

## CONTEXT & OBJECTIVES

The saddle gall midge, *Haplodiplosis marginata* (von Roser), has been detected in Belgium since 2010, after several decades without any reporting. Saddle gall midge had indeed caused serious damages between 1965 and 1970 (De Clercq & D'Herde 1972). This insect is a European pest of cereals whose larvae feed on stems and engender saddle-shaped depressions, resulting in yield losses.

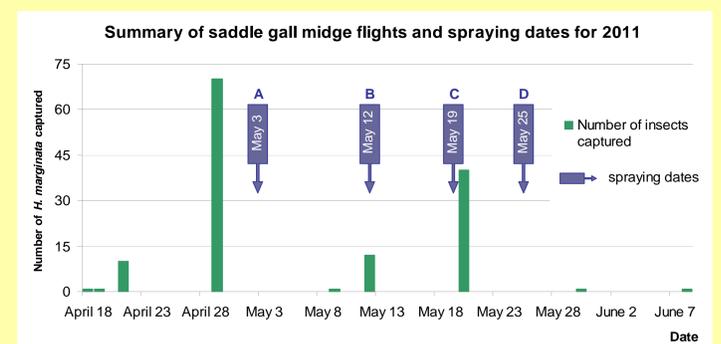
Faced with the come back of this pest, we sought to develop efficient curative control methods in cases of severe infestation, as it was already the case in 2011 for some fields in Belgian Polders. To date, crops chemical protection seems to be the only solution in case of heavy emergences, which occurs when appropriate preventive measures –like crop rotation– were not implemented.



Female of *H. marginata* laying eggs

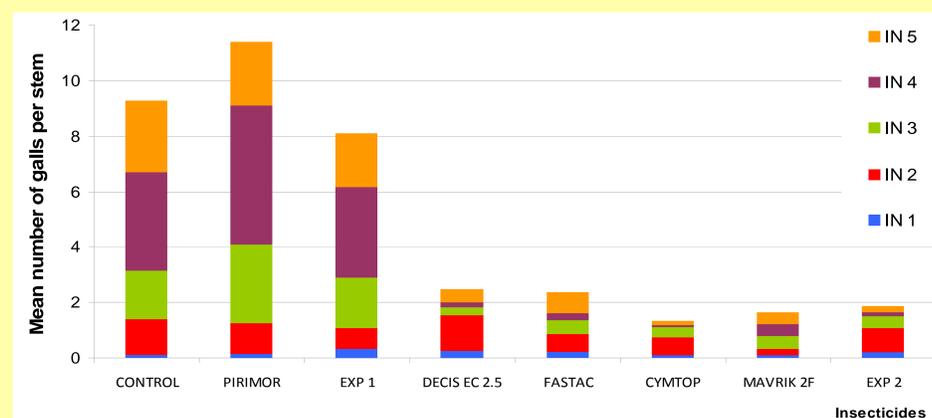
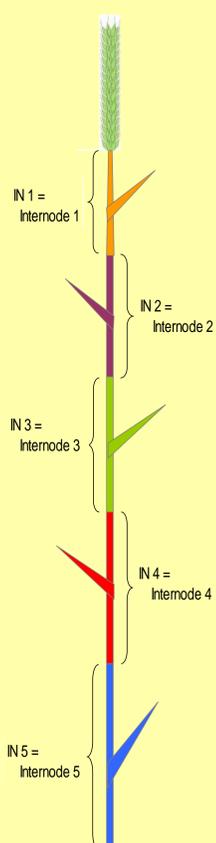
## METHODS

- Experimentation was made in a winter wheat field in Meetkerke (Brugse Polders), highly infested by *H. marginata*, according to a randomized complete block arrangement with four replications.
- Several insecticides, already registered in cereals against aphids, were tested against the saddle gall midge. Products were applied twice : on May 12 and May 25, 2011.
- KARATE ZEON, a lambda-cyhalothrin-based insecticide, was tested to measure the efficacy of various protection schemes, ranging from one to four weekly spray(s) (A, B, C and D) with the recommended dose (0,05 L/ha).
- Once larvae were went back to the ground, 30 stems were taken for each plot, and the galls on each internode (IN) of each stem were counted.

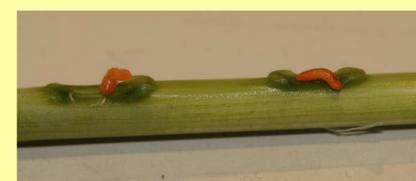
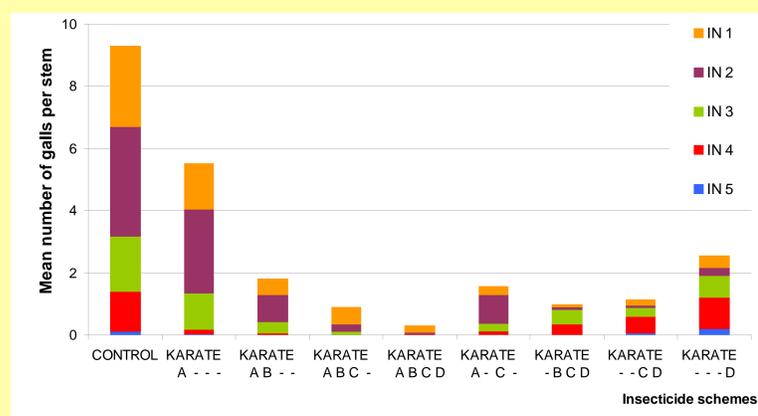


## RESULTS

- **Number of galls per stem (and localisation per internode), after application of various insecticides applied twice :**



- **Number of galls per stem (and localisation per internode), after application of KARATE ZEON (lambda-cyhalothrin-based insecticide) for different schemes ranging from 1 to 4 spray(s) :**



Larvae of *H. marginata* and galls on a stem of winter wheat.

## DISCUSSION

- ✓ Tested pyrethroids have shown a very good efficacy, ranging from 75 % to 87 % (DECIS, FASTAC, CYMTOP, MAVRIK 2F and EXPERIMENTAL PRODUCT 2), contrary to other tested insecticides (PIRIMOR and EXP. 1).
- ✓ The efficacy of the KARATE ZEON was also proved, and the large spread of flights allowed to highlight the influence of the treatment date on the attack intensity and the galls distribution on the different internodes (IN) : IN 4 and IN 5 are protected with the first spraying, while last sprayings induce reduction of galls number on IN 1 and IN 2 . .
- ✓ To be efficient, chemical control has to be well synchronized with flights and egg layings. Monitoring the phenology of flights is thus a critical point for IPM against saddle gall midge.