Cercetări Agronomice în Moldova
Vol. XLI , No. 4 (136) / 2008

SPREADING OF PESTS AND DISEASES IN MOLDAVIA, IN THE CROP YEAR 2006 – 2007

T. SĂPUNARU[*1], M. HATMAN[2], Viorica IACOB[2], T. GEORGESCU[2], E. ULEA [2], M. TĂLMACIU[2] [**]

[1]*Agricultural Research and Development Station of Podu-Iloaiei, Iaşi County*
[2]*University of Agricultural Sciences and Veterinary Medicine of Iaşi*

Received June 23, 2008

ABSTRACT - The paper presents the evolution of the pathogenic agents and pests from crops under the direct influence of the climate conditions registered between 2006 and 2007 in the central area of Moldavia. We presented the frequency of the attack for the main pathogenic agents and pests, as well as the measures applied by the Plant Protection Centres in order to diminish the casualties. The paper is useful to the engineers and practicians for elaborating long-term estimates on the appearance of the pathogenic agents and pests and for establishing the best period of sending the treatment alert.

Key words: pathogenic agents, pests, cereals, food plants, industrial plants, grain and feed legumes, trees, fruit bushes, vine

REZUMAT - Răspândirea agenţilor patogeni şi a dăunătorilor culturilor agricole din Moldova în anii 2006 şi 2007. Lucrarea prezintă situaţia evoluţiei agenţilor patogeni şi a dăunătorilor culturilor agricole sub influenţa directă a condiţiilor climatice înregistrate în anii agricoli 2006 şi 2007, în zona centrală a Moldovei. Este prezentată frecvenţa atacului principalilor agenţi patogeni şi dăunători, precum şi agenţii patogeni sau posibil patogeni nou semnalaţi în această zonă a ţării. Lucrarea serveşte inginerilor şi practicienilor în elaborarea

[*] E-mail: cercet_agromold@yahoo.com

[**] **Co-workers:** Dr. eng. Elena Trotuş, eng. Margareta Ene (Agricultural Research Station, Secuieni);Dr. eng. C. Rădescu, Dr. eng. Doina Martin, , Dr. eng. O. Miha.lache, eng. P. Ferenţ, eng. Iulia Isac, eng. Sonia Elena Ulea, Dr. eng. I. Ghiuţă - Ţarălungă, eng. Mihaela Ghiuţă – Ţarălungă, eng. Elena Iliescu, eng. Cătălina Cojocaru, eng. Luminiţa Grijelaru, eng. Ana Humulescu, C. Puiu, Dr. eng. Coca Şerban, Dr. eng. C. Udrea, eng. M. Lipan (County phytosanitary inspectorates from Bacău, Botoşani, Iaşi, Neamţ, Suceava, Vaslui and Vrancea)

unei prognoze de lungă durată a apariţiei agenţilor patogeni şi dăunătorilor şi pentru a stabili momentul optim al emiterii avertizării tratamentelor.

Cuvinte cheie: agenţi patogeni, dăunători, cereale, plante alimentare, plante industriale, leguminoase pentru boabe şi furaj, pomi, arbuşti fructiferi ,vița de vie

Knowing the phytosanitary condition of crops from a microarea is an essential element of applying a correct technology in crop growing. The climatic changes, observed in the last few years at global level, had alerted science and political world, simple people and also most of the farming producers.

The analysis of climatic data, registered by the Weather Station of Agroexpert-Adamachi, Iaşi County (*Table 1*), correlated to data obtained from County Phytosanitary Units, is the background for characterizing the main climatic factors in the crop year 2006-2007 and their influence on the evolution of pathogens and pests attack in the crops from Moldavia.

The crop year 2006 – 2007 was, generally, warm, the mean annual temperature exceeding the normal one by 2.2°C during the vegetation period, and by 3.2°C during all the 12 months. There has been registered 463.2 mm rainfall, as compared to the multiannual normal value of 517.8 mm, with excessive rainfall in August and September, the other months having a rainfall deficit, especially in the months with high rainfall needs for crop growing. These deviations were more significant than in the previous crop years, so that the evolution and the damages produced by pathogens and pests on crops were different.

Cereals

During 2006 – 2007, winter cereals crops – wheat, barley and two row barley and spring crop – two row barley and oats from Moldavia have registered the attacks produced by 12 pathogenic agents and 18 pests (*Tables 2, 3*). Only some of them caused damages, which varied according to climatic factors and growing technologies, as it follows:

Blumeria graminis (DC.) Speer. was signalled with low attacks on 4446 ha cultivated with wheat in Bacău, 7340 ha in Botoşani, 5200 ha in Iaşi and 4685 ha in Vaslui. A medium attack was signalled on 1665 ha in Bacău, 3920 ha in Botoşani, 4369 ha in Vrancea and 15287 ha in Vaslui. The highest attack was signalled only on 412 ha in Bacău County;

Blumeria graminis (DC.) Speer was signalled in barley (with different intensities) on 295 ha in Bacău, on 1880 ha with low attacks in Iaşi, 61 ha in Neamţ, 100 ha in Vaslui and on 189 ha in Vrancea County;

Gibberella zeae (Schw) Petch. inflicted a low attack in wheat in Bacău (2268 ha), Vaslui (1940 ha), Vrancea (728 ha) and a medium attack on 366 ha in Bacău, while in barley it was signalled only in Bacău (181 ha) and Neamț counties (37 ha);

Table 1 – Climatic characterization of the crop year 2006-2007, AgroExpert Adamachi Station – Iaşi

Specification	X 2006	XI 2006	XII 2006	I 2007	II 2007	III 2007	IV 2007	V 2007	VI 2007	VII 2007	VIII 2007	IX 2007	Total 12 months	Vege-tation period (IV-X)
TEMPERATURE(^{0} C)														
I st Decade	16.9	4.7	3.2	4.1	3.3	7.2	9.9	13.6	22.7	23.9	20.7	17.0		
II nd Decade	9.2	7.7	4.7	6.6	2.6	8.4	10.0	20.3	23.8	25.4	23.7	15.1		
III rd Decade	11.3	8.1	0.6	2.8	-2.8	8.6	13.0	24.5	22.8	26.3	25.4	15.8		
Monthly mean	12.4	6.8	2.8	4.5	1.3	8.1	11.0	19.6	23.1	25.2	22.6	16.0	12.8	19.5
Normal	10.1	4.1	-0.8	-3.6	-1.9	3.3	10.1	16.1	19.4	21.3	20.6	16.3	9.6	17.3
Deviation	+2.3	+2.7	+2.7	+0.9	-0.6	-4.8	+0.9	+3.5	+3.7	+3.9	+2.0	-0.3	+3.2	+2.2
Monthly minimum	-2.7	-3.5	-3.5	-9.8	-20.4	-2.0	0.8	0.0	12.5	11.4	11.8	4.3	-20.4	0.8
Monthly maximum	32.5	18.4	18.4	16.9	17.6	21.6	24.7	38.8	36.5	40.0	37.6	26.7	40.0	40.0
RELATIVE HUMIDITY (%)														
I st Decade	81	80	97	89	81	77	60	61	60	49	79	84		
II nd Decade	79	80	85	71	93	71	61	59	60	60	77	76		
III rd Decade	82	93	83	74	84	65	57	64	59	52	22	78		
Monthly mean	81	84	88	78	86	71	59	62	60	54	75	79	73	65
Normal	73	78	82	81	79	72	62	62	63	62	63	66	70	63
Deviation	+8	+6	+6	-3	+7	-1	-3	0	-3	-8	+12	13	+3	+2
RAINFALL (mm)														
I st Decade	7.6	17.2	1.4	18.0	3.6	8.6	4.0	4.0	1.2	7.0	73.0	50.2		
II nd Decade	7.8	0.0	0.6	7.2	5.4	2.0	16.6	4.2	8.0	32.6	4.0	37.6		
III rd Decade	9.2	9.20.8	0.8	0.8	16.2	25.6	9.0	25.2	12.8	5.4	35.6	0.0		
Monthly sum	24.6	2.8	2.8	26.0	25.2	36.2	29.6	33.4	22.0	45.0	112.6	87.8	463.2	330.4
Normal	34.4	28.9	28.9	28.9	27.4	28.1	40.3	52.4	75.1	69.2	57.6	40.8	517	337.5
Deviation	-9.8	-26.1	-16.6	-2.9	-2.2	+8.1	-10.7	-19.1	-53.1	-24.2	+55.0	77	-54.6	-7.1

