

1900 (2290)

5-6 1177 16-17° 0,3° (2000)

- 2500 1900 (- 1960),
- 440 : - 740 , - 260

- 5100-5400 (MJ/m2).
10° 3800-4100 (MJ/m2),
1500-1600 .
- 19.3 (MJ/m2), 3-4 -

e :

16° 20° 1000
3° 5° (8°) 8°)
10-15° (0 (8°),
(5°)
600-700 35-50
1000-1600 70-120
215
1000-1200 260, 180 0° 600 300
210 1200-1400 5° 100-110 240 600
10° 1700-1800

60% 80%., (),

() 80% 90%.

650-700 1000 -

(1000 - 1030). - 70-90% ,

- 100%.

15-20% , - 20-23%.

180 300 .

10-15%

- 5-8. - 10-15, -

50-70% - 21 2001 . ,

50-60% 1800

, 800 .

3-5 .

10-13 . 1000 - 1500

- 40-60 .

2000 - 150-170 (- 200

).

1800) , - (1600-

/ . 8

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，

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2001

”

”

”

”

2007

2001

620

”

”

4000

8

5500

500

500

500

15

2001

150 000

6

10

2007

80%

1964

1964

19

108

(2961

0,6.

74

)

2004

pityographus Ratz.
 - *Polygraphus polygraphus* L.

25 %

Tomicus piniperda L.

accuminalus), (*Ips typographus* L.) (*Pityogenes chalcographus* L), (*Ips*
 (*Trypodendron Hneatum* L.).

Year	(<i>Ips typographus</i> L.)	(<i>Pityogenes chalcographus</i> L)	(<i>Ips</i>)
2004	1511	295	197
2005	9830	11652	504
2006	629	345	65
2007	12459	345	80
2008	155	10	20
2009	448	15	9
2010	6	9	58
2011	25	4	58
2012	20	4	60
2013	40		
2014			

2001-2013

853,8

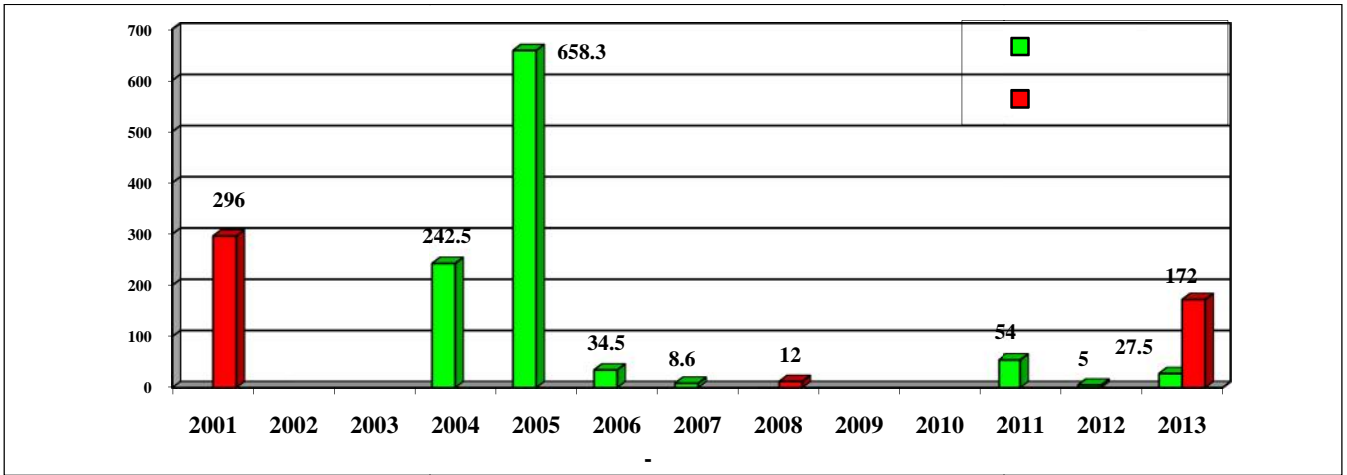
0,8

35-40

« » (Otto H.,1998; ., 2012; 2013).

