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DISTRIBUTION RANGE OF THE EUROPEAN CORN BORER (*OSTRINIA NUBILALIS* HBN.) ON MAIZE IN 2004–2008 IN POLAND

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Abstract: The European corn borer (*Ostrinia nubilalis* Hbn.) has been causing damage to maize crops (*Zea mays* L.) in Poland since the 1950s. Initially, this pest occurred on maize only in the south-western part of Poland, but since 1994 it has also been observed in the south-eastern part. Monitoring was carried out by the State Plant Health and Seed Inspection Service (SPHSIS) and the Institute of Plant Protection – National Research Institute, Regional Experimental Station in Rzeszów (IPP – NRI) in 2004–2008. The monitoring demonstrated that from the time the pest was first encountered on maize in the second half of the 20th century, up to the end of 2008, the distribution range of this species had moved in a northerly direction from the southern part of Poland. Up to the end of 2008, damage to plants caused by caterpillars of *O. nubilalis* was recorded in 185 districts located in 14 provinces. In the study years only two provinces located in northern Poland were free from the pest: Pomorskie and Warmińsko-Mazurskie.

Key words: *Ostrinia nubilalis* Hbn., Poland, occurrence, maize, distribution range

INTRODUCTION

The European corn borer (ECB) (*Ostrinia nubilalis* Hbn.) is a moth (*Lepidoptera*) from the family *Crambidae*, subfamily *Pyraustinae* (ITIS 1996). Harmful effects are caused by caterpillars of this species, which can grow up to 25 mm in body length (Walczak 2007).

ECB is a remarkable polyphagous insect (Bengtsson *et al*. 2006). Its hosts are many plant species from various families (Brindley and Dicke 1963). Dicke (1932) reported that the list of host plants include approximately 200 species in Michigan state, while Lewis (1975) recorded 233 species in the US. However, maize remains the major host plant (Poos 1927; Brindley and Dicke 1963) and is the only one which encourages mass-scale reproduction of this pest (Häni *et al*. 1998).

Owing to the growing global maize cultivation area the European corn borer has found favourable conditions for development. It has become one of the major maize pests in Europe, Asia and on the American continent. It was probably accidentally brought from Hungary or Italy, at the beginning of the 20th century (Calvin *et al*. 1991; Got *et al*. 1996). The particularly serious harm caused by this species is recorded in the warmer regions of the world where maize is cultivated (Welling 1989).

Manson *et al*. (1996) and Bode and Calvin (1990) reported that damage to maize caused by *O. nubilalis* create losses which, together with expenses for its control in North America, range from 1.0 to 1.22 billion dollars a year. Hyde *et al*. (2001) reported an even higher economic loss of close to 2 billion dollars a year.

ECB is also one of the most serious maize pests in Poland (Lisowicz and Tekiela 2004; Bereś *et al*. 2007; Bereś and Pruszyński 2008). In many cultivations in the southern part of Poland, caterpillars of this moth damage from 50 to 80%, and locally up to 100% of plants, causing a 20–30%, and locally a 40% loss, in maize grain yield (Lisowicz and Tekiela 2004). Based on estimates in 2005, the ECB caused a loss in over 40% of the maize cultivation area intended for grain in Poland. This translates into 272 000 hectares, and economic losses associated with caterpillar feedings in that period were estimated at PLN 230 million (Warzecha and Bereś 2008).

In Poland *O. nubilalis* was recorded for the first time by Judenko (1938) between the First World War and the Second World War on hops (*Humulus lupulus* L.) and millet (*Panicum miliaceum* L.). *O. nubilalis* was recorded in the eastern part of the country at that time, in the province of Lubelskie. The first confirmed information concerning the occurrence of this species on maize dates back to the 1950s. In that period the pest was recorded only in the south-western part of Poland, where the entire Polish maize cultivation was concentrated (Kania 1962a, b).

With the growing popularity of maize cultivation on Polish land, the range of this species distribution has widened. The ECB occurred in south-eastern Poland for the first time on maize in 1994, at that time in the Rzeszowsk-

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ie and Przemyskie provinces (Lisowicz 1995, 2001, 2003a). Findings from the detailed studies by Lisowicz (1995) demonstrated that in 1994 *O. nubilalis* occupied eleven provinces in south-western, western, southern and south-eastern parts of the country. Since 1994 no detailed observations were conducted concerning the expansion of this species on maize in Poland. Only a few studies were conducted on a regional scale.