Table 2 - Disease spreading in Moldavia during 2006 – 2007

Pathogenic agent	Crop	Bacău			Botoşani			Iaşi			Neamţ			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Wheat streak mosaic virus	Wheat	-	-	-	-	3728	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blumeria graminis (DC) Speer	Wheat	4446	1665	412	7340	3920	-	5200	-	-	-	2081	-	-	1000	-	4685	15287	574	-	4369	-
Gäumannomyces graminis (Sacc.) Arx et Oliv.	Wheat	209	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gibberella zeae(Schw.) Petch	Wheat	2268	366	-	-	-	-	-	-	-	-	102	-	-	-	-	1940	-	-	728	-	-
Cladosporium herbarum Pers.	Wheat	155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Micronectriella graminicola (Berk. et Br.) Wr.	Wheat	962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pseudocercosporella herpotrichoides(Fron.) D.	Wheat	1511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Septoria tritici Rob. et Desm.	Wheat	5261	707	-	-	-	-	-	-	-	-	1742	-	-	600	-	-	-	-	-	-	-
Septoria nodorum Berk	Wheat	3559	350	-	-	-	-	-	-	-	-	3298	-	-	-	-	-	-	-	-	-	-
Ustilago tritici(Pers.) Jens.	Wheat	2264	168	-	20	-	-	-	-	-	-	-	-	-	-	-	1601	-	-	546	-	-
Tilletia sp.	Wheat	899	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Puccinia recondita Rob. et Desm	Wheat	2340	45	-	810	-	-	-	-	-	-	280	-	-	-	-	-	-	-	1092	-	-
Puccinia striiformis West.	Wheat	3870	17	-	-	-	-	-	-	-	-	656	-	-	-	-	-	-	-	1274	-	-
Puccinia graminis Pers.	Wheat	1643	50	-	920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Micronectriella graminis(Berk. et Br.) Wr.	Barley	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blumeria graminis(DC) Sp.	Barley	252	32	11	-	-	-	1880	-	-	-	36	24	-	200	-	-	100	-	-	189	-
Gibberella zeae (Schw.) Petch.	Barley	166	15	-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-	-
Puccinia graminis Pers.	Barley	164	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Pathogenic agent	Crop	Bacău			Botoşani			Iaşi			Neamţ			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Puccinia recondita f. hordei *Rob. et Desm.*	Barley	35	-	-	-	-	-	-	-	-	-	34	-	-	-	-	-	-	-	68	-	-
Puccinia striiformis West.	Barley	58	4	-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	149	-	-
Pyrenophora graminea (Rab.)I. et K.	Barley	244	26	-	-	-	-	-	-	-	-	56	-	-	200	-	-	-	-	68	-	-
Pyrenophora teres (Sacc.)Drechs.	Barley	270	-	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	-	-
Rhynchosporium secalis (Oud.)Davis	Barley	266	-	-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	74	-	-
Ustilago nuda (Jens.)Rost.	Barley	266	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	121	-	-
Blumeria graminis(DC)Sp	Rye	-	-	-	-	-	-	-	-	-	-	20	-	-	100	-	-	-	-	-	-	-
Rhizoctonia solani Kühn.	Wheat	-	-	-	-	-	-	-	-	-	-	399	-	-	-	-	-	-	-	-	-	-
Gibberella zeae (Schw.) Petch.	Maize	15236	955	-	-	-	7650	-	3500	2800	-	-	-	-	-	-	-	35	-	-	-	-
Trichometasphaeria turcica Tuttr.	Maize	16213	1940		-	-	-	-	-	-	-	-	-	-	150	-	-	-	-	-	-	-
Nigrospora oryzae(Berk. et Br.)Petch.	Maize	13584	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sorosporium holci-sorghi(Pass.) Săvul.	Maize	15693	339	-	-	9020	600	3200	-	-	-	841	-	-	-	-	-	40	-	5640	-	-
Ustilago maydis(DC) Corda	Maize	15477	2415	80	-	-	-	2800	-	-	-	-	-	-	200	-	-	-	35	4387	-	-
Erysiphe pisi(DC) f.medicaginis Hamm.	Alfalfa	1880	210	28	-	-	-	-	-	-	-	-	-	-	150	-	-	-	-	4025	-	-
Pseudopeziza medicaginis(lib.)Sacc.	Alfalfa	2298	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uromyces striatus Schr.	Alfalfa	2348	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Cercospora beticola Sacc.	Beet	110	33	-	-	-	-	-	-	-	-	139	-	-	-	-	24	96	-	-	-	-
Erysiphe betae (Vanh.) Weltz.	Beet	95	40	-	-	-	-	-	-	-	-	70	-	-	200	-	96	-	-	50	-	-
Peronospora farinosa f.sp.betae Byford	Beet	61	20	-	-	-	-	-	-	-	-	-	-	-	-	-	80	-	-	-	-	-
Ramularia betae Rostr.	Beet	-	-	-	-	-	-	-	-	-	23	-	-	-	-	-	-	-	-	-	-	-

Pathogenic agent	Crop	Bacău			Botoşani			Iaşi			Neamţ			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Commons virus	Potato	146	-	-	-	2650	-	80	-	-	-	70	-	-	1200	-	-	-	-	-	-	-
Streptomyces scabies(Th.)Wak.et Hen.	Potato	726	136	-	-	-	-				-	455	-	-	-	-	-	-	-	-	-	-
Clavibacter michiganense Sc. et Burk.	Potato	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Erwinia carotovora (Jones)Bergey	Potato	-	-	-	-	-	-	-	-	-	-	107	-	-	-	-	-	-	-	-	-	-
Phytophtora infestans (Mont.)de Bary	Potato	720	312	50	-	1100	-	520	-	-	495	-	-	-	13000	-	5	-	-	203	-	-
Alternaria porri f.solani (Ell. et Mart)Neerg.	Potato	940	200	-	-	-	-	-	-	-	-	412	265	-	860	-	69	-	-	62	-	-
Colletotrichum atramentarium(Berk. et Br.)Taub	Potato	707	-	-	-	-	-	230	-	-	-	-	-	-	-	-	-	-	-	125	-	-
Rhizoctonia solani Kühn.	Potato	373	-	-	-	-	-	-	-	-	-	33	-	-	-	-	-	-	-	-	-	-
Plasmopara helianthi (Farl.)Berl .et Toni	Sunflower	30	-	-	2630	-	-	120	-	-	-	-	-	-	-	-	-	-	-	10	-	-
Sclerotinia sclerotiorum (Lib.)de Bary	Sunflower	243	-	-	-	160	5100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Puccinia helianthi Schw.	Sunflower	-	-	-	-	-	-	543	-	-	-	-	-	-	-	-	59	-	-	-	-	-
Alternaria zinniae M.B..Ellis	Sunflower	940	200	-	-	-	-	-	-	-	158	-	-	-	50	-	-	-	-	603	-	-
Septoria helianthi Ell. et Kell.	Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59	-	-	-	-	-
Botrytis cinerea Pers.	Sunflower	359	15	-	-	1080	1800	-	-	-	-	-	-	-	50	-	-	-	-	-	-	-
Diaporthe helianthi-Phomopsis helianthi Munt.	Sunflower	-	-	-	-	-	-	20	-	-	208	-	-	-	-	-	-	-	-	-	-	-
Orobanche cumana Wallr.	Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	327	200	-	-	-	-
Commons bacterium	Beans	20	-	-	120	-	-	-	-	-	-	15	-	-	-	-	1	4	-	55	-	-
Colletotricum lindemuthi-anum(Sacc. et Magn.) Br. et Cav.	Beans	19	6	-	-	-	-	-	-	-	-	33	-	-	-	-	1	-	-	65	-	-
Isariopsis griseola Sacc.	Beans	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Pathogenic agent	Crop	Bacău			Botoşani			Iaşi			Neamţ			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Sclerotinia sclerotiorum(Lib.)de Bary	Beans	9	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Botrytis cinerea Pers.	Beans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Uromyces appendiculatus(Pers.)Link	Beans	10	8	-	-	-	-	-	-	-	-	19	-	-	-	-	-	-	-	-	-	-
Erysiphe pisi DC	Peas	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-		-	-	-	-	-
Alternaria brassicae (Berk.)Sacc.	Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	683	-	-	-	-	-
Phoma lingham (Tode) Desm.	Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	339	-	-	-	-	-
Want of microelements	Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-
Commons virus-*VMT+VMC*	Tomatoes	-	-	-	-	-	-	35	-	-	-	25	-	-	-	-	13,5	0,002	-	-	-	-
Xanthomonas campestris (Doid.)Dye	Tomatoes	-	-	-	-	-	-	54	-	-	-	31	-	-	-	-	-	-	-	-	-	-
Clavibacter michiganense ssp.michiganense Scapt et Burkh.	Tomatoes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0,02	-	-	-	-	-
Erwinia carotovora (Jones)Bergey	Tomatoes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Pythium de Baryanum Hesse.	Tomatoes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,01	-	-	-	-	-
Phytophtora infestans (Mont.)de Bary	Tomatoes	208	83	17	312	202	-	-	-	-	-	11	-	-	600	-	7	1	-	1946	-	-
Phytophtora parasitica Dast.	Tomatoes	89	-	-	-	-	-	-	-	-	-	30	-	-	-	-	-	1	-	-	-	-
Leveillula taurica(Lev)Arn.	Tomatoes	240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Septoria lycopersici Speg.	Tomatoes	242	36	-	200	252	-	-	-	-	-	-	-	-	700	-	53,5	-	-	-	-	-
Botrytis cinerea Pers.	Tomatoes	85	13	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	316	-	-
Alternaria dauci (Kuhn)Gr.et Sk. f.sp.solani (Ell.et Mart)Neerg.-	Tomatoes	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	1,15	3	-	-	-	-
Cladosporium fulvum Cooke	Tomatoes	49	210	20	-	-	-	-	-	-	-	25	-	-	-	-	7	-	-	-	-	-

