

## Grasses - Gramineae or Poaceae

### Botanical information:

Family: GRAMINEAE (original name) or POACEAE (updated name). This is a family which, in Catalonia, is made up of more than 350 species of grasses and reeds.

Gramineae are characterised by very flexible stems, with long, narrow leaves (like ribbons) that surround the stem at the base, and very peculiar flowers, organised in a characteristic way in simple or compound spikes. The stamens, when ripe, protrude from the flowers and are exposed to the wind, which carries away the pollen. The fruit is a grain, the caryopsis, which is very rich in carbohydrates. Some of its wild species and cultivated species - the different types of cereals (rice, wheat, oats, barley, rye, maize) - are of great economic importance.

Grasses are widespread throughout the world and live in all types of environments.



Fig. 1. General view of a field with flowering grasses and detailed view of some flowers where the stamens (where pollen is produced) can be seen exposed to the outside.

Scientific names of representative wild species: *Agropyrum repens*, *Alopecurus pratense*, *Anthoxanthum odoratum*, *Bromus mollis*, *Cynodon dactylon*, *Dactylis glomerata*, *Festuca pratensis*, *Lolium perenne*, *Phalaris canariensis*, *Phleum pratense*, *Phragmites communis*, *Poa pratensis*, *Trisetum paniceum*

### Common names of representative woodland species:

English: Grass, Reed.

Català: Gram, Gram d'olor, Dàctil, Ussona, Margall, Escaiola, Cua de rata, Canya...

Castellano: Grama oficial, Cola de zorro, Grama de olor, Bromo Dulce, Grama común, Dactilo, Cañuela, Ballico, Alpiste, Cola de topo, Carrizo, Cañuela

Euskera: Basaolo, Lolloa, Alpiste, Ugarritza

Galego: Lesta, Pata de galiña, Carrizo, Ballico

Scientific names of representative cultivated species: *Avena sativa*, *Hordeum vulgare*, *Secale cereale*, *Triticum aestivum*, *Zea mays*

Common names of representative cultivated species:

English: Oats, Barley, Rye, Wheat, Maize, Corn

Català: Civada, Ordi, Sègol, Blat, Blat de moro

Castellano: Avena, Cebada, Centeno, Trigo, Maiz

Euskera: Olo, Garagar, Zekale, Ogi, Arto

Galego: Avéa, Orgo, Centeo, Trigo, Millo mainzo

Aerobiological information:

Grass pollen is present in the air from early spring to late summer-early autumn, with variations depending on the geographical area.

The pollen calendar is shown below, with information on the distribution of this type of pollen throughout the year at each of the stations of the Aerobiological Network of Catalonia (Xarxa Aerobiològica de Catalunya, XAC). For more information consult: <https://aerobiologia.cat>.