Knowledge of the actual distribution range of this pest is important for decision making-regarding the need for pest control. Therefore, it was necessary to update information on the distribution of this species in Poland. An update is essential particularly in those areas where the ECB has recently occurred for the first time because under favourable weather conditions the damage done by this pest can gradually increase. According to Lisowicz (2003b), within 9 years in the south-eastern part of Poland the harm caused by caterpillars of *O. nubilalis* increased from 2.7% of plants damaged in 1994 to 96.0% in 2002.

Owing to the great damage done by the European corn borer to maize crops in Poland, this species was monitored as an agrophage of cultivated plants. Such monitoring is part of an official programme carried out by the State Plant Health and Seed Inspection Service (SPHSIS). Within a limited scope, studies on the regional occurrence of ECB are also conducted by the Institute of Plant Protection – National Research Institute (IPP – NRI).

The objective of the conducted study was to specify the actual distribution range of caterpillars of the ECB on maize in Poland. The study was based on data collected by SPHSIS and IPP – NRI in 2004–2008.

MATERIALS AND METHODS

Observations regarding the nationwide occurrence of the ECB on maize were conducted by inspectors of the SPHSIS in 2004–2005 and 2007–2008.

In 2004–2005 SPHSIS's inspectors carried out analyses focused on the identification of the pest on plants in all counties in Poland where maize was cultivated. Depending on the cultivation area, from 50 to 150 plants at the ripening dough stage (BBCH 85) (Adamczewski and Mae tysiak 2002) were inspected. On small maize crops on up to 1 ha, 50 plants were observed, while on fields of more than 1 ha, the number of plants increased to 150.

In 2007–2008 observations were carried out based on the methodology provided in an annex to a manual for plant inspection services concerning forecasting, alerting and data recording (Instrukcja 2006). For these plant inspection purposes, from 100 to 150 plants were inspected (25 consecutive plants in a row) in several test places, in each district where maize was cultivated. Searches for signs of caterpillars feeding were undertaken. The number of observed plants depended on the size of the maize farms. On small fields 100 plants were observed, while on large fields more than 1–2 ha, the number of observed plants increased to 150. On cultivations of over 2 ha the number of test places was increased by two per additional hectare. Analyses were carried out at the end of August and the beginning of September, when plants were at the ripening dough stage (BBCH 85). At this stage damage caused by the pest was most visible.

Additional observations concerning the occurrence of the European corn borer in the Podkarpackie province, the eastern part of the Małopolskie province and the western and south-western Lubelskie province were conducted by personnel of the IPP – NRI, Regional Experimental Station in Rzeszów in 2004–2008. In each district within these provinces at the end of August and the beginning of September, when plants were at the BBCH 85 stage, observations were carried out on 1 to 8 maize farms with a focus on damage caused by caterpillars of *O. nubilalis*. In each field, depending on its size, 25 consecutive plants were analysed in a row, in 4–8 test places (in total 100–200 plants).

In all the years of the study, observations were terminated when any signs of caterpillars feeding were recorded. A district was considered infested by *O. nubilalis* if any signs of ECB caterpillars feeding were recorded in one maize crop.

RESULTS

In 2004–2008 weather conditions were highly diversified in different regions. According to Michalski (2005a, b), 2004 was one of the most unfavourable years for maize cultivation in Poland in the last 30 years. This resulted from the combination of such factors as unfavourable weather conditions in spring, drought in central-western Poland during maize flowering, a cold and rainy autumn and ground frosts in September.

Also 2005 did not facilitate maize cultivation because in spring in many regions of Poland, cold weather continued and this inhibited or delayed plant growth. Prolonged drought was recorded between June and mid-July. An insignificant increase in humidity was observed in the second half of July and persisted until early August. After that period, until the end of the maize vegetation season, precipitation intensity decreased again (Michalski 2006).

In 2007–2008 weather conditions were favourable for maize cultivation in Poland. In 2008 periodic drought only occurred in some regions of Poland, and it reduced plant vitality (Michalski 2009).

Summary data for all provinces and counties where signs of feeding of the ECB on maize were recorded in 2004–2008 are presented in table 1. A graphic representation of the distribution range of the ECB in Poland in individual years is presented in figures 1–4.

The year 2004 was unfavourable for pest development. The ECB occurred in twelve provinces, causing damage to maize plants in 93 districts. The majority of the counties in which caterpillars of *O. nubilalis* infested maize fields were in the Podkarpackie, Świętokrzyskie and Opolskie provinces. Monitoring carried out with a focus on pest distribution did not demonstrate any signs of caterpillars feeding on maize in the area of four provinces located in northern Poland, i.e. Kujawsko-Pomorskie, Pomorskie, Warmińsko-Mazurskie and Podlaskie (Fig. 1).