Pathogenic agent	Crop	Bacău			Botoşani			Iaşi			Neamţ			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Didymella lycopersici Kleb	Tomatoes	56	-	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fusarium oxysporum Schl.	Tomatoes	131	130	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	0,004	30	-	-
Commons virus	Pepper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Decay damp (physiologic disease)	Pepper	-	-	-	-	-	-	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pseudomonas syringae pv.tomato(Ok.) Y.D.W.	Pepper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
Phytophthora capsici Leonian	Pepper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
Leveillula taurica (Lev.) Arn.	Pepper	83	2	-	-	-	-	84	-	-	-	15	-	-	-	-	-	-	-	-	-	-
Fusarium oxysporum Schl.	Pepper	6	60	19	-	-	-	56	-	-	-	-	-	-	-	-	-	12	1	211	-	-
Verticillium dahliae Kleb.	Pepper	83	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alternaria capsici-annui Savul. et Sandu	Pepper	-	-	-	-	-	-	25	-	-	7	-	-	-	-	-	8	4	1	-	-	-
Botrytis cinerea Pers.	Pepper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	183	-	-
Alternaria brassicae (Berk.)Sacc.	Crucifers	-	-	-	-	-	-	-	-	-	68	40	-	-	-	-	-	-	-	-	-	-
Pythium de Baryanum Hesse.	Eggplant	-	-	-	-	-	-	-	-	-	-	-	-	-	70	-	-	0,002	-	-	-	-
Alternaria porri (Ell.) Neerg.	Eggplant	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
Botrytis cinerea Pers.	Eggplant	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	26	-	-
Fusarium oxysporum Schl.	Eggplant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Verticillium albo-atrum Keinke et Berth.	Eggplant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		24	-	-
Erwinia carotovora (Jones)Holl.	Cabbage	90	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	2	-	-	-	-
Xanthomonas campestris(Pamm.)Dows	Cabbage	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0,05	-	-	-	-	-

Pathogenic agent	Crop	Bacău			Botoşani			Iaşi			Neamţ			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Pythium de Baryanum Hesse.	Cabbage	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	2	-	-	-	-	-
Peronospora brassicae Găum.	Cabbage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	-	-	-	-	-
Alternaria brassicae (Berk.) Sacc.	Cabbage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	-	-	-	-	-
Erwinia carotovora (Jones) Holl	Onion	98	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	5	-	-	-	-
Peronospora destructor (Berk.) Casp.	Onion	141	69	60	300	320	-	-	-	-	-	37	-	-	260	-	-	-	-	102	60	-
Botrytis allii Munn.	Onion	87	7	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-
Helminthosporium allii Camp.	Garlic	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Sclerotinia sclerotiorum (Lib.) de Bary	Garlic	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-		-
Common virus	Cucumber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Pseudomonas syringae pv.lachrymans (Smith et Br.) Z.D. et Wilk.	Cucumber	39	8	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	4	-	-	-
Pseudoperonospora cubensis(Berk. et Curt.) Rost.	Cucumber	26	18	15	-	-	-	-	-	-	-	16	-	-	-	-	-	-	0,5	26	20	
Sphaerotheca fuliginea(Sch.) Salm	Cucumber	6	4	-	-	380	-	-	27	-	-	17	-	-	-	-	-	-	4	20	41	-
Alternaria cucumerina(Ell. et Ev) Ell.	Cucumber	54	-	-	-	-	-	-	-	-	-	19	-	-	-	-	4	-	-	-	-	-
Colletotrichum lagenarium(Pass.) Ell. et Hals.	Cucumber	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	21	-	-
Cladosporium cucumerinum Ellis et Arth.	Cucumber	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	4	-	-	-	-	-
Fusarium solani f.cucurbitae Snyd. et Hans.	Cucumber	8	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-

Pathogenic agent	Crop	Bacău			Botoşani			Iaşi			Neamţ			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Sclerotinia sclerotiorum(Lib.)de Bary	Cucumber	52	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pseudoperonospora cubensis (Berk. et Curt) Rost.	Melon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
Sphaerotheca fuliginea (Sch.)Salm.	Melon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
Fusarium oxysporum (Schl.)Sn. f.sp. melonis Hans.	Melon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
Colletotrichum lage - narium(Pass.)Ell. et Hals	Melon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-		-
Alternaria cucumerina(Ell. et Ev.)Ell.	Melon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
Erwinia carotovora (Jones)Bergey	Carrot	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Botrytis cinerea Pers.	Carrot	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Erysiphe heraclei DC. ex St. Amans.	Carrot	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Sclerotinia sclerotiorum(Lib.)de Bary	Carrot	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Septoria apiicola Speg.	Carrot													-	-	-	1	-	-	-	-	-
Bremia lactucae Regel	Lettuce	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Septoria apiicola Speg.	Celery	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Septoria petroselini (Lib.)Desm	Parsley	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grapevine leaf virus	Grapevine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-		-
Agrobacter. radiobacter pv.tumefaciens(Smith et Town.)K.,Z., et Pan.	Grapevine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-
Plasmopara viticola(Berk. et Curt)Berl. et de Toni	Grapevine	9	100	-	340	280	-	-	-	-	-	31	-	-	-	-	-	-	-	3570	-	-
Uncinula necator (Schw.)Burr.	Grapevine	360	290	-	200	400	-	320	-	-	-	25	-	-	-	-	2179	-	-	2746	-	

Pathogenic agent	Crop	Bacău			Botoşani			Iaşi			Neamţ			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Botryotinia fuckeliana (De Bary)Whetzel	Grapevine	274	130	-	-	-	-	50	-	-	-	-	-	-	-	-	1559	110	-	2746	-	-
Elsinoe ampelina Shear.	Grapevine	-	-	-	-	-	-	-	-	-	51	25	-	-	-	-	-	-	-	489	-	-
Phomopsis viticola Sacc.	Grapevine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-	-
Pseudopeziza tracheiphila H. Müll.-	Grapevine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1372	-	-
Chlorosis	Grapevine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0,02	-	-	-	-
Erwinia amylovora (Burill)Wins.	Apple tree	-	-	-	-	-	-	5120	-	-	-	37	-	-	900	-	5	23	-	579	-	-
Podosphaera leucotricha (Ell.et Ev.)Salm.	Apple tree	223	183	16	395	385	-	230	-	-	176	74	53	-	980	-	387	62	-	646	-	-
Venturia inaequalis (Cke)Wint.	Apple tree	279	264	15	320	-	-	156	-	-	-	95	-	-	1000	-	522	80	7	206	-	-
Monilinia fructigena (Aderh. et Ruhl.) Honey	Apple tree	301	167	25	230	-	-	-	-	-	-	84	-	-	-	-	-	-	120	1157	-	-
Pear stony pit virus	Pear tree	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Erwinia amylovora (Burill)Wins.	Pear tree	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	4,5	-	51	-	-
Venturia pirina Aderh.	Pear tree	9	14	10	-	-	-	-	-	-	-	38	-	-	-	-	5	-	-	89	-	-
Mycosphaerella sentina (Fuck.)Schr.	Pear tree	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	1	-	-	-	-	-
Monilinia fructigena (Aderh. et Ruhl.) Honey	Pear tree	-	33	-	-	-	-	-	-	-	-	20	-	-	-	-	-	1	-	-	-	-
Erwinia amylovora (Burill)Wins.	Quince tree	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,5	0,5	0,5	2
Fabrea maculata(Lev)Atk.	Quince tree	14	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
Monilinia linhartiana (Prill. et Del.)Haney	Quince tree	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Plum pox virus (Annulus pruni Holmes)	Plum tree	-	-	-	-	-	-	342	-	-	-	15	3	-	-	-	1	-	-	-	-	-
Taphrina pruni(Fuck.)Tul.	Plum tree	93	-	-	-	-	-	-	-	-	-		-	-	-	-	-	8	-	150	139	-
Polystigma rubrum (Pers.) DC.	Plum tree	124	7	-	400	-	-	-	-	-	-	20	-	-	-	-	350	58		1638	-	-