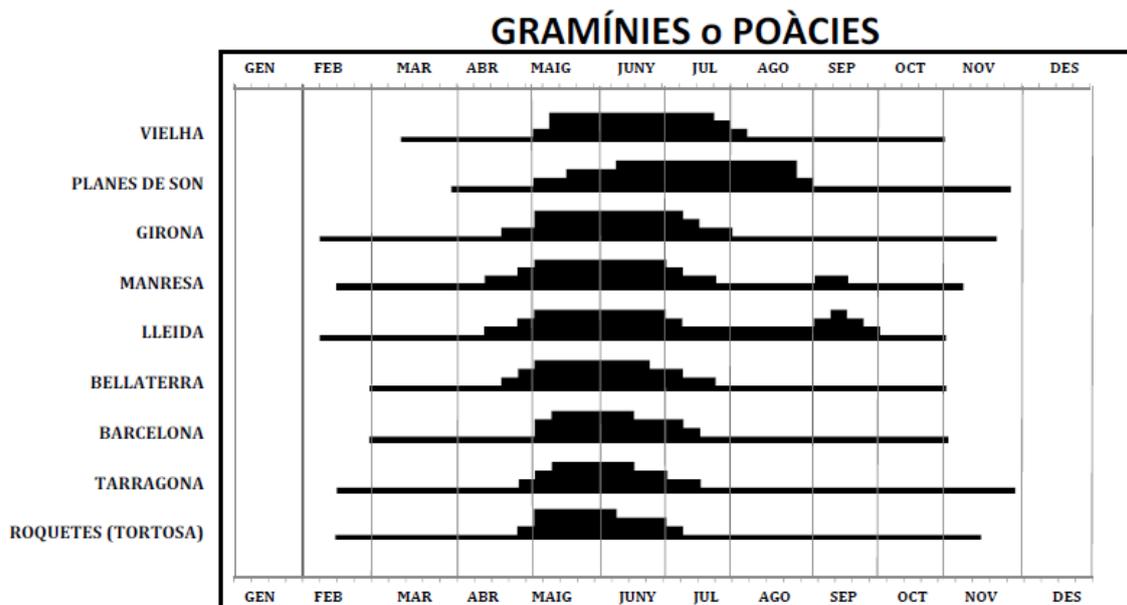


Fig. 2. Comparative dynamics of the levels of goosefoot and *Salsola* pollen in Catalonia and of the risks of allergy.

Levels	Concentrations	Allergies
1. Low	Little important	Rare
2. Medium	Medium	Possible risk
3. High	Very high	Important risk
4. Very high	Maximal	Maximal risks

**Remark:** Near flowering plants the levels may be higher than indicated.

Información médica:

Due to the wide distribution of the plants of this family and the high allergenicity of their pollen, it is the most relevant pollen type worldwide. The subfamily Pooideae contains

most of the allergenic species. Moreover, they are cross-reactive with each other, so people allergic to grasses of this subfamily are generally allergic to the pollen of all of them, whether wild or cultivated.

### *Advice for grass pollen allergy sufferers*

- Be aware of (with a medical diagnosis) which pollen is causing the allergy.
- Keep yourself informed of the levels of allergenic pollen in your usual area and inform yourself of the levels in the areas where you plan to go. It is advisable to adapt voluntary trips (weekends, vacations...) to areas where the allergen that affects us is not present. The website <https://aerobiologia.cat> shows updated information on pollen levels in Catalonia and explains how to access information from other geographical areas. You can sign up (and unsubscribe) to receive the weekly newsletter at: <https://aerobiologia.cat/pia/en/subscribe#newsletter>
- If you notice "problems" outside the usual season, consult your allergist to see if sensitization to other allergens has occurred.
- Learn to recognize the pollen-producing plant that causes allergy and, above all, what its flower looks like, from the moment it begins to form and while it is releasing pollen.
- Have the plant that causes allergy located in the usual environment (home, school, work...) and avoid approaching it as much as possible when we see it starts to have open flowers and until the end of flowering.
- During the pollination season,
  - if you are outdoors, protect your eyes with dark circles and your nose and mouth with a handkerchief or a mask to help filter the air.
  - if you go by car, travel with the windows closed and with an anti-pollen filter; if you go by motorcycle or bicycle, follow the previous advice.
  - change your clothes when you get home and wash them before using them again.
  - dry your clothes indoors to avoid retaining the allergen that affects you.
  - wash your hair or avoid contact with the pillow when you go to sleep, as it will retain the particles that were in the air.
  - ventilate the rooms for 5-10 minutes, if possible before it gets light or early in the morning, because normally in this time slot there will be little pollen in the air.
  - wash fresh vegetables before eating them, as they may carry pollen grains.
  - be very careful on windy, dry and sunny days, as they tend to have higher pollen concentrations.
  - the central hours of the day are usually those with the highest pollen concentrations.
  - having a cold, environmental pollution, physical efforts, the presence of perfumes, tobacco, insecticides, lacquers... can aggravate the symptoms.