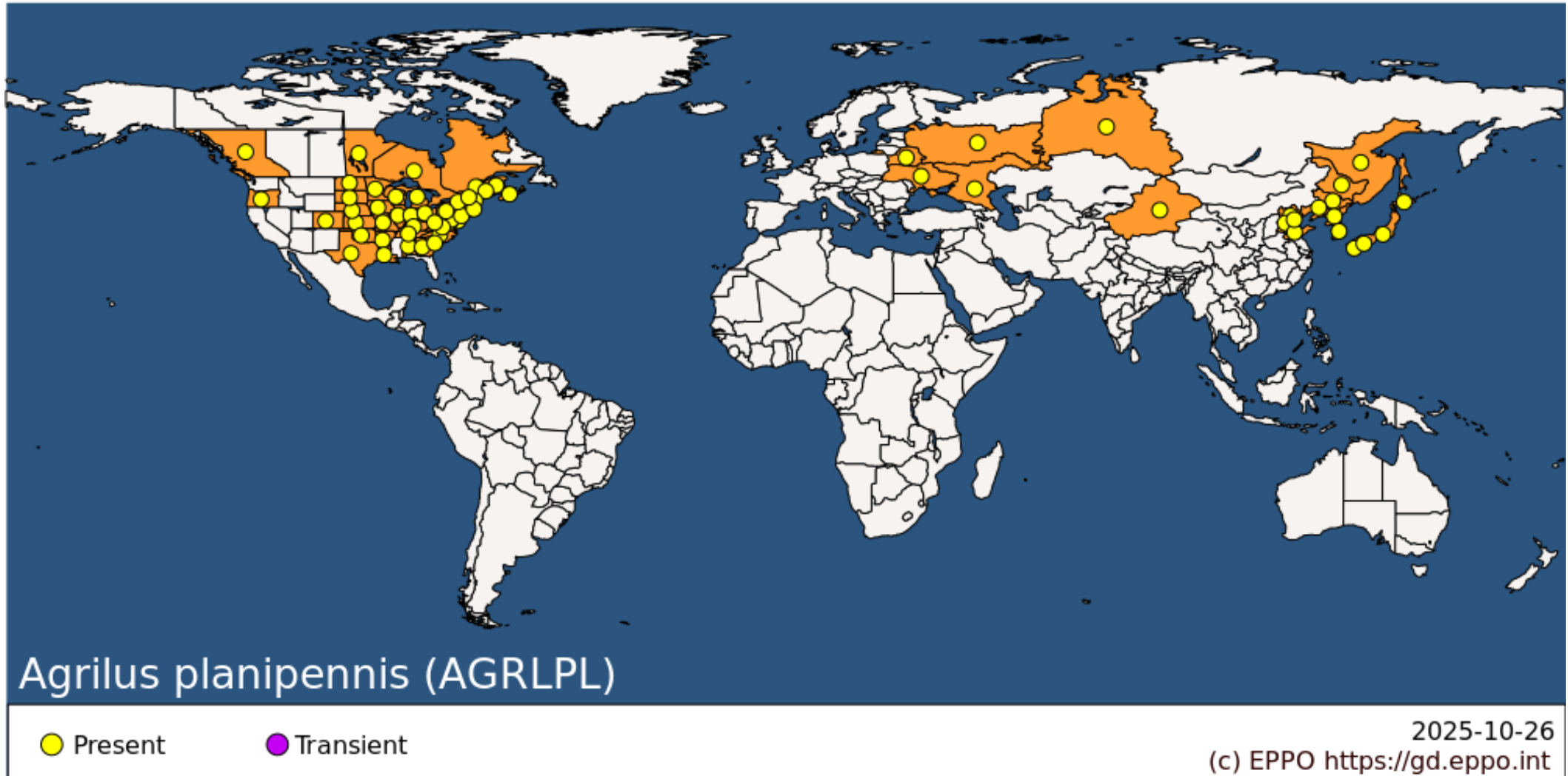
National Research Institute), Poznan, Poland

# *Agrillus planipennis*



*Agrillus planipennis* (AGRLPL) - <https://gd.eppo.int>

# Distribution



# Legislation/Categorization

- Commission Delegated Regulation (EU) 2019/2072
- Commission Delegated Regulation (EU) 2019/1702
- **Commission Implementing Regulation (EU) 2024/434**