Pathogenic agent	Crop	Bacău			Botoşani			Iaşi			Neamţ			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Monilinia laxa(Aderh. et Ruhl.) Honey	Plum tree	0	33	-	-	-	-	-	-	-	-	18	-	-	-	-	136	-	-		-	-
Stigmina carpophylla (Lev.)Ellis	Plum tree	108	18	5	410	165	-	-	-	-	-	30	-	-	-	-	-	58	-	337	-	-
Tranzschelia pruni-spinosae(Pers.)Died	Plum tree	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Stereum purpureum(Pers. ex Fr.)Fr.	Plum tree	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-
Monilinia laxa(Aderh. et Ruhl.) Honey	Cherry tree	60	10	-	-	-	70	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-
Blumeriella jaapii(Rehm.) v.Arx(Coccomyces hiemalis Higg.)	Cherry tree	110	50		-	-	-	-	-	-	-	13	-	-	-	-	293	60	-	-	-	-
Stigmina carpophylla (Lev.)Ellis	Cherry tree	110	50	2	-	-	-	-	-	-	-	16	-	-	460	-	293	60	-	53	-	-
Taphrina deformans (Berk.)Tul.	Peach tree	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	-	-
Stigmina carpophylla (Lev.)Ellis	Peach/ Apricot tree	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	10/ 20	-	-
Apoplexy	Apricot tree													-	-	-	-	1	-		-	-
Plum pox virus	Apricot tree	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-
Monilinia laxa(Aderh. et Ruhl.) Honey	Sour-cherry tree	-	-	-	-	-	-	156	-	-	-	13	-	-	-	-	311	30	-	-	-	-
Xanthomonas campestris pv.juglandis(Pierce)Dye	Walnut tree	-	-	-	-	-	-	-	-		1	-	-	-	-	-	5	-	-	-	-	-
Gnomonia leptostyla(Fr.) Ces. Et De Not.	Walnut tree	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-
Erysiphe trifolii Grev.	Clover	-	-	-	-	-	-	-	-	-	-	368	-	-	-	-	-	-	-	-	-	-
Pseudopeziza trifolii (Biv.Bernh.)Fuck.	Clover	-	-	-	-	-	-	-	-	-		310	-	-	-	-	-	-	-	-	-	-

Pathogenic agent	Crop	Bacău			Botoşani			Iaşi			Neamţ			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack			Ha - attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Uromyces trifolii (Hedw.) Lev.	Clover											133	-	-	-	-	-	-	-	-	-	-
Erysiphe pisi DC f.sp.medicaginisHamm.	Alfalfa	-	-	-	-	-	-	-	-	-	-	788	-	-	-	-	-	-	-	-	-	-
Uromyces striatus Schr.	Alfalfa	-	-	-	-	-	-	-	-	-	-	321	-	-	-	-	-	-	-	-	-	-
Xanthomonas campestris pv.cannabis Severin	Monoic hemp	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Pythium de Baryanum Hesse.	Monoic hemp	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Peronoplasmopara cannabina(Otth.)Peglion	Monoic hemp	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Sclerotinia sclerotiorum (Lib.)de Bary	Monoic hemp	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Botrytis infestans (Hazsl.)Sacc	Monoic hemp	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Septoria cannabina Peck.	Monoic hemp	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Fusarium oxysporum Schl.	Monoic hemp	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Diplocarpon rosae Wolf.	Rose	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Sphaerotheca pannosa (Wallr.)Lèv var. rosaeWoron.	Rose	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0,5	-	-	-
Phragmidium mucronatum(Pers.)Schl.	Rose	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Phoma sp.	Thuja sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Alternaria alternata (Fr.)Keissl.	Chrysan-themum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Fusarium oxysporum Schl.	Chrysan-themum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Cuscuta sp.	Legumes	3996	572	266	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1127	-	-

Table 3 - Spreading of crop pests in Moldavia during 2006 – 2007

Crop pests	Crop	Bacău			Botoşani			Iaşi			Neamţ			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Anisoplia spp.	Wheat	3347	325	-	90	45	-	210	-	-	125	-	-	-	-	-	940	-	-	1150	450	-
Cephus pygmeus L.	Wheat	2705	15	-	-	-	-	-	-	-	181	-	-	-	-	-	24529	-	-	-	-	-
Eurygaster spp.	Wheat	3800	4977	10	1600	1000	-	12100			6402	997	-	250	140	-	15220	-	-	2700	1410	-
Haplothrips marginata	Wheat	1260	261	-	270	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haplothrips tritici Kurdj.	Wheat	3377	406	-	420	175	-	85	-	-	1889	1350	-	25	-	-	365	815	-	110	-	-
Oulema melanopa L.	Wheat	5345	58	-	-	-	-	120	-	-	1428	3091	-	-	-	-	24529	-	-	3640	-	-
Oscinella fritt L.	Wheat	5660	-	-	2100	250	-	-	-	-	2480	-	-	-	-	-	24529	-	-	-	-	-
Schizaphis graminum Romd.	Wheat	4021	380	-	450	310	-	155	-	-	2296	887	-	-	-	-	2741	-	-	1456	-	-
Zabrus tenebrioides Goeze	Wheat	1707	330	-	1550	520	-	-	-	-	268	-	-	145	30	-	1978	-	-	510	400	-
Anisoplia spp	Barley	189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	-	-
Cephus pygmeus L.	Barley	264	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haplothrips tritici Kurdj.	Barley	65	110	-	-	-	-	-	-	-	68	39	-	-	-	-	200	-	-	-	-	-
Oulema melanopa L	Barley	246	4	-	-	-	-	-	-	-	69	35	-	-	-	-	200	-	-	70	-	-
Oscinella fritt L.	Barley	362	22	-	-	-	-	-	-	-	75	56	-	-	-	-	300	-	-	-	-	-
Schizaphis graminum Romd.	Barley	275	-	-	35	45	-	25	-	-	63	48	-	-	-	-	100	-	-	165	-	-
Zabrus tenebrioides Goeze	Barley	10	-	-	15	22	-	-	-	-	60	-	-	-	-	-	-	-	-	-	-	-
Heliothis armigera Hnb.	Maize	155	-	-	-	-	-	35	-	-	-	-	-	-	-	-	35	-	-	-	-	-
Opatrum sabulosum L.	Maize	1215	70	-	-	-	-	-	-	-	2490	-	-	-	-	-	150	-	-	-	-	-
Ostrinia nubilalis Hb.	Maize	3940	2499	280	11585	5000	-	120	350	410	4020	-	-	170	40	-	663	1040	-	3132	-	-
Rhopalosiphum maydis Fitch.	Maize	8151	260	-	-	-	-	140	170	-	4495	5350	1844	-	-	-	310	265	-	-	-	-
Tanymecus dilaticollis Gyll.	Maize	1961	38	9	1350	240	-	-	-	-	9462	5276	3367	310	-	-	2425	535	-	-	-	-
Opatrum sabulosum L.	Sunflower	141	-	-	-	-	-	-	-	-	547	577	-	-	-	-	979	-	-	-	-	-
Tanymecus dilaticollis Gyll.	Sunflower	271	-	-	-	-	-	-	-	-	770	315	-	-	-	-	979	929	-	-	-	-

Crop pests	Crop	Bacău			Botoşani			Iaşi			Neamț			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Entomoscelis adonidis L.	Rape	199	73	-	-	-	-	-	-	-	51	-	-	-	-	-	682	536	-	-	-	-
Opatrum sabulosum L.	Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acanthoscelides obsoletus Say.	Beans	9	1	1	15	10	-	-	-	-	39	24	4	15	8	-	-	-	-	64	-	-
Delia platura Meig.	Beans	14	-	-	-	-	-	-	-	-	45	4	-	-	-	-	-	-	-	-	-	-
Etiella zinckenella Tr.	Beans	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heliothis armigera Hnb.	Beans	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aphis fabae Scop.	Beet	108	55	-	-	-	-	-	-	-	106	71	37	-	-	-	1	-	-	-	-	-
Liscus spp.	Beet	101	10	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Mamestra brassicae L.	Beet	234	-	-	-	-	-	-	-	-	123	67	-	-	-	-	36	-	-	-	-	-
Pegomia betae Curtis	Beet	73	-	-	-	-	-	-	-	-	91	-	-	-	-	-	30	-	-	-	-	-
Autographe gamma L.	Beet	71	20	-	-	-	-	-	-	-	115	59	-	-	-	-	36	-	-	-	-	-
Scotia segetum Schiff.	Beet	134	-	-	-	-	-	-	-	-	94	39	-	-	-	-	36	-	-	-	-	-
Leptinotarsa decemlineata Say	Potato	150	467	245	1320	510	-	1150	2275	-	1054	633	401	220	75	-	2	56	389	119	-	-
Myzodes persicae Sulz.	Potato	997	50	-	-	-	-	-	-	-	500	158	-	-	-	-	-	-	-	-	-	-
Adelphocoris lineolatus Goeze	Alfalfa	2900	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	268	-	-
Contarinia medicaginis Kieff.	Alfalfa	4098	-	-	-	-	-	-	-	-	2360	631	-	-	-	-	-	-	-	-	-	-
Heliothis armigera Hnb	Alfalfa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phytodecta fornicata Brügg.	Alfalfa	2960	668	-	-	-	-	-	-	-	1092	506	-	40	17	-	500	-	-	165	-	-
Phytonomus variabilis Hb.	Alfalfa	3750	340	-	-	-	-	-	-	-	648	-	-	-	-	-	-	-	-	1610	-	-
Sucoccinella 24 punctata L.	Alfalfa	3810	288	-	-	-	-	-	-	-	248	174	-	25	15	-	200	-	-	1610	-	-
Tychnis flavus Beker	Alfalfa	3388	240	-	-	-	-	-	-	-	692	211	-	-	-	-	-	-	-	-	-	-
Leptinotarsa decemlineata Say.	Tomatoes	248	43	5	112	102	-	-	-	-	63	28	-	-	-	-	60	20	-	-	-	-

