GUIDANCE ON GOOD PRACTICES FOR GRASSLAND BIRDS

THE CORNCRAKE CASE
The corncrake

**Description**

**CLASSIFICATION**
Class: Bird  
Order: Gruiformes  
Family: Rallidae  
Genus: Crex  
Species: C. crex  
English name: Corncrake  
French name: Râle des genêts

**IDENTIFICATION**

*Adult male:* generally a dark yellow-brown, with dark stripes on the back and a reddish colour on the flanks. The belly is mainly grey with a smooth contour. The legs are a pinkish-grey with a thick tarsus. The head, showing a grey-blue supercilium, is prolonged by a short, thick bill.

Compared to the male, *the female* has a less smooth outline to the breast, is duller coloured with a reddish supercilium.

*On hatching, the chicks* have a black down that they keep for about 20 days, which often allows them to be quickly recognized during mowing. They then acquire their first brownish feathers and complete their moult. Nidifugous, they leave their nest after 2-3 days when they follow the female for short distances.

*A protected species!*

The Corncrake is fully protected in France (Decree dated 29/10/2009), listed in Annex I of the Birds Directive (79/409) and in Annex II of the Berne and Bonn Conventions.

**BIOMETRICS**

- **Body length:** 27 – 30 cm  
- **Wingspan:** 46 – 53 cm  
- **Weight of males:** 135 – 200 g  
- **Weight of females:** 120 – 150 g  
- **Longevity:** 2 à 4 ans  
- **Presence status:** summer breeding

**The corncrake is a species of the Rallidae family**

- Corncrake (Crex crex)  
- Common Moorhen (Gallinula chloropus)  
- Water Rail (Rallus aquaticus)  
- Spotted crake (Porzana porzana)
Corncrake biology

ECOLOGY AND BIOLOGY

This secretive species moves in cover of tall vegetation and is difficult to see.

Unlike other members of the family, Corncrakes are intolerant of water which prevents them nesting in meadows and also affects the abundance of their food resources.

BREEDING – BEHAVIOUR

Corncrakes don’t form permanent pairs throughout the breeding season. The males defend a territory by giving their raucous call (the famous «crex-crex») that can be heard almost a kilometer away. This song is the best indicator of the presence of the species. The call is generally given at night but can be heard during the day in spring. Vocal activity then diminishes rapidly during July with the ending of the mating period.

The female lays 8-12 eggs in a rudimentary nest built of dry grasses in a hollow on the ground. Eggs hatch between mid-May and late July. Incubation lasts between 16–19 days and the female looks after the young for some twelve days after which they quickly become independent. If conditions allow, the female can lay a second clutch in the season, during July. Research has shown that these second broods are often the most successful, but unfortunately, they are the most difficult to bring to fruition due to grassland management. Corncrakes leave their breeding areas during late August and early September, a period at which all birds have completed their moult.

FOOD

The Corncrake is omnivorous, feeding mainly on ground invertebrates, such as insects (Orthoptera, beetles), gastropods and spiders but also plant material including seeds and cereal grain, especially at the end of summer, before migrating.
Status and distribution

UICN CONSERVATION STATUS

- **At international level**, the Corncrake is not regarded as endangered, because of its significant numbers in Eastern Europe and particularly in Russia.
- **At national level**, the situation of the Corncrake is more worrying. Due to a heavy decline in numbers over the past few decades, the species is listed as «Endangered» in the red list of France’s breeding birds.

DISTRIBUTION IN FRANCE

This species occurred throughout the country except for the very south of France 50 years ago, gradually regressing to the countries large floodplains where agriculture has remained fairly extensive. The traditionally important sites are located in the heart of floodplains in the northern half of France: Charente, Loire, Seine, Oise, Meuse, Rhône and Saône.

NATIONAL NUMBERS

Censuses carried out since the 1980s show that the French population of the Corncrake has declined by 85%, from 2,000 singing males in 1975 to less than 300 in 2014.

A TRANS-SAHARAN MIGRATORY BIRD

**Wintering**: a long-distance migrant, Corncrake winters in Africa, from the savannas of southern Sudan, Botswana and Zambia as far as South Africa. Many individuals travel through Egypt, which is a geographical bottleneck in this long journey. Recent researches show that birds that breed in Western Europe pass through the Straits of Gibraltar and make several migratory stop-overs in west-central Africa.

**Breeding**: In France and Britain, the Corncrake is at the western end of its breeding range. This extends over a wide band between Eastern Europe to the heart of Eurasia.
Preferred habitat

The Corncrake occupies extensively managed areas of grass: a flagship species of floodplain meadows, over 80% of individuals are recorded in floodplains.

HAY MEADOWS
Hay meadows are by far the most suitable habitat for the Corncrake (> 90% use of this habitat). They often offer they best floral composition, a diverse range of prey species as well as tall vegetative cover allowing the corncrake to hide. Late flooding in alluvial valleys can however push the species to breed in peripheral areas.