During the dry, hot year of 2005, the distribution range of the ECB in Poland did not widen significantly. Damage to plants caused by caterpillars of *O. nubilalis* were recorded

Table 1. Occurrence of *O. nubilalis* on maize in Poland in individual provinces and districts in 2004–2005 and 2007–2008

Province	Occurrence in individual districts in years			
	2004	2005	2007	2008
1	2	3	4	5
Dolnośląskie	średzki, wrocławski, dzierżoniowski, świdnicki, wałbrzyski, ząbkowicki, legnicki, jaworski, lubański, złotoryjski, głogowski	średzki, wrocławski, dzierżoniowski, świdnicki, wałbrzyski, ząbkowicki, legnicki, jaworski, lubański, złotoryjski, głogowski	górowski, oławski, oleśnicki, średzki, strzeliński, trzebnicki, wołowski, wrocławski, milicki, dzierżoniowski, kłodzki, wałbrzyski, ząbkowicki, świdnicki, legnicki, jaworski, złotoryjski, głogowski, lubiński, polkowicki, lwówecki, bolesławiecki, jeleniogórski, lubański, zgorzelecki	górowski, oławski, oleśnicki, średzki, strzeliński, trzebnicki, wołowski, wrocławski, milicki, dzierżoniowski, kłodzki, wałbrzyski, ząbkowicki, świdnicki, legnicki, jaworski, złotoryjski, głogowski, lubiński, polkowicki, lwówecki, bolesławiecki, jeleniogórski, kamiennogórski, lubański, zgorzelecki
Kujawsko-pomorskie	not found	chełmiński, grudziądzki, brodnicki	brodnicki, bydgoski, chełmiński, golubsko-dobrzyński, grudziądzki, inowrocławski, mogileński, nakielski, świecki, toruński, wąbrzeski, żniński	bydgoski, golubsko-dobrzyński, inowrocławski, mogileński, nakielski, świecki, toruński, wąbrzeski, włocławski, żniński
Lubelskie	biłgorajski, krasnostawski,	biłgorajski, krasnostawski, janowski, puławski, zamojski	bialski, łukowski, rycki, lubartowski, puławski, lubelski, kraśnicki, opolski, biłgorajski, tomaszowski, zamojski, hrubieszowski, krasnostawski, chełmski, łęczyński	bialski, łukowski, radzyński, parczewski, włodawski, rycki, lubartowski, puławski, kraśnicki, opolski, biłgorajski, tomaszowski, zamojski, hrubieszowski, krasnostawski, chełmski, łęczyński
Lubuskie	zielonogórski, świebodziński, żagański, sulęciński	świebodziński, żarski, sulęciński, krośnieński, słubicki, żagański, wschowski, zielonogórski	strzelecko-drezdeński, gorzowski, międzyrzecki, sulęciński, słubicki, świebodziński, krośnieński, zielonogórski, żarski, żagański, nowosolski, wschowski	strzelecko-drezdeński, gorzowski, międzyrzecki, sulęciński, słubicki, świebodziński, krośnieński, zielonogórski, żarski, żagański, wschowski
Łódzkie	opoczyński, pajęczański	łaski	wieluński, pajęczański, opoczyński	sieradzki, pajęczański, tomaszowski, radomszczański, opoczyński, kutnowski, łęczycki, rawski
Małopolskie	bocheński, brzeski, krakowski, oświęcimski, tarnowski, wadowicki	bocheński, brzeski, krakowski, oświęcimski, tarnowski, wadowicki	bocheński, brzeski, dąbrowski, gorlicki, krakowski, limanowski, myślenicki, nowosądecki, olkuski, oświęcimski, proszowicki, tarnowski, wadowicki	bocheński, brzeski, dąbrowski, gorlicki, krakowski, limanowski, miechowski, myślenicki, nowosądecki, olkuski, oświęcimski, proszowicki, tarnowski
Mazowieckie	lipski, zwoleński	lipski, Warszawa	płoński, płocki, sochaczewski, sierpecki, łosicki, siedlecki, sokołowski, ostrowski, zwoleński, radomski, kozienicki, piaseczyński	płoński, płocki, sierpecki, sochaczewski, radomski, zwoleński, kozienicki, siedlecki, łosicki, sokołowski