Crop pests	Crop	Bacău			Botoşani			Iaşi			Neamţ			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Macrosiphum euphorbiae Th.	Tomatoes	163	7	-	-	-	-	25	-	-	56	60	22	-	-	-	127	1	-	-	-	-
Traleurides vaporariorum Westw.	Tomatoes	70	20	-	-	-	-	-	-	-	-	-	-	20	10	-	-	-	-	175	-	-
Heliothis armigera Hnb	Pepper	79	-	-	-	-	-	37	-	-	13	4		-	-	-	8	2	-	229	-	-
Myzodes persicae Sulz.	Pepper	79	9	-	-	-	-	-	-	-	28	15	11	-	-	-	47	-	-	30	-	-
Polyphagotarsonemus latus Bank	Pepper	4	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	146	-	-
Leptinotarsa decemlineata Say.	Eggplant	13	11	8	-	-	-	-	-	-	34	6		-	-	-	16	8	-	-	-	-
Macrosiphum euphorbiae Th.	Eggplant	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	12	-	-
Polyphagotarsonemus latus Bank		10	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	-
Tetranychus urticae Koch.	Eggplant	1	10	10	-	-	-	-	-	-	14	18			-	-	-	-	-	21	-	-
Brevicoryne brassicae L.	Cabbage	73	251	15	250	320	90	10	12	5	119	72	47	35	17	-	9	1	-	45	-	-
Ceuthorrhynchus pleurostigma Marsh.	Cabbage	206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Delia brassicae Bche.	Cabbage	122	7	-	-	-	-	-	-	-	63	40	-	-	-	-	-	-	-	-	-	-
Euryderma ornata L.	Cabbage	328	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mamestra brassicae L.	Cabbage	173	191	90	150	190	-	15	20	7	74	40	-	22	10	-	87	109	-	35	-	-
Pieris brassicae L.	Cabbage	116	123	60	90	140	-	-	-	-	68	34	-	15	7	-	-	-	-	32	-	-
Phyllotreta spp.	Cabbage	32	235	32	-	-	-	-	-	-	130	67	39	-	-	-	-	-	-	27	-	-
Plutella maculipenis Curt.	Cabbage	290	29	-	-	-	-	-	-	-	24	16	-	-	-	-	-	-	-	-	-	-
Cerosipha gossypii Glov.	Cucumber	52	4	-	-	-	-	10	5	-	25	19	14	-	-	-	-	-	-	-	-	-
Tetranychus urticaeKoch.	Cucumber	18	29	9	32	-	-	-	-	-	32	26	-	-	-	-	-	-	1	29	-	-
Ceuthorrhinchus suturalis F.	Onion	237	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-

Crop pests	Crop	Bacău			Botoşani			Iaşi			Neamț			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Delia antiqua Meig.	Onion	151	69	35	112	45	-	15	-	-	81	41	5	10	7	-	24	106	-	47	-	-
Suilla lurida Meig.	Garlic	4	70	12	-	-	-	-	-	-	32	16	-	-	-	-	-	-	-	-	-	-
Aphis pomi de Greer	Apple tree	283	247	7	15	45	-	-	-	-	175	61	47	140	55	-	213	65	1	292	-	-
Anthonomus pomorum L.	Apple tree	188	42	-	410	130	-	-	-	-	184	146	-	25	10	-	112	-	-	-	-	-
Eriosoma lanigerum Hausm.	Apple tree	221	130	-	240	130	-	12	-	-	100	48	-	-	-	-	-	-	-	73	-	-
Hoplocampa testudinea Klug.	Apple tree	137	27	-	-	-	-	-	-	-	176	103	-	-	-	-	83	41	-	-	-	-
Cydia pomonella L.	Apple tree	275	191	61	470	110	-	-	27	58	134	83	43	230	110	-	222	207	27	290	-	-
Psylla mali Schm.	Apple tree	173	15	-	-	-	-	-	-	-	125	-	-	-	-	-	-	-	-	-	-	-
Quadraspidiotus perniciosus Comst.	Apple tree	197	104	72	210	150	50	70	120	-	140	105	-	125	60	-	285	245	71	119	-	-
Anthonomus cinctus Koller	Pear tree	21	-	-	-	-	-	-	-	-	33	17	-	-	-	-	-	-	-	-	-	-
Eriosoma lanigerum Hausm.	Pear tree	13	3	-	-	-	-	-	-	-	13	7	-	-	-	-	-	-	-	-	-	-
Hoplocampa brevis Klug.	Pear tree	21	-	-	-	-	-	-	-	-	32	30	-	-	-	-	-	-	-	-	-	-
Psylla pyricola Foers.	Pear tree	33	-	-	-	-	-	-	-	-	53	30	-	-	-	-	1	-	-	43	-	-
Quadraspidiotus perniciosus Comst.	Pear tree	4	26	2	-	-	-	-	-	-	44	20	-	-	-	-	-	-	-	58	-	-
Brachycaudus caudatus Fl.	Plum tree	108	20	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eurytoma schreineri Schr.	Plum tree	66	19	42	110	305	120	-	11	55	38	30	16	75	52	-	314	36	58	740	-	-
Hoplocampa minuta Christ.	Plum tree	91	27	-	17	20	-	15	-	-	33	28	-	60	45	-	291	29	1	-	-	-
Hyalopterus Plum treei Geoffr.	Plum tree	113	12	2	-	-	-	-	-	-	37	17	14			-	232	-	71	964	-	-
Cydia funebrana Tr.	Plum tree	72	37	20	210	100	-	-	15	60	46	36	-	110	25	-	43	-	-	578	-	-
Parthenolecanium corni Bché	Plum tree	137	17	3	-		-	-	-	-	35	9	-	-	-	-	-	-	-	-	-	-
Quadraspidiotus perniciosus Comst.	Plum tree	103	18	40	-	-	-	-	-	-	42	53	-	-	-	-	47	-	-	-	-	-

Crop pests	Crop	Bacău			Botoşani			Iaşi			Neamț			Suceava			Vaslui			Vrancea		
		Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack			Ha -attack		
		L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
Eriophyes phyleocoptes Sch.	Plum tree	74	34	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Myzus cerasi F.	Cherry tree	8	110	1	15	12	-	15	10	-	22	13	8	15	10	-	50	51	-	97	-	-
Rhagoletis cerasi L.	Cherry tree	115	12	73	50	20	-	-	12	57	25	33	-	15	5	-	377	30	22	95	-	-
Rhynchites bacchus L.	Cherry tree	118	34	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anomala solida Er.	Grapevine	737	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bycticus betulae L.	Grapevine	1041	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	762	-	-
Eupoecilia ambiguella Hb.	Grapevine	887	-	-	70	80	-	27	-	-	-	-	-	-	-	-	100	-	-	1450	-	-
Lobesia botrana Den. et Schiff.	Grapevine	1051	25	-	-	-	-	30	-	-	42	-	-	-	-	-	320	-	-	1450	-	-
Lethrus apterus Laxm.	Grapevine	207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pulvinaria vitis L.	Grapevine	517	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280	-	-	-	-
Eriophyes vitis Nal.	Grapevine	1039	396	36	-	-	-	35	-	-	52	22	-	-	-	-	140	220	-	3410	-	-
Tetranychus urticae Koch	Grapevine	283	247	7	180	65	-	-	-	-	45	25	-	-	-	-	1727	320	-	3293	-	-
Agriotes spp	Various crops	1500	500	500	7500	2585	-	-	-	-	5460	2754	-	420	120	-	4168	-	-	-	-	-
Hyphantria cunea Drury	Various crops	325	478	-	520	100	-	-	55	-	238	320	77	110	45	-	24	91	363	470	250	50
Citellus citellus L.	Various crops	2500	-	-	-	-		-	-	-	350	-	-	-	-	-	24529	-	-	910	-	-
Microtus arvalis Pall.	Various crops	10000	1000	452	-	-	-	-	-	-	4328	2031	662	-	-	-	-	-	-	201	-	-
Gryllotalpa gryllotalpa Latr.	Vegetables	299	126	86	-	-	-	-	-	-	335	-	-	-	-		13	-	-	-	-	-

Ustilago tritici (Jensen) Rostrup inflicted a low attack in Bacău (2264 ha), Botoşani (20 ha), Vaslui (1601 ha) and Vrancea counties (546 ha) and a medium attack on 168 ha in Bacău;

Tilletia sp. was signalled only in Bacău County on 899 ha;

Puccinia recondita Rob. et Desm. - *f. sp. tritici* was signalled with low attacks on 2340 ha in Bacău, 810 ha in Botoşani and 1092 ha in Vrancea and with medium attacks on 45 ha in Bacău and 280 ha in Neamț counties;

Puccinia striiformis West. inflicted a low attack on 3870 ha in Bacău, 1274 ha in Vrancea and a medium attack on 17 ha in Bacău and 656 ha in Neamț counties;

Septoria tritici Rob. et Desm. inflicted a low attack (5261 ha) in Bacău and a medium attack on 707 ha in Bacău and 1742 ha in Neamț counties;

Septoria nodorum Berk. appeared in the same counties on 3909 and 3298 ha;

Rhizoctonia solani Kühn was signalled only in Neamț County on 399 ha, with medium attacks;