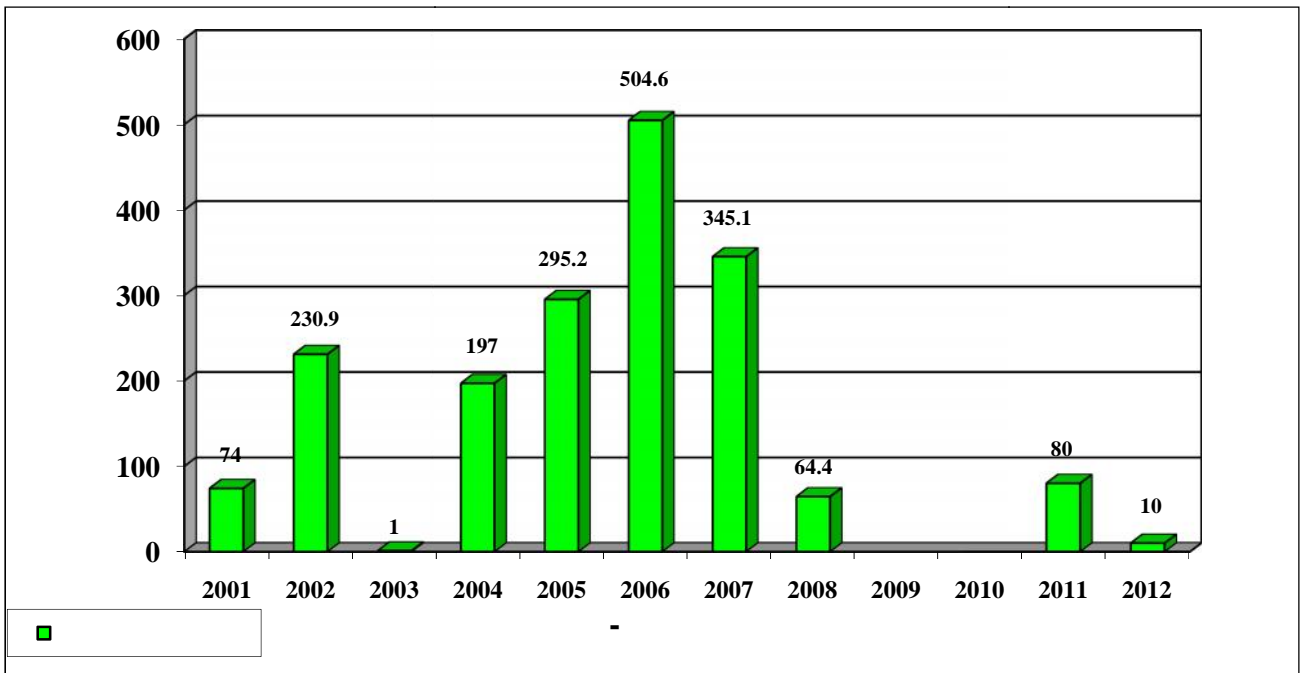
2004

(), (*Ips typographus* L.).



.1.

