

THE YEAR OF THE RABBIT: AUTUMN

By Dr Anne McBride

Baby rabbits grow rapidly. Their size increases fivefold in the first three weeks

Photo: C. Norris

Mid-June and the summer solstice marks the year's turn. Over the next three months, the days gradually shorten, triggering nature's preparations for the oncoming winter. Our young kits born mid-April are two months old and have been weaned a month. They already have two sets of younger siblings, one a month old, just weaned and emerging from the nest burrow, the other, more recently born are still being nursed. These are likely to be the last litter of the year, though in sparsely populated areas the breeding season may extend to August. The end of breeding is triggered by the combined effect of the length of day, the rising temperature between the spring equinox and summer solstice and the decreasing quality of the food supply, compared to spring growth. Male sperm production ceases and the testicles shrink and partially retract into the abdominal cavity. The females are exhausted from being repeatedly and concurrently pregnant and lactating. They now must rebuild their strength and regrow a full coat, no longer needing to pluck it to make yet another nest.

Survival

Many of the offspring will not see the spring. It is estimated that approximately 90% of the year's young will die before winter, 75% within their first three months. While a pet rabbit may live for 10 years, it is the lucky wild one that lives to see its third summer. Nestlings may be eaten by a canny badger, stoat or rat, drown if the weather is bad or starve if their mother

is killed. Baby rabbits have a large surface area to volume ratio; that is a lot of skin area relative to their overall body mass. As for other small mammals, like shrews and mice, this means they lose heat rapidly. A cold, rainy summer can mean death by hypothermia for young rabbits that get wet whilst out grazing. Some will be killed by domestic dogs or, more likely, cats. Cats retain strong hunting instincts and skills, often practised on rabbit kits which they rarely eat. Ironically, these same cats may return home after 'a night on the tiles' hunting to a plate of cat food that contains rabbit meat. More importantly, many thousands of baby rabbits will have provided a meal for other wildlife such as foxes and their cubs. Their major role in the UK food chain was well illustrated in the late 1950s by the collapse of the buzzard population due to the decimation of rabbit numbers caused by the myxomatosis epidemic.

Baby rabbits grow rapidly, efficiently converting greenstuffs into muscle and bone. Their size increases fivefold in the first 3 weeks, from 30 - 150 g, and by 4 months they weigh 400g, a sizeable snack. At this age they are sexually mature, and females born early in the season may well rear a litter, though their brothers are still too lightweight to compete with an adult male for mating rights. At nine months they will reach adult size of about 900g. Their skeleton is light and most of this weight is dense, strong, lean muscle (meat); there is very little fat on a wild rabbit. This high lean-meat to bone ratio, and medium size makes rabbits nutritious, easy to kill and carry. Truly, rabbits are Mother Nature's healthy option take away meal. Their size, rapid growth and nutritious meat are qualities they share with chickens. Not surprisingly, we humans domesticated, and continue to keep, both species primarily as sources of cheaply produced protein.

July, August and early September we may think of as full of lazy, hazy days with crops ripening in fields and gardens in bloom. These are the

It is estimated that approximately 90% of the year's young will die before winter



Dog Days of summer, when Sirius (the Dog Star) rises at the same time as the Sun. Yet, this is no time for young rabbits to be lazy, there is a lot of eating and growing to do! Rabbits are notorious grazers, seven adult rabbits eat as much as a sheep! Each year they cause approximately £100 million worth of damage to crops, earning them the UK's number one pest status.

Moving home

What rabbits eat will depend on what is available. Rabbits live across the UK, some in monoculture landscapes of arable farmland, where plant diversity is maintained only along hedgerows and set aside land. Others will live in less cultivated habitats such as the chalk downlands or, the extremely rare, organic meadows. These have a far greater range of native, and non-native, plants and grasses which provide a reliable food source throughout the year. One type of habitat that can be rich in plants is the roadside verge. Indeed, at this time of year you will often see young rabbits munching away along the verges of motorways.

Living on the side of a road, particularly one with fast moving traffic does not seem very sensible, though there may be fewer predators. Research into rabbit habits conducted in Spain suggests that it is not a preferred habitat, possibly because of the stress of the noise and bright lights. So why are the youngsters there? Well, by August kits born in February and March are beginning to disperse and set up their own home. Simple pressure of numbers means they may have to reside alongside a road and though some will be killed by cars, more will take their place. For others, habitat choice may be limited. Rabbits living in arable areas have the advantage of an abundance of food when the crops are growing in the summer, however, ploughing can destroy their burrows. Where farming is intensive and there are few hedges, road verges may provide both a place to dig a burrow and an additional food source when the crops have been harvested and the fields are bare.

Many baby rabbits are seen by the side of roads or railways at this time of year



Shine on, shine on Harvest Moon, so goes the song. This is the full moon closest to the autumn equinox in mid-September. At this time of year the moon rises only a few minutes after sunset, providing more light for farmers to harvest their fields... not so important nowadays as combine harvesters have headlights! Harvesting is an extremely important time for us humans as we bring in the crops that will feed us, our livestock and our pets over the coming year. It is also a time when farmers take the opportunity to control wild rabbit numbers. In late summer when the crops are high, rabbits will move out of their warrens, finding both food and cover amongst the tall oat, barley and wheat plants. On harvest day, nets put up between the field and the burrows trap rabbits as they flee from the combine harvester and they are dispatched quickly by the rabbit management team. It is not just on crop fields that people attempt to control rabbit numbers. Throughout the year their digging and eating habits damage gardens, graveyards, nature reserves, roads, railways, golf courses, archaeological sites, buildings and construction sites and fields where horses and livestock are kept, which can easily break a leg by tripping down a rabbit hole. A recent, newsworthy example occurred on the Hebridean Isle of Canna in 2013. Rabbit digging caused a major landslide, of some 100 tonnes of earth, closing the only road for several days.

In the next issue we will look at the challenges the forthcoming winter will bring to our young rabbits.