Micronectriella graminicola (Berk. et Br.) Wr. was signalled on small areas (962 ha) in Bacău in wheat and on 160 ha in Bacău County in barley;

Pyrenophora graminea (Rab.) I. et K., *P. teres* (Sacc.) Drechs and *Rhynchosporium secalis* (Oud.) Davis were signalled on average areas (between 32 and 270 ha) only in Bacău and Neamț counties;

Eurigaster integriceps Put. *E. maura* L., *E. austriaca* Schrank, *Aelia acuminata L. , Aelia rostrata Bch*. inflicted a low attack in cereals crops in the Moldavian counties. In Bacău, Botoşani, Neamț and Suceava counties, the attack was medium. Only in Iaşi County (on 10 ha), the attack was stronger;

Zabrus tenebrioides Goeze was signalled in all the Moldavian counties, inflicting low and medium attacks, especially in wheat and barley cultivated on the same areas. The pest attacks are decreasing due to the applied seed treatments with Tirametox 90 PTS-3 kg/t, Gammavit 85 PSU – 3 Kg/t, Vitalin 85 PTS - 3 Kg/t, Trialin 50 – 2.5 kg/t , Sumidan – 1.8 l/t, Protilin 460 FS – 4.5 l/t and Orius Combi – 2.5 kg/t, etc;

Schizaphis graminum Rond. and other green flies like *Rhopalosiphum maydis* Fitch., *R. padi* L. and *Macrosiphum avenae* F. produced infestation and low attacks in most of the cereals crops but the biological reserve for year 2008 is reduced;

Oscinis frit L., *Chlorops pumilionis* Bjerk., *Opomyza florum* Fall., *Phorbia spp.* produced low attacks in all the Moldavian counties, excepting the crops from Botoşani County where the attack had medium intensity;

Cephus pygmeus L. presented low attacks only in Botoşani County;

Haplodiplosis marginata Van Roser was signalled only in Bacău and Botoşani counties with low and medium attacks;

Anisoplia austriaca Hbst. and *A. segetum* Hbst. were present in almost all the Moldavian counties, excepting Suceava County, with low or medium attacks. We may conclude that the biological reserve for 2008 is small but involves the crop control after flowering. The treatments carried out for *Schizaphis graminum* Rond. had a positive effect against those pests;

Oulema melanopa L. produced low and medium attacks in almost all the Moldavian counties, excepting Suceava County, where no attack was signalled;

Haplothrips tritici Kurdj. was signalled in all the Moldavian crops with low and medium attacks. The attack on the plants' ears was between 5 and 10 % and the damages were small.

The climatic conditions during the vegetation period (April – August), which were characterized by draught, high temperatures during May – July, rich rainfall during August – September and also improper technological factors, maize continuous cropping for 4-5 years, sowing with untreated seeds from the own production obtained in small farms, absence of technologies, fertilization, etc. had favoured the occurrence and development of the attacks produced by the pathogenic agents and pests in maize crops from Moldavia, attacks that exceeded the Economic Damaging Threshold.

The pathogenic agents signalled in maize during 2006 – 2007 produced low and medium attacks, excepting *Sorosporium holci-sorghi,* which had an attack frequency in some counties of 10 – 45 % (Bacău, Botoşani, Iaşi, and Vrancea counties).

Analyzing the data regarding the evolution of pathogenic agents and pests from maize crops in Moldavia (Tables 2, 3) during 2006 – 2007, we can draw the following conclusions:

Ustilago maydis (DC.) Corda produced low attacks on 15477 ha in Bacău, 2800 ha in Iaşi and 4387 ha in Vrancea, medium attacks on 2415 ha in Bacău and strong attacks only on 80 ha in Bacău;

Sorosporium holci-sorghi (Riv.) Moesz. produced low attacks in maize on stems, leaves, flowers and cobs, in Bacău (15693 ha), Iaşi (3200 ha) and Vrancea counties (5640 ha). A medium attack was signalled on 339 ha in Bacău, 9200 ha in Botoşani, 841 ha in Neamț and 40 ha in Vaslui counties;

Gibberella zeae (Schw.) Petch. was signalled with low attacks on 15236 ha in Bacău, medium attacks on 955 ha in Bacău, on 3500 ha in Iaşi and on 35 ha in Vaslui and with strong level attacks on 2800 ha in Iaşi counties;

Drechslera turcica (Pass.) Sub. produced minor attacks in Suceava County (150 ha), while in Iaşi County, low attacks were signalled on 16213 ha and medium attacks, on 1940 ha. To these pathogens attack, the damages produced by the following pests superposed:

Agriotes ustulatus Schall.*, A. lineatus* L. was signalled in Bacău, Botoşani, Neamț, Suceava and Vaslui counties with low and medium attacks. Great damages were identified in the crops sown with untreated seed, where the worm

density was between 1 and 3 individuals on 1 m^2. The attack was also registered in potato crops. Worms produced groves in tubercles, where the microorganisms induced the putrefaction processes;

Tanymecus dilaticollis Gyll. was present in most of the counties, excepting Iaşi and Suceava counties. The pest has started with low to strong attacks according to the number of pests on m^2. The biological reserve was small as compared to the previous years, due to the treatments with insecticides;

Ostrinia nubilalis Hb. was present in all the maize crops from Moldavia. The attack intensity was low to strong, depending on the hybrid resistance or tolerance to the pest attack. The damages were minor and the biological reserve for 2008 was small;

Heliothis armigera Hbn. is an average pest, which was signalled in maize crops from Bacău, Iaşi and Suceava counties with a low intensity attack. It was also present in bean crops from Bacău, in pepper from Bacău, Iaşi, Neamţ, Vaslui and Vrancea and in sunflower crops from Bacău, Neamţ and Vaslui counties, with a low intensity attack.

Pathogenic agents and pests of grain and feed legumes

Peas

Erysiphe pisi (DC.) ex. Saint Amans was reported with a frequency of 15-20 % on 12 ha in Neamţ County.

Beans

Xanthomonas campestris pv. phaseoli (Smith.) Dye., in association with other bacteria, produced attacks on areas ranging between 20 and 40% in bean crops from Botoşani, Iaşi, Neamţ and Vaslui counties, with the frequency of 5-30% during 2001- 2003;

Colletotrichum lindemuthianum (Sacc. et Magn.) Br. et Cavara. Low and medium attacks were registered on 25 hectares in Bacău, 33 ha in Neamţ, 1 ha in Vaslui and 65 ha in Vrancea;

Uromyces appendiculatus (Pers.) Ung. has been reported with a medium attack (10-20%), in Bacău (18 ha) and Neamţ counties (19 ha);

Sclerotinia sclerotiorum (Lib.) de Bary has been reported with low attacks only in Bacău County on 14 ha;

Acanthoscelides obsoletus. Say has produced attacks on bean crops in Bacău, Botoşani, Neamţ, Suceava and Vrancea counties. The attacks were reported in huge deposits and especially in private households. Because of the high temperatures, the biological cycle of pests was shorter, so that at the harvesting time, beans were already attacked. It is recommended to apply seed treatments, immediately after harvesting, with insecticides from Group III or IV of toxicity. It is not recommended to use the Decis product, which is very toxic;

Delia (Phorbia) platura Meig. has been reported only in the crops from Bacău and Neamț counties with a low intensity attack. Worms caved galleries in leaves and stems at the beginning of the vegetation period.

Soybean

Etiella zinkenella Tr. has been reported only in crops from Bacău County.

Alfalfa

Erysiphe pisi DC. *f. sp. medicaginis* Hamm. was reported with medium attacks on 788 ha in Neamț County;

Uromyces striatus Schroet. was reported with medium attacks on 321 ha in Neamț County;

Cuscuta sp. has been reported in Iaşi County with low attacks on 3996 ha, with medium attacks on 572 ha and strong attacks on 266 ha;

Phytodecta fornicata Tr caused damages in alfalfa crops from Bacău, Neamț, Suceava, Vaslui and Vrancea counties, but the attack was low. In Suceava County, on 17 hectares, the attack was medium;

Contarinia medicaginis Keff. has been reported in alfalfa crops from Bacău and Neamț counties, where it produced damages between 5 and 7% to the inflorescences.

In alfalfa crops, there were also signalled *Tychius flavus* Beker, *Phytonomus variabilis* Hb. and *Adelphocoris lineatus* Goeze, pests that did not produce significant damages. For controlling these pests, two treatments, with Sinoratox 35 CE - 0.15 l / ha Supersect 10 CE - 0.15 l / ha and Sumialfa CE 2.5 - 0.2 l / ha: T_1 – maximum bud formation period; T2 – beginning of flowering and pod formation.

Clover

Erysiphe trifolii Grev. DC. was mentioned only in Neamț County, with a medium attack on 368 ha;

Pseudopeziza trifolii (Biv. Bernh.) Fuck. was reported with medium attacks in Neamt County, on 133 ha;

Uromyces trifolii (Hedw.) Lév. was reported with medium attacks in Neamț County on 310 ha;

For controlling these pathogens, the following fungicides were used: Bavistin 50 WP (0.5 kg / ha) and Bumper 250 CS (0.2 l / ha).