1	2	3	4	5
Opolskie	brzeski, głubczycki, kędzierzyńsko-kozielski, kluczborski, krapkowicki, namysłowski, nyski, oleski, opolski, prudnicki, strzelecki	brzeski, głubczycki, kędzierzyńsko-kozielski, kluczborski, krapkowicki, namysłowski, nyski, oleski, opolski, prudnicki, strzelecki	brzeski, głubczycki, kędzierzyńsko-kozielski, kluczborski, krapkowicki, namysłowski, nyski, oleski, opolski, prudnicki, strzelecki	brzeski, głubczycki, kędzierzyńsko-kozielski, kluczborski, krapkowicki, namysłowski, nyski, oleski, opolski, prudnicki, strzelecki
Podkarpackie	kolbuszowski, leżajski, mielecki, niżański, przemyski, przeworski, rzeszowski, strzyżowski, brzozowski, bieszczadzki, jarosławski, jasielski, krośnieński, leski, lubaczowski, łańcucki, ropczycko-sędziszowski, sanocki, stalowowolski, tarnobrzeski, dębicki	kolbuszowski, leżajski, mielecki, niżański, przemyski, przeworski, rzeszowski, strzyżowski, brzozowski, bieszczadzki, jarosławski, jasielski, krośnieński, leski, lubaczowski, łańcucki, ropczycko-sędziszowski, sanocki, stalowowolski, tarnobrzeski, dębicki	kolbuszowski, leżajski, mielecki, niżański, przemyski, przeworski, rzeszowski, strzyżowski, brzozowski, bieszczadzki, jarosławski, jasielski, krośnieński, leski, lubaczowski, łańcucki, ropczycko-sędziszowski, sanocki, stalowowolski, tarnobrzeski, dębicki	kolbuszowski, leżajski, mielecki, niżański, przemyski, przeworski, rzeszowski, strzyżowski, brzozowski, bieszczadzki, jarosławski, jasielski, krośnieński, leski, lubaczowski, łańcucki, ropczycko-sędziszowski, sanocki, stalowowolski, tarnobrzeski, dębicki
Podlaskie	not found	białostocki, kolneński	kolneński	augustowski, bielski, hajnowski, siemiatycki
Pomorskie	not found	not found	not found	not found
Śląskie	bielski, cieszyński, gliwicki, pszczyński, raciborski, wodzisławski, tarnogórski	częstochowski, gliwicki, lubliniecki, pszczyński, raciborski, wodzisławski, będziński, zawierciański	bielski, żywiecki, cieszyński, częstochowski, myszkowski, gliwicki, Katowice, Mysłowice, Jaworzno, Siemianowice, lubliniecki, pszczyński, bieruńsko-lędziński, raciborski, wodzisławski, mikołowski, tarnogórski, zawierciański	bielski, żywiecki, cieszyński, częstochowski, myszkowski, gliwicki, Bytom, Katowice, Mysłowice, Jaworzno, Siemianowice, lubliniecki, pszczyński, bieruńsko-lędziński, raciborski, wodzisławski, tarnogórski, zawierciański
Świętokrzy-skie	buski, jędrzejowski, kazimierski, kielecki, konecki, opatowski, ostrowiecki, pińczowski, sandomierski, skarżyski, starachowicki, staszowski, włoszczowski	buski, jędrzejowski, kazimierski, kielecki, konecki, opatowski, ostrowiecki, pińczowski, sandomierski, skarżyski, starachowicki, staszowski, włoszczowski	buski, jędrzejowski, kazimierski, kielecki, konecki, opatowski, ostrowiecki, pińczowski, sandomierski, skarżyski, starachowicki, staszowski, włoszczowski	buski, jędrzejowski, kazimierski, kielecki, konecki, opatowski, ostrowiecki, pińczowski, sandomierski, skarżyski, starachowicki, staszowski, włoszczowski
Warmińsko-mazurskie	not found	not found	not found	not found
Wielkopolskie	kępinski, leszczyński, międzychodzki, nowotyski, obornicki, ostrowski, ostrzeszowski, pleszewski, śremski, szamotulski, wrzesiński	kępinski, leszczyński, międzychodzki, nowotyski, obornicki, ostrowski, ostrzeszowski, pleszewski, śremski, szamotulski, wrzesiński	chodzieski, gnieźnieński, gostyński, jarociński, kaliski, kępiński, kolski, kościański, krotoszyński, leszczyński, międzychodzki, nowotyski, obornicki, ostrowiecki, ostrzeszowski, pilski, pleszewski, poznański, słupecki, szamotulski, śremski, średzki, wągrowiecki, wrzesiński, złotowski	chodzieski, gostyński, kaliski, kępiński, kościański, krotoszyński, międzychodzki, ostrzeszowski, obornicki, pilski, pleszewski, słupecki, leszczyński, szamotulski, śremski, średzki, wągrowiecki, złotowski
Zachodnio-pomorskie	choszczeński, drawski, sławieński	choszczeński, drawski, gryfiński, myśliborski	drawski, gryficki, gryfiński, kamieński, myśliborski, wałecki	gryficki, gryfiński, kamieński, kołobrzeski, wałecki
Total number of infested districts	93.0	106.0	187.0	185.0

