

FARMING WITH BARN OWLS IN BC

BENEFICIAL LAND MANAGEMENT PRACTICES



Farmland Bird



© Chris Martin Photography

Barn Owls are closely tied to agricultural landscapes, and if you are lucky you might see them flying silently over grass fields at dusk hunting for small mammals. Barn Owls are only found in southwestern BC. Unfortunately, their population is declining, mainly as result of reduced food abundance caused by the conversion of grass habitats to urban land and changes in agricultural land-use. Other major concerns are loss of nest sites as old barn are demolished and road mortality.

What Do Barn Owls Need?

Nest and Roost Sites

Barn Owls are known to nest in old wooden barns and tree cavities. However, they will easily take to nest boxes installed in or mounted on modern barns, in addition to boxes placed on poles.



Tall old barn with multiple openings is the ideal nest site location for a Barn Owl pair.

Food and Habitat

Field Voles are the Barn Owls' main prey, but Barn Owls also eat, mice, shrews, rats and moles. The highest abundance of prey, mainly field voles, are found in dense, un-mowed rough grassland with a thick layer of litter at the base.



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Grass fields that have not been mown for 2-3 years develop a litter layer at the base. This is where the field voles and other small mammals live, creating small tunnels to move around and sometimes you can see them scurrying through the grass.

BARN OWLS AS RODENT CONTROL CANDIDATES

Barn Owls are excellent rodent hunters, especially field voles, and they can be implemented as part of an Integrated Pest Management Program (IPM)

- A nesting Barn Owl pair and their chicks eat 1200 or more small mammals per year.
- Barn Owls will hunt within a 1 km radius when food is abundant. They are not territorial so nest boxes can be placed close to each other ~ 100 meters apart.
- Farmers have reported reduced rat and vole problems on their farms after a breeding Barn Owl pair has taken residence on their farm.
- Some farmers have noted fewer pigeons and starlings in buildings occupied by Barn Owls.



3 owlets soon ready to leave the nest. The owlets will start to learn how to fly when they are around 60 days old.

Field voles are the favourite food of the Barn Owl.



Considerations & Risks

- Barn Owls usually fly low when hunting and are vulnerable to getting hit by vehicles and trucks when crossing roads. Where possible avoid installing nest boxes within 500 m of major highways.
- Barn Owls and other predators are at risk of being secondary poisoned by rats and rodents that have eaten rat poison. To the extent possible avoid the use of rat poisons. Consider preventive measures such as removal of potential food sources and block access to the inside of structures. Rat poison should only be used as a last resort and application should carefully follow the instructions on the product label. For information on preventive measures and guidance on rat poison application:
barnowlsbc.ca "Rodent control"



NEST BOX DESIGNS FOR BARN OWLS



Barn Owls take readily to tall structures with multiple openings and Barn Owls are even known to nest in busy industrial buildings as long as there is a place for them to hide higher up in the roof.

Installment of nest boxes is also a suitable way to compensate for the loss of nest sites when old trees with nesting cavities fall down or old wooden barns get demolished.

All boxes should be mounted a minimum of 3-4 meters above ground. Make sure there is a platform with a safety ledge level to the entrance hole for the Barn Owl chicks to stand on when they begin to emerge from the nest box. Also, the depth from the bottom of the box to the entrance hole should be no less than 15 cm (6 in) as this will prevent young owlets from falling out of the box.

Pole-Mounted Box

In BC, pole-mounted boxes work well for Barn Owls. This is also a great way to encourage Barn Owls to nest in farm fields where they will help reduce the vole population.

Do not face the entrance hole into prevailing winds.



© Richmond Nature Park

Nest Box placed inside or on the outside of buildings

Almost any type of building is suitable for a nest box. As long as the box can be placed at least 3-4 m above ground level and outside the reach of pets and raccoons. Nest box installment inside or on buildings is in most cases the easiest and safest option.

In old barns the boxes are typically placed on elevated wooden platforms or on the supporting beams. In modern barns they are usually mounted high up in a quiet corner.



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Tree-Mounted Box

Although limited success in BC, Barn Owls will sometimes take to tree-mounted boxes attached to large single standing trees in grassland habitats.

Check that squirrels and raccoons cannot access the nest box by jumping from a neighbouring tree. Adding a metal wrap or a squirrel baffle around the base of the tree makes it impossible for mammals to disturb the nest or occupy the nest site.



© Richmond Nature Park

For Pole and Tree Boxes: To avoid predation by larger Owls the size of the entrance hole should be no bigger than 9.6 * 11.5 cm (3.75 * 4.5 in).

REFERENCE NEST BOX DESIGN PLANS: barnowlsbc.ca
"Nest box installation & habitat enhancement"

- **Do not install nest boxes on utility poles, it is illegal and owls are occasionally electrocuted.**

BENEFICIAL LAND MANAGEMENT PRACTICES

Barn Owl Habitat

- Barn Owls need rough grassland either in the form of blocks such as a farm field, or wide strips (minimum 2-3 meters wide) along fields or waterways.
- For optimum Barn Owl habitat do not cut or graze the first year the grass is seeded. This will allow the grass to grow tall, collapse and form the litter layer used by field voles.
- Grassland can be established by using different seed mixes that include both tall tussock-forming species and shorter softer grasses.
- Every 2nd or 3rd year, grass can be grazed lightly or cut in the fall (set cutting blades to 10 cm or higher)
- If possible, rotational cutting, where sections are cut in alternate years will allow there to always be available rough grassland for hunting.



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Annual Lifecycle of Barn Owls and Best Management Practices*

Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
	Courting & Mating	Egg Laying & Incubation			Rearing of Young and Dispersal of Young				Roosting		
	Sensitive Period – Do Not Disturb Nesting Owls								Best Time for Nest Box Installation		

*General depiction, Barn Owls have been known to breed in every month of the year in BC, on average ~ 10 % of pairs have a second clutch per year.