GRAZING MEADOWS
Grazed meadows are generally less used by the Corncrake. Grazing by livestock often occurs earlier than mowing (April-May) and induces a rapid loss of cover. Furthermore, repeated trampling may cause damage to nests. Only low density grazing, on small areas, and the provision of ungrazed areas lasting throughout the season, allows the Corncrake to occupy the area with more or less success.

OTHER NATURAL ENVIRONMENTS
- **Set-aside and fallow land**: it was once the best refuge area for the species, now supplemented by hedgerow margins and small reed beds.
- **Transitional environments (ecotones) such as sedge, areas of wet tall grasses and reedbeds**: widely used habitats in Great Britain, mainly used as refuge sites in France.
- **Forest clearings and recent poplar plantations** can act as refuge areas during mowing nearby. The extension of these plantations in alluvial valley causes a loss of habitat.
- **Cereal crops** (wheat, barley) and **forage** (alfalfa) can serve as migration stop over sites or as refuge after mowing.
- The species can also be found locally and in very small numbers in alpine meadows such as those the Bas-Jura and the Vercors.

These marginal habitats may be suitable for breeding in some circumstances if management allows.

THE DETERMINING FACTORS FOR BREEDING

On a landscape scale, the corncrake breeds in open and homogeneous environments forming extensive grassland complexes with tall vegetation, this in order to lessen the risk of brood predation.

The vertical structure of the vegetation seems to be decisive. Indeed, many individuals occupy layered cover composed of not too dense lower plants, topped by a high stratum composed of stems, floral heads and other tall plants, that enable them to hide from predators.
Floodplain activities
The importance of livestock

Livestock rearing greatly contributes to the conservation of biodiversity by maintaining grassland. Indeed, natural grasslands have a greater diversity of plant and animal species. The natural trend for this type of ecosystem is the gradual closure of the environment through the invasion by woody species such as ash; grassland management through mowing or grazing is essential in maintaining such meadows.

The meadow is still the most common environment in floodplain. It is therefore vital to continue efforts to maintain these agricultural areas.

**Indicator:** the area under agri-environmental measures covers between 50% and 70% of eligible areas on the three sites.

**INCREASING BEST PRACTICES FOR BIODIVERSITY**
Livestock rearing practices have become more intensive in recent decades. This intensification, coupled with other factors such as habitat loss and change have led to a loss of floodplain biodiversity. This is particularly due to an ever-increasing speed of mowing practices, which affects the wildlife's survival rate.
Encouraging management and practices

Adapted grassland management would allow for a reduction of threats to Corncrake populations.

MAINTAINING NATURAL GRASSLANDS
Natural grasslands have never been ploughed or reseeded. A very diverse variety of plants occurs spontaneously allowing a range of wildlife to find a favourable habitat for its development. These meadows provide a perennial grass cover, habitat suitable for the Corncrake.

FAVOUR MOWING RATHER THAN GRAZING
Management by either mowing or grazing have different consequences on grassland biodiversity and vegetation structure. The Corncrake uses mainly hay meadows that provide plant cover suitable to its behaviour, it can move while remaining hidden in tall grass.

Grazing also enhances a specific biodiversity in each field. The presence of livestock and their dung is favourable to coprophagous insects and other invertebrates, and consequently the birds that feed on them. Stocking rate determines grassland appearance, plant density, vegetation composition and thus the suitability of plots for breeding birds. However, this practice is not appropriate to the ecological requirements of the Corncrake as it doesn’t find the necessary cover and vegetation structure.

Combining these practices provides a mosaic of habitats at the landscape level. Nevertheless, maintaining hay meadows on the most favourable areas for the species is necessary for its preservation.

JOINT MANAGEMENT
Regrowth grazing has a limited impact on the Corncrake as it occurs after mowing once the breeding season has finished.
By contrast, early spring grazing is highly unfavourable as it occurs when Corncrakes arrive in France. In addition, it increases vegetation density that may have a negative impact on ease of movement of birds in their meadows.
CONCILIATING MOWING, CORNCRAKE PROTECTION AND BIODIVERSITY

**Encouraging late mowing**

Mowing date greatly influences the specie’s breeding success and survival of young. Indeed, if it is too early, mowing may cause nest destruction or death of the chicks which are not yet old enough to flee from the mower. More the mowing date is postponed, the greater the number of young fledged per the female. Studies have shown a relationship between the rate of Corncrake population decline and average mowing date. The practice of late mowing is a key element in promoting the conservation of the species. *In France, an earliest mowing date of July 15th is recommended*, it is approximately the date at which first brood chicks fledge.

The mowing date is also a determining factor in meadow floral biodiversity.

Late mowing will allow a greater number of species to seed and thus continue growing from one year to the next. These late growing species will progressively regenerate the floral community during the summer and maintain a higher forage value. Moreover, tall plant biodiversity is correlated with a high abundance of insects and other invertebrates that are an important part the corncrake’s food resources.

**Examples of some late growing species**

- *Oenanthe fistulosa* © J. Terrisse, LPO
- *Gratiola officinalis* © J. Terrisse, LPO
- *Senecio aquaticus* © J. Terrisse, LPO
Sympathetic mowing

Mowing technique is also a key parameter. Sympathetic mowing practices can improve Corncrake survival as well as that of many other species (Grey partridges, Common quails, Hares ...).