Pathogenic agents and pests of industrial plants

Sunflower

Plasmopara helianthi (Farl.)Berl et de Toni. was reported with low attacks in Bacău, Iaşi and Vrancea counties but on large areas – 2963 ha in Botoşani;

Sclerotinia sclerotiorum (Lib.) de Bary was signalled in Bacău County with low attacks on 243 ha, while in Botoşani, it was signalled with medium attacks on 160 ha, because the crop rotation indicated for disease prevention was not observed;

Alternaria zinniae M.B. Ellis was reported with low attacks in the following counties: Bacău - 940 ha, Neamț - 158 ha, Suceava - 50 ha and Vrancea - 603 ha and with medium attacks on 200 ha in Bacău County;

Phomopsis helianthi Mont. Cost. was reported in Iaşi on 20 ha and Neamț counties – 208 ha;

Botrytis cinerea Pers. was reported in Bacău on 359 ha and Suceava counties on 50 ha. A medium intense attack was reported in Bacău on 15 ha, in Botoşani counties on 1080 ha and on 1800 ha with a strong attack;

Opatrum sabulosum L. was reported in Bacău, Neamț and Vaslui counties;

Tanymecus dilaticollis Gyll. and *T. palliatus* F. were signalled in Bacău, Neamț and Vaslui counties, with low intensity attacks, the density of adult pests being of 0.1 – 0.5 /m^2 .

Sugar beet

Erysipha.e betae (Vanha.) Weltz. Low attacks were signalled in Bacău, Neamț, Suceava counties, on small areas (50 - 96 ha), and medium attacks were found on 40 ha in Bacău, 70 ha in Neamț and 200 ha in Suceava;

Peronospora farinosa (Fr.) *f. sp. betae* Byford – was signalled in Bacău and Vaslui counties with low attacks (61 and, respectively, 80 ha) and 20 ha with medium attacks in Bacău County;

Cercospora beticola Sacc. Low symptoms were signalled in all the areas, especially in irrigated crops. The attack was medium in Bacău, Neamț and Vaslui counties on 33, 139 and 96 ha;

Ramularia betae Rostr. was signalled only in Neamț County with low attacks on 23 ha. Sugar beet crops were not attacked, especially the non-irrigated ones;

Aphis fabae Scop, *Mamestra brassicae* L., *Autographa gamma* L., *Scotia segetum* Schiff. and *Pegomia betae* Curtis presented a low attack in all the Moldavian counties.

Hemp

The information on the pathogenic agents of hemp crops came only from Secuieni, Neamț County, where the monoic hemp is cultivated. In this crop, a low attack of pests was signalled: *Xanthomonas campestris pv.cannabis* Sev.; *Pythium de baryanum* Hesse.; *Peronoplasmopara cannabina* (Otth.)Pelglion; *Sclerotinia sclerotiorum*(Lib.)de By.; *Botrytis infestans* (Ha.zsl.) Sacc.; *Septoria cannabina* Peck.;

Pests had a medium density on plants: *Aphis fabae* Scop. – 0.01 colonies/m ^{2} and *Psylliodes attenuata* Koch - 154 individuals/m^2. Considering the number of collected species, *Coleoptera* ord. had a 35% occurrence, *Lepidoptera* ord. - 30%, *Diptera* ord. - 15% and *Homoptera* and *Heteroptera* ord. - 10 %.

Rape and Mustard

Alternaria brassicae (Berk.) Sacc. was found in Vaslui County with low attacks on 683 ha; *Phoma lingham* (Tode) Desm. attacked 339 ha in Vaslui County.

Pathogenic agents and pests of food plants

Potato

Potato Virus Y, Potato leafroll virus, Potato virus X attacked potato crops in the central and southern region of Moldavia, but also in counties with higher humidity values (Suceava, Bacău and Neamț counties); the attack was medium, especially on Ostara varieties as Désirée on 2650 ha in Botoşani, 70 ha in Neamț and 1200 ha in Suceava counties. In order to prevent the attack, it is recommended the replanting of virus - free material produced in the areas near the agrarian authorized units or importing a healthy planting material;

Erwinia carotovora pv. atroseptica (van Hall.) Dye attacked potato plants with low frequencies in Neamț County on 107 ha;

Phytophtora infestans (Mont.) de Bary was registered with low attacks in Bacău - 720 ha, Iaşi - 520 ha, Neamț - 495 ha, Vaslui - 5 ha and Vrancea counties - 203 ha. The medium attack was reported on 312 ha in Bacău, 1100 ha in Botoşani and 13000 ha in Suceava counties;

Alternaria porri (Ell.) Say. f. sp. *solani* (Ell. et Mart.) Neerg., produced stronger attacks in Bacău (940 ha - low attacks and 200 ha - medium attacks), Neamț (412 ha - low attacks and 265 ha - strong attacks), Suceava counties - medium attacks on 860 ha. In the untreated crops, the damages were of about 20% in Suceava County;

Colletotrichum, atramentarium (Berk. et Br.) Taub was signalled in this dry crop year on 707 ha in Bacău, 230 ha in Iaşi and 125 ha in Vaslui counties;

Rhizoctonia solani Kühn was signalled on 373 ha with low attacks in Bacău and 33 ha with medium attacks in Neamț County;

Leptinotarsa decemlineata Say. attacked all potato crops from Moldavia with low to strong intensity. After warning announcements were sent, there were applied treatments with organic-phosphoric, carbamic insecticides and synthetic pyretroides, or with inhibitors for chitin synthesis;

Myzodes persicae Sulz. was reported in crops from Bacău and Neamț counties.

Tomatoes

VMT + VMC were present with low attacks on 35 ha in Iaşi, 13.5 ha in Vaslui and on 25 ha with medium attacks in Neamţ counties;

Clavibacter michiganensis pv. michiganensis David et al. was reported with low attacks on 0.02 ha in Vaslui County;

Xanthomonas campestris (Doid.) Dye appeared with low attacks on 54 ha in Iaşi and with medium attacks on 31 ha in Neamţ counties;

Phytophtora infestans (Mont.) de Bary produced low attacks on 208 ha in Bacău, 312 ha in Botoşani, 7 ha in Vaslui and 1946 ha in Vrancea counties. In untreated crops, the attack was of medium intensity on 83 ha in Bacău, 202 ha in Botoşani, 11 ha in Neamţ, 600 ha in Suceava and 1 ha in Vaslui counties. A strong attack was registered on 17 ha in Bacău;

Septoria lycopersici Speg. attacked the majority of the tomato crops from Bacău (242 ha with low attacks, 36 ha with medium attacks), Botoşani (200 ha with low attacks, 252 ha with medium attacks) and 700 ha with medium attacks in Suceava counties.

For the tomatoes cultivated in greenhouses, the following pests were reported: *Sclerotinia sclerotiorum* (Lib.) de Bary, in association with *Verticillium dahliae Fusarium oxysporum* Schlecht, *f. sp. lycopersici* Syd and Hansen;

Fulvia fulvum Cooke produced a frequency attack of 3-10% on 49 ha in Bacău, 7 ha in Vaslui, a medium attack on 210 ha in Bacău, 25 ha in Neamţ counties; at the end of summer and in September, in untreated crops, the damages were much higher.

Tomatoes, peppers and eggplants were attacked by the following pests: *Leptinotarsa decemlineata* Say.; *Trialeurodes vaporariorum* Westw.; *Heliothis armigera* Hbn., *Myzodes persicae* Sulz. and *Polyphagotarsonemus latus* Bank.

Pepper

Leveillula L. taurica appeared with low attacks on 83 ha in Bacău, 84 ha in Iaşi and medium attacks on 2 ha in Bacău and 15 ha in Neamţ counties*;*

Fusarium oxysporum Schlecht. was present with low attacks in Bacău (6 ha), Iaşi (56 ha), Vrancea (211 ha), with medium attacks in Bacău (60 ha), Vaslui (12 ha) and strong attacks in Bacău on 19 ha and Vaslui counties on 1 ha.

Cabbage

Erwinia carotovora pv. carotovora (Jones) Bergey et al. was reported with low attacks (3-8%) in Bacău on 90 ha, Iaşi counties (5 ha) and medium attacks in Vaslui on 2 ha;

Xanthomonas campestris pv. campestris (Bryan and Mc Wosthler) Dye., produced low attacks (5%) in Bacău on 44 ha and 0.05 ha in Vaslui counties;

Brevicoryne brassicae L. was present in all the cabbage crops from Moldavia counties, and the intensity of the attack was strong to low;

Ceuthorrhynchus pleurostigma Marsh. was present only in Bacău County;

Pieris brassicae L. *and Mamestra brassicae* L. were signalled in all the crops from Moldavia counties, with low to strong attacks;

In cabbage crops, *Eurydema ornatum* L., *Phyllotreta spp, Plutella maculipenis* Curt. and *Delia brassicae* Bché sporadically appeared.