Fig. 1. The distribution range of the European corn borer on maize in Poland in 2004. Maize crops where signs of caterpillars feeding were recorded are marked in the shaded areas

Fig. 2. The distribution range of the European corn borer on maize in Poland in 2005. Maize crops where signs of caterpillars feeding were recorded are marked in the shaded areas

Fig. 3. The distribution range of the European corn borer on maize in Poland in 2007. Maize crops where signs of caterpillars feeding were recorded are marked in the shaded areas

Fig. 4. The distribution range of the European corn borer on maize in Poland in 2008. Maize crops where signs of caterpillars feeding were recorded are marked in the shaded areas

in 106 districts located in 14 provinces. As in 2004, the majority of the counties in which maize crops were infested by ECB were recorded in three provinces: Podkarpackie, Świętokrzyskie and Opolskie. In addition, the first signs of damage to maize plants were recorded in the Kujawsko-Pomorskie (3 districts) and Podlaskie provinces (2 districts). In 2005 damage to maize plants caused by caterpillars of *O. nubilalis* was observed in all provinces except the Pomorskie and Warmińsko-Mazurskie provinces (Fig. 2).

A dynamic increase in the distribution range of the ECB in Poland was observed in 2007–2008. During this period, weather conditions were favourable for pest development, which caused an increase in the number of maize cultivations demonstrating signs of pest feeding.

All together in 2007, damage to plants caused by caterpillars was recorded in 187 districts located in fourteen provinces in Poland. That year the highest number of districts in which maize crops were infested by ECB were recorded in the following provinces: Dolnośląskie (25 districts), Lubelskie (15 districts), Lubuskie (12 districts), Małopolskie (13 districts), Opolskie (11 districts), Podkarpackie (21 districts), Śląskie (18 districts), Świętokrzyskie (13 districts) and Wielkopolskie (25 districts) (Fig. 3).

In 2008 the number of districts in which maize crops were infested by ECB decreased insignificantly. That year damage caused by caterpillars was recorded in 185 districts. As in 2007, the majority of damaged maize fields were recorded in the Dolnośląskie, Lubelskie, Lubuskie, Małopolskie, Opolskie, Podkarpackie, Śląskie, Świętokrzyskie and Wielkopolskie provinces. In addition, the number of districts where maize crops were infested by caterpillars in the Łódzkie and Podlaskie provinces increased significantly (Fig. 4).

In 2007–2008 the two most northerly provinces in Poland, i.e. Pomorskie and Warmińsko-Mazurskie, were still free from damage caused by caterpillars of *O. nubilalis.*

DISCUSSION

The ECB is a maize pest of high economic significance, because the annual global losses caused by this pest in maize crops are estimated at billions of dollars. Apart from pest control and its biology, monitoring of distribution is a significant part of studies on this species. It allows for ongoing analysis of pest expansion directions, which helps authorities to take appropriate advanced measures to control the pest population and the damage.

In Poland the monitoring of the distribution range of the ECB has been carried out on a very small scale. The first data concerning the occurrence of this pest on maize date back to 1957–1961. According to Kania (1966), in that period the ECB caused damage in three provinces: Opolskie, Wrocławskie and Zielonogórskie. For a long time, from 1961 to 1993, no detailed studies on the distribution range of this species were carried out in Poland. Finally, the distribution range of this pest on maize was specified in 1994 by Lisowicz (1995). According to this author, in 1994 the ECB caused damage in maize crops in 11 provinces: Gorzowskie, Jeleniogórskie, Kaliskie, Legnickie, Leszczyńskie, Opolskie, Przemyskie, Rzeszowskie, Wałbrzyskie, Wrocławskie and Zielonogórskie. In comparison to the distribution range for *O. nubilalis* determined by Kania (1966), within about 30 years the pest widened its range by an additional 7 provinces. Lisowicz (1995) reported that a particularly dynamic expansion of the range and damage caused by the ECB occurred in the warm years of 1992–1994. Lisowicz also indicated possible directions of future ECB expansion in Poland. According to him, in the 1990s or later, the pest population present in south-western and western Poland would spread its range towards the north and north-east, while the population present in the Przemyskie and Rzeszowskie provinces would expand towards the south, north-west, north and north-east.