**Friendly mowing technique**

- **Step 1**
- **Step 2**

**This technique consists of maintaining a mowing speed of between 2.5 and 5 mph** in order that wildlife can escape in front of the mower. In addition, the establishment of **sympathetic mowing** (centre-out), that is to say from the inside to the outside of the plot, helps to push wildlife into the edges. It is best **not to mow round** the whole plot but only at the two ends as the corncrake is rather reluctant to cross cut vegetation.

**Using a scaring bar**

The use of the scaring bar, a device set up in front of the cutter bar, is still underdeveloped but a promising technique. This may consist of chains (single or double) or tedder bars that aim at driving wildlife away by frightening them with the noise and vibrations they generate. The effectiveness of this method has been proven, but it is difficult to assess by farmers as the wildlife that escapes often goes unseen into tall grass. It helps to save wildlife without being difficult to use according to many farmers who have experimented with it.
Maintaining refuge areas

When mowing meadows, it is possible to leave part of the plot uncut which will then be a refuge for wildlife, especially the Corncrake. To be effective, lengthwise mowing should be carried out so as to push wildlife into this refuge area.

This practice is included in the specifications of the new agri-environmental measures by maintaining an uncut area from 6 to 9 meters wide. This refuge area must be sited in the most appropriate way according to distribution of singing Corncrakes and layout of the land. It can be moved from one year to another.

It is permitted to mow the refuge area at the end of summer, once the young are old enough to fly. In this case, it is necessary to export the forage because simply grinding the grass, if repeated, may affect the biodiversity of this part of the plot for years to come.

By providing habitat for all grassland wildlife, the refuge area will also be a vital food resource for grassland passerines such as Yellow Wagtail, Whinchat, Corn Bunting or Zitting Cisticola.
Reducing fertilizers and other inputs

Using fertilizers, whether organic or inorganic, has consequences for the floral composition of the plot. The input of nitrogen in the soil enables earlier growth but selects for fast-growing species. Biodiversity is strongly affected, resulting in the disappearance of high value species of conservation concern.

Furthermore, fertilization affects vegetation structure, an essential parameter in habitat selection by the Corncrake. It causes an increase in vegetation density, which, when it becomes too dense, hinders corncrake movement. Moreover, it leads to homogeneity of the vegetation within the plot.

The combination of these impacts will further decrease the invertebrate biodiversity, a major part of the Corncrake’s diet. The biodiversity will be even more affected if pesticides are used.

Preserving the topography and character of wet meadows

The more the physical aspect of a plot is varied (depressions, bumps, flooded parts, sloping areas) the more it accommodates a diversified flora and fauna, particular to each of these habitats. Of course, the plot must also be managed extensively (no treatment, low grazing pressure) to be even more suitable.

It is also important to keep some flooded areas on the plot in order to maintain a diverse flora and fauna in the spring.

Modification of this physical aspect and installation of drains or drainage dykes to aid water drainage is to be avoided. Flood meadows also play a role in flood management and water quality by allowing a natural flow of water.

IMPROVING THE SPECIFICATIONS OF THE NEW AGRO-ENVIRONMENTAL MEASURES:

• Orienting contract levels according to priority sectors (depending on the distribution of singing males in particular).

• Delaying mowing on all types of agreements (with most mowing after July 15th).

• Maintaining some grazing, necessary in livestock rearing, on those parts least suitable sectors for the Corncrake.

• Make refuge areas compulsory at lower level agreements.
Programme sites and your partners

The LIFE+ programme dedicated to the Corncrake aims at halting the decline of this endangered species in three historic strongholds: the Moyenne Vallée de la Charente, the Moyenne Vallée de l’Oise and the Basses Vallées Angevines. The LIFE+ programme has enabled significant land acquisitions, tested innovative measures (scaring bars and emergency measures) and the evolution of agri-environmental measures adapted to the Corncrake’s biology. The sustainability of the results of this programme depends on the adequate participation of all those concerned.

**MOYENNE VALLÉE DE LA CHARENTE**

Total N2000 site area: 7 000 ha
Eligible grassland area: 2 650 ha
Area under agro-environment schemes: 2 300 ha

*Contact:* LPO - 05.46.82.12.34

**BASSES VALLÉES ANGEVINES**

Total N2000 site area: 9 200 ha
Eligible grassland area: 6 250 ha
Area under agro-environment schemes: 4 000 ha

*Contact:* LPO Anjou - 02.41.44.44.22

**MOYENNE VALLÉE DE L’OISE**

Total N2000 site area: 5 892 ha
Eligible grassland area: 3 000 ha
Area under agro-environment schemes: 1 650 ha

*Contact:* CEN Picardie - 03.23.80.29.32

Have you heard a corncrake in the spring? Have you seen a Corncrake whilst mowing? Do you want to make a commitment for late mowing? Do not hesitate to get in touch with your local partner!