

Dynvect's overview of the *Culicoides* surveillance systems in the EU and distribution maps of key species

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One of the aims of the DynVect project was to set up a network of European entomologists working on *Culicoides*, the vectors of bluetongue virus, to create a platform for discussion, data sharing and data analysis. The first task consisted in describing the surveillance systems in place in each country. For this, a questionnaire was sent to 9 countries: Belgium, Denmark, England, France, Germany, Italy, Spain, Sweden and The Netherlands. Between 1 and 9 institutes per country were involved in the surveillance. The first country to set up a surveillance system was Spain (in 2000), followed by other southern countries (Italy and France). A second wave of countries set up surveillance systems in 2006, with the arrival of bluetongue in northern Europe. All countries currently continue the surveillance except Germany (which stopped the surveillance in mid 2008). All countries shared common aims: defining “vector-free” periods and describing the diversity and dynamics of species. Except in Italy, all surveillance protocols evolved over the years, for example from covering specific regions to the entire country, and/or with an increasing number of traps. Surveillance systems vary between countries in terms of i) number of traps per country (5 – 300), ii) types of traps used (OVI, CDC, BG, Rieb, Rothamsted suction trap), although currently all countries use OVI traps except for Spain, iii) trapping frequency (day and night, weekly, fortnightly or monthly), iv) number of collection nights (mainly 1 night trapping, except Belgium with 2 consecutive nights and Germany with 7 consecutive days), v) trap location within farm (inside or outside buildings or both according to the season), vi) the level to which species are identified (Group, Complex or species) and vii) the definition of the vector-free period. Following this descriptive phase, participants discussed the data which could be shared and the associated aims as well as the database structure which should be used. This was fruitful and led to the sharing of *Culicoides* data from 7 countries (Belgium, Denmark, France, Germany, Spain, Sweden, England), thus allowing, for the first time ever at that scale, to map *Culicoides* distribution, and to further analyze and model the dynamics and distribution of *Culicoides* in Europe.