# Host plants / Poland

- *Fraxinus excelsior*
- *Fraxinus pennsylvanica*
- *Fraxinus ornus*
- *Chionanthus virginicus*



# Ways of entry

- **Natural dispersal- flight**
- Import of plants for planting
- Import of wood/ wood products

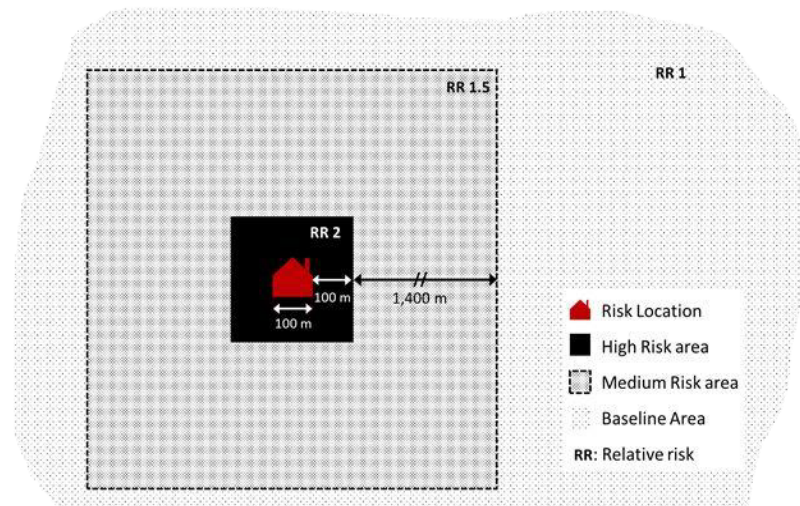
# Traps



# Risk areas

- Airports
- Main sea ports
- Borders

**Table 9:** Risk areas and their respective relative risk for detection surveys of *Agrilus planipennis*



Risk areas	Relative risk	Area*
<i>High-risk areas</i> lie within 100 m of the risk locations where, according to Mercader et al. (2009), about 90% of the larvae of a newly established pest population are found	2	$(100 + 100 + 100)^2$ = 90,000 m <sup>2</sup> = 9 ha
<i>Medium-risk areas</i> lie between 100 m and 1,500 m from the risk location as this corresponds to the median of the maximum yearly spread rate of the adult insects (EFSA, 2019)	1.5	$(1,400 + 300 + 1,400)^2 - 90,000$ = 952 ha
<i>Baseline area</i> is the survey area beyond 1,500 m from the risk location	1	Rest of the survey area

\*Area calculated considering a risk location of 1 ha.

# RiPEST

**LEVEL 1:  
SURVEY AREA**  
e.g. Member State



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**LEVEL 2-3:  
EPIDEMIOLOGICAL UNITS**  
e.g. NUTS areas  
e.g. ash trees in the forest, landscape or in cities



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**LEVEL 4:  
RISK AREAS**  
e.g. ash trees near risk locations (e.g. nurseries)



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**LEVEL 5:  
INSPECTION UNITS**  
e.g. a trap, or a tree



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# Parameters

- CL: 95%
- DP: 1%
- Diagnostic sensitivity: 98%
- Trapping: 60%
- Time: April- November
- Agro and Urban: twice less than forest
- Forest: State Forests data