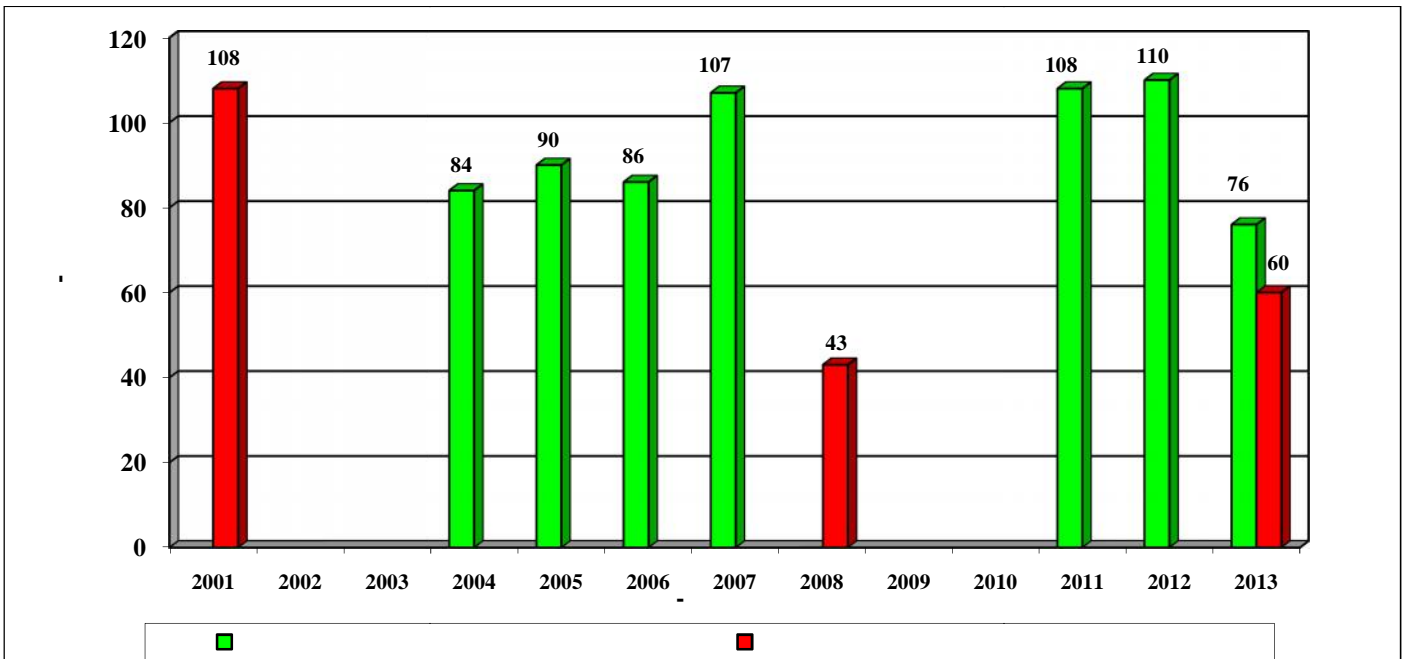
2001 . 2012 .



.2.

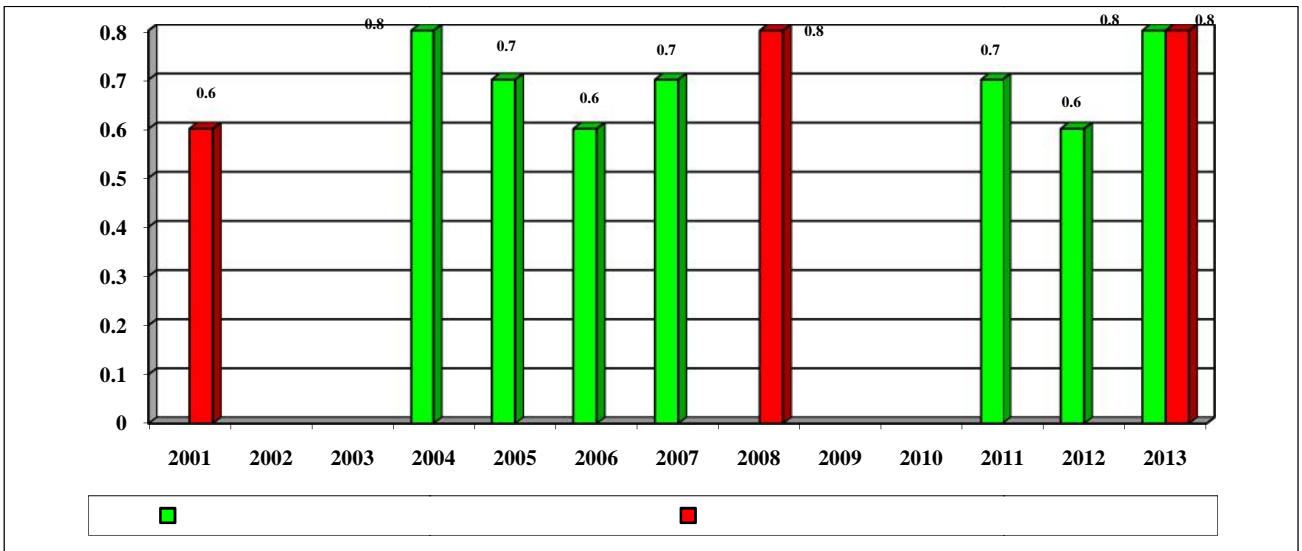
. 2012 .,

2001



.3

2001 . 2012 .



.4.

2001 . 2012 .

: . -