Onion and garlic

Erwinia carotovora pv. carotovora (Jones) Bergey et al. was reported with low attacks in Bacău - 98 ha, Iaşi counties - 15 ha and with medium attacks in Vaslui County on 5 ha;

Peronospora destructor (Berk.) Casp. produced low attacks on 141 ha in Bacău, on 300 ha in Botosani, on 102 ha in Vrancea, medium attacks on 69 ha in Bacău, 320 ha in Botoşani, 37 ha in Neamţ, 260 ha in Suceava and 60 ha in Vrancea counties;

Botrytis allii Munn. was reported with low and medium attacks - 10-20% only in Bacău County on 94 ha;

Ceutthorrhynchus suturalis F. and *Suillia lurida* Meig. produced low attacks;

Delia antiqua Meidg. was present in all the crops with low to strong attacks.

Cucumbers

Pseudoperonospora cubensis (Berk. and Curt.) Rost. has been reported in all the counties of Moldavia: with low attacks in Bacău - 26 ha, Vrancea - 26 ha; medium attacks in Bacău on 18 ha, in Neamţ on 16 ha and 20 ha in Vrancea counties; strong attacks were reported on 15 ha in Bacău and 0.5 ha in Vaslui;

Sphaerotheca filiginea (Schlecht. ex. Fr.) Pall. attacked the crops from all the counties, because of the climate conditions. There have been weakly attacked 6 ha in Bacău and 20 ha in Vrancea counties. The attack was of medium intensity on 4 ha in Bacău, 380 ha in Botoşani, 17 ha in Neamţ and 41 ha in Vrancea counties. The attack was strong only in Vaslui County on 4 ha;

Pseudomonas syringae pv. lacrymans (Smith and Bryan.) Young, Dye et Wilkie, was reported in Bacău - 39 ha with low attacks and 8 ha with medium attacks, 8 ha with low attacks in Neamţ and 4 ha with strong attacks in Vaslui County;

Colletotrichum lagenarium (Pass.) and Ell Halbst. was reported with low attacks in Bacău (56 ha), Vrancea on 21 ha and Vaslui counties on 1 ha;

Cerosipha gossypii Glov. and *Tetranychus urticae* Koch. produced low attacks.

Carrot, parsley and celery

These vegetables were sporadically attacked by *Erwinia pv. carotovora* (Jones) Bergey, *Erysiphe umbeliferarum* de By., *Alternaria dauci* (Kühn.) Groves and Skolka and *Septoria apriicola* Speg. in Vaslui County.

Pathogenic agents and pests of fruit trees and bushes

Apple tree – Pear tree

Erwinia amylovora (Burill) Winslow, Broodhorst, Buchan, Krunwiede, Roger and Smith. was highly spread in the plantations from Moldavia, being signalled by County Phytosanitary Units, Fruit-Growing Research Stations of Fălticeni and Iaşi, in Suceava on 900 ha, in Vaslui on 28 ha, in Iaşi on 5120 ha and in Vrancea on 579 ha. The attack was estimated having a frequency between 20 and 50%. This very dangerous disease spread to pear trees and quince trees has caused great losses;

*Venturia inaequalis (*Cooke) Wint. produced a low attack on 279 ha in Bacău, 320 ha in Botoşani, 156 ha in Iaşi, 522 ha in Vaslui and 206 ha in Vrancea counties. A medium attack was registered on 264 ha in Bacău, 95 ha in Neamţ, 1000 ha in Suceava and 80 ha in Vaslui counties. A strong attack was found on 15 ha in Bacău and 7 ha in Vaslui;

Podosphaera leucotricha. (Ell. and Ev.) Salm. attacked leaves and shoots with a frequency between 35 and 65%, affecting over 50% of the orchard areas in Moldavia: 223 ha in Bacău, 395 ha in Botoşani, 230 ha in Iaşi, 176 ha in Neamţ, 387 ha in Vaslui and 646 ha in Vrancea counties, with low attacks. Medium attacks were registered on 183 ha in Bacău, 385 ha in Botoşani, 74 ha in Neamţ, 980 ha in Suceava and 62 ha in Vaslui counties. Strong attacks were registered on 16 ha in Bacău and 53 ha in Neamţ counties;

Monilinia fructigena (Aderh. and Ruhl.) Honey produced low attacks on 301 ha in Bacău, 230 ha in Botoşani and 1157 ha in Vrancea counties. Medium attacks were reported on 167 ha in Bacău, 84 ha in Neamţ and a very strong attack was noticed on 25 ha in Bacău and 120 ha in Vaslui counties;

In apple tree and pear tree orchards, there have been reported strong attacks of *Quadraspidiotus perniciosus* Comst.*, Cydia pomonella* L., *Adoxophyes reticulana* Hb. and *Aphis pomi* Greer;

There have been sporadic attacks of *Phyllonorycter blancardella* F., *Phyllonorycter corylifoliella* Hb. and *Stimella malella* St.;

Anthonomus pomorum L. produced small to medium damages;

Hyphantruia cunea Drury produced small to large damages in all the plantations from Moldavia because of the higher biological reserve.

Plum tree

Plum pox virus was encountered with low attacks on 342 ha in Iaşi and medium attacks on 15 ha in Neamț counties; 3 ha were strong attacked in Neamt County;

Polystigma rubrum (Pers.) DC. has been detected in untreated orchards with a frequency of 10 to 15%. There were low attacks on 124 ha in Bacău, 400 ha in Botoşani, 350 ha in Vaslui and 1638 ha in Vrancea counties. Medium attacks were found on 7 ha in Bacău, 20 ha in Neamț and 58 ha in Vaslui counties;

Monilionia laxa (Aderh. and Ruhl.) Honey has been reported in all the Moldavian counties. In the orchards where treatments were applied, the attack was very low, under 5%. There was a low attack on 136 ha in Vaslui, and a medium attack was reported on 33 ha in Bacău and 18 ha in Neamț counties;

Cydia funebrana Tr. produced damages in all the orchards from Moldavia with a low to strong attack;

Hoplocampa minuta Christ. produced damages of 5 to 10%, medium-intense attacks, in Botosani, Suceava and Vaslui counties;

Eurytoma schreineri Schhr. is a harmful pest reported in all the Moldavian counties, which produces damages because of its large biological reserve and warning treatments lack.

Sweet cherry and sour cherry trees

Monilinia laxa (Aderh. and Ruhl.) Honey attacked sour cherry and sweet cherry trees in all the Moldavian counties with a frequency of 20-30%. There were low attacks on 60 ha in Bacău, medium attacks on 10 ha in Bacău, 13 ha in Neamț and only 70 ha strong attacks in Botoşani counties;

Coccomyces hiemalis Higg. was reported with low attacks on 110 ha in Bacău, 293 ha in Vaslui and 53 ha in Vrancea. Medium attacks were found on 50 ha in Bacău, 13 ha in Neamț and 60 ha in Vaslui counties;

Stigmina carpophylla (Lév.) Ellis produced low attacks in Bacău - 110 ha and Vaslui - 293 ha, medium attacks on 50 ha in Bacău, 16 ha in Neamt, 460 ha in Suceava and 60 ha in Vaslui counties; strong attacks occurred on 2 ha in Bacău;

Ragoletis cerasi L. has been reported in Moldavia with attacks on the late harvesting varieties;

Myzus cerasi F. has been reported only in orchards where no treatments were applied.

Nut tree

Xanthomonas campestris pv. juglans (Pierce) Dye. was reported in Vaslui County on 5 ha;

Gnomonia leptostyla (Fr.) Ces. and Not. is mentioned in Vaslui County on 5 ha.

Chestnut tree

Recently, increasing intensity attacks of *Cameraria orhidella* Deschka-Dimic were registered, producing withering and leaf fall since August.

Grape vine

Plasmopara viticola (Berk. and Curt.) Berl. and Toni. is reported with low attacks on 9 ha in Bacău, 340 ha in Botoşani and on 3570 ha in Vrancea counties. Medium attacks occurred on 100 ha in Bacău, 280 ha in Botoşani and 31 ha in Neamț counties;

Uncinula necator (Schw.) Burr. appeared with low attacks on 360 ha in Bacău, 200 ha in Botoşani, 320 ha in Iaşi, 2179 ha in Vaslui and 2746 ha in Vrancea counties. Medium fungus attacks were observed on 290 ha in Bacău and 400 ha in Botosani counties;

Sclerotinia fuckeliana (de By) Fuck. appeared later under the shape of "noble mould" in areas without rainfall;

Eupoecilia ambiguella Hb. and *Lobesia botrana* Den. Et Schiff produced low attacks of 5 to 7%;

Tetranychus urticae Koch. and *Eriophyes vitis* Nall. produced low to medium attacks;

Byctiscus betulae L., *Lethrus apterus* Laxm. and *Pulvinaria vitis* L. produced sporadic attacks.

Because the pathogens' and pests' biological reserves from Moldavia's vineyards remained at high values, the application of complex treatments was required, on the stations forecasting and warning recommendation, using the most effective fungicides and insecticides, thus the damage being kept below the Economic Damaging Threshold.

Data presented in this paper, during 2006 – 2007, are the result of the cooperation between research stations, University of Agricultural Sciences and Veterinary Medicine of Iaşi and Phytosanitary Units from Moldavia, which provided valuable contributions and effective plant protection activity.