# Calculations

Area	km2	Forest ha	Agro ha	Urban ha	Ash Forest	Ash Agro	Ash Urban	Ash G1	AshAll	Ports	Risk ha
POLSKA	311928	10748600	15725300	4718900	860223,9	629257,712	188829,7342	802,2291	1679114	19	18259
Dolnośląskie	19947	627500	1010000	357200	133655,37	107563,286	38041,19376	127,946	279387,8	1	961
Kujawsko-pomorskie	17972	457700	1065800	273700	23604,28	27482,4575	7057,561106	86,7072	58231,01	1	961
Lubelskie	25123	744200	1509200	258900	43042,38	43643,886	7487,014366	33,77	94207,05	1	961
Lubuskie	13988	775600	445600	177600	27770,83	7977,48959	3179,53804	121,76	39049,62	1	961
Łódzkie	18219	490800	1056900	274200	15120,65	16280,5776	4223,800153	174,69	35799,72	1	961
Małopolskie	15183	560300	623500	334500	69836,77	38857,0642	20846,33193	38,45	129578,6	1	961
Mazowieckie	35559	1027800	1995200	532900	25114,47	24376,5278	6510,751636	18,5577	56020,31	3	2883
Opolskie	9412	294100	550400	96700	37618,58	35201,065	6184,489436	60,8	79064,93	0	0
Podkarpackie	17846	788000	658800	337800	127574,68	53328,8066	27344,36986	15,37	208263,2	1	961
Podlaskie	20187	700600	1134400	183700	62388,78	50509,4434	8179,288386	3,45	121081	0	0
Pomorskie	18170	730500	823300	263200	20934,98	11797,241	3771,448827	5,5059	36509,18	3	2883
Śląskie	12333	473600	438200	321500	40350,54	18667,2367	13695,8389	49,29	72762,91	1	961
Świętokrzyskie	11709	433100	558900	178900	10634,65	6861,817	2196,419863	12	19704,89	0	0
Warmińsko-mazurskie	24011	852500	1164100	384500	104547,57	71380,5432	23576,8567	1,02	199506	1	961
Wielkopolskie	29826	866000	1734800	381800	60171,63	60268,9052	13264,16186	14,0223	133718,7	1	961
Zachodniopomorskie	22443	926300	956300	361700	57857,74	29865,7869	11296,09444	38,89	99058,51	3	2883

Area	Borders
Dolnośląskie	
Kujawsko-pomorskie	0
Lubelskie	0
Lubuskie	283 km Ukraine, 166 km Belarus
Łódzkie	0
Małopolskie	0
Mazowieckie	0
Opolskie	0
Podkarpackie	0
Podlaskie	239 km Ukraine
Pomorskie	337 km Lithuania and Belarus
Śląskie	0
Świętokrzyskie	0
Warmińsko-mazurskie	0
Wielkopolskie	210 km Russia
Zachodniopomorskie	0



		Risk area (ha)	AshAll(voivodeshipswithborders)	10% cover by Ash	% of AshArea: RiskArea
RL=5/6	Russia, Belarus, Lithuania= 730 kr	228 222,00	355 443,56	35544,35603	15,57
RL= 10/12	Ukraine= 536 km	168 082,00	267 613,67	26761,36682	15,92

	No of insp. Units	%
RL10/12 ha	26761,4	1,6
RL 5/6 ha	53803,4	3,2
Baseline	1598549,3	95,2

	No of insp. Units	UA i 1BLR
RL10/12 ha	30530	1,8182208
RL 5/6 ha	50040	2,980143099
Baseline	1598544	95,2
		UA i BLR
RL10/12 ha	39050	2,325631256
RL 5/6 ha	41520	2,472732644
Baseline	1598544	95,2



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RL10/12 ha	39050	2,325631256
RL 5/6 ha	41520	2,472732644
Baseline	1598544	95,2

	granica z UA i 1BLR		granica z UA i BLR	
	RL: H12, M6, B1		RL: H12, M6, B1	
	CS: H3, M2, B0		CS: H3, M2, B0	
	Medium	High	Medium	High
Dolnośląskie	1	0	1	0
Kujawsko-pomorskie	1	0	1	0
Lubelskie	<b>1</b>	<b>13</b>	<b>1</b>	<b>11</b>
Lubuskie	1	0	1	0
Łódzkie	1	0	1	0
Małopolskie	1	0	1	0
Mazowieckie	3	0	3	0
Opolskie	0	0	0	0
Podkarpackie	<b>1</b>	<b>29</b>	<b>1</b>	<b>24</b>
Podlaskie	<b>7</b>	<b>0</b>	<b>3</b>	<b>10</b>
Pomorskie	3	0	3	0
Śląskie	1	0	1	0
Świętokrzyskie	0	0	0	0
Warmińsko-mazurskie	<b>12</b>	<b>0</b>	<b>14</b>	<b>0</b>
Wielkopolskie	1	0	1	0
Zachodniopomorskie	3	0	3	0
	<b>79</b>		<b>80</b>	

# What next?

- Risk areas: sawmills, wood importers
- Traps: multifunnel? Double decker?
- Combine VE and Traps?

Thank you ;)