Further studies conducted by Wałkowski and Bubniewicz (2004) confirmed this direction of ECB expansion in south-western Poland. In 2003 the pest moved northwards and its range almost entirely covered the Wielkopolskie province. Simultaneously, in southern Poland, e.g. in the Opolskie, Podkarpackie and Lubelskie provinces, a significant increase in pest damage was observed (Lisowicz 2003b; Żołnierz and Hurej 2005; Bereś 2006; Haliniarz and Bojarczyk 2007).

Observations conducted by personnel of the State Plant Health and Seed Inspection Service and the IPP – NRI in 2004–2008 demonstrated that the ECB is currently one of the most widely distributed maize pests in Poland. Up until the end of 2008 it caused damage to maize crops in 14 out of the 16 Polish provinces. A comparison of the distribution range of this species for 1994 prepared by Lisowicz (1995), demonstrated that within 14 years a particularly intensive increase of the distribution range of the ECB occurred in south-eastern, eastern and central Poland.

The expansion of *O. nubilalis* in Poland was largely facilitated by weather conditions. In 2004–2005, when weather conditions were unfavourable for pest development, the number of provinces with recorded damage to maize plants caused by caterpillars was lower. Later, in 2007–2008, when weather conditions were favourable for both the development of maize and the ECB, a dynamic increase in the pest's distribution range in Poland was observed.

The favourable combination of weather conditions enables the moth to fly in and colonize new areas. Poos (1927) emphasized that although no long-distance moth flight had been observed during the day, at night their natural expansion may be supported by wind. It has been assumed that the ECB spreads 3–5 km a year (Cordillot and Duelli 1989; Lisowicz 1995), while in the US the spread reaches 32–42 km (Schurr and Holdaway 1965).

The increase in the population size and harm caused by this pest in Poland is also facilitated by simplified crop production methods, monoculture, crop residues left on the field, late ploughing before winter, global warming, and especially by the growing area of maize cultivation (Kania 1962b; Lisowicz 1996). It is assumed that in future years (if the weather is warm) the ECB may also spread to the most distant northern regions of Poland. The growing popularity of maize cultivation in the north makes the possibility of this happening even more so. However, if weather conditions are less favourable to pest development, its distribution will be limited to the warmest regions of southern Poland (Bereś 2007, 2008).

CONCLUSIONS

The observations which were carried out demonstrated that the ECB is currently one of the most widespread maize pests in Poland. Its distribution range increased from 93 infested districts in 2004 to 185 districts in 2008. Expansion of the pest was largely facilitated by weather conditions persisting during the maize vegetation season.

Further monitoring of maize cultivations in Poland for the presence of moths or caterpillars of this pest is necessary owing to the significant damage this species causes to maize.

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POLISH SUMMARY

ZASIĘG WYSTĘPOWANIA OMACNICY PROSOWIANKI (*OSTRINIA NUBILALIS* HBN.) NA KUKURYDZY W LATACH 2004–2008 W POLSCE

Omacnica prosowianka (*Ostrinia nubilalis* Hbn.) uszkadza zasiewy kukurydzy (*Zea mays* L.) w Polsce od lat 50. XX wieku. Początkowo szkodnik występował na kukurydzy jedynie w południowo-zachodniej części kraju, a od 1994 roku także w południowo-wschodniej Polsce.

Monitoring prowadzony przez Państwową Inspekcję Ochrony Roślin i Nasiennictwa oraz Instytut Ochrony Roślin – Państwowy Instytut Badawczy, Terenową Stację Doświadczalną w Rzeszowie w latach 2004–2008 wykazał, że od momentu pierwszego stwierdzenia szkodnika na kukurydzy w drugiej połowie XX wieku do końca 2008 roku, zasięg występowania tego gatunku przesunął się z południowej części kraju w kierunku północnym. Do końca 2008 roku uszkodzenia roślin powodowane przez gąsienice *Ostrinia nubilalis* zanotowano w 185 powiatach leżących na obszarze 14 województw.

W latach badań wolne od szkodnika były jedynie dwa województwa położone na północy Polski: pomorskie i warmińsko-mazurskie.