Hedge Trimming

Trimming is a traditional method of hedgerow maintenance which when undertaken correctly is a highly efficient form of management. Mechanised trimming is now the norm but has been linked with hedgerow dieback and it is well known that the widespread practice of annual cutting greatly reduces the availability of food resources for wildlife. This sheet discusses these issues and suggests management regimes which aim to maintain and enhance the hedgerow resource and it's value to wildlife without impacting on efficient farm management practices.

Introduction

One of the most positive steps a landowner can take to improve hedgerow management on their holding is to do less cutting and trimming. Allowing for larger hedges and cutting them less frequently can have significant benefits in terms of the health of the hedge and it's value to wildlife.

The most recent assessment of the state of the countryside (Countryside Survey 2000) suggests that in England and Wales the overall decline in the length of hedgerows reported from the 1980's and 90's may have been reversed, i.e. more hedges are now being planted and brought into positive management than are being removed or becoming derelict. However concerns remain about the quality and health of the majority of the resource, much of which is poorly managed and declining in vigour.

The increasingly widespread presence of gaps, particularly in heavily trimmed hedges, will not have escaped the notice of anyone who lives or works in the countryside.

Hedgerows are principally under threat from two processes, neglect, where hedges are allowed to grow out into lines of trees which eventually decline, ultimately leading to the disappearance of the feature. And an overreliance on trimming as a form of management. As discussed in the Hedgelaying and Coppicing Technical Information Sheet (Durham County Council) in order to ensure the long term survival of a hedge it will periodically require laying or coppicing.

The Process of decline in trimmed hedges

Trimming stimulates the growth of multiple shoots just below the point at which cutting is undertaken, this results in an extremely dense growth form which can form an excellent source of shelter whilst serving as a formidable barrier to stock (Illustration 1).

1: A well maintained hedge.

When correctly managed hedges can be maintained in this state for many years. With the passage of time they will however start to become gappy at the base, as a result of the shading out of lower stems by the dense top growth (Illustration 2).

2: An overtrimmed hedge in need of laying. At this stage the hedge should be allowed to grow up in preparation for hedgelaying or coppiced as appropriate.

Where this not undertaken, hedgeplants may survive for many years but the hedge will become increasingly derelict and dysfunctional (Illustration 3) as individual plants. Hedges allowed to deteriorate to this state offer little value to the farm and will require extensive work to return them to a functional state.

3: A common sight in many hedgerows, the appearance of gaps indicate a need to undertake remedial management on this hedge.

Accelerators of decline

The proccess of decline is accelerated where hedges are regularly cut back to the same point. This practice results in the build up of scar tissue which is increasingly unable to support healthy shoot growth. Eventually the plant is unable to put out enough foliage to support itself and dies. (Illustration 4).

4: This entire section of hedge is dead, its decline accelerated by excessive trimming.

This process of decline can be seen in many hedges across the county.

Overzealous trimming when undertaken on a regular basis will also accelerate the natural rate of decline.

(Illustration 5). Most hedgerow species (holly is an exception to this) are able to survive an occasional heavy pruning but cannot tolerate it on an annual basis.

5: Trimming hedges back to the main stem will simply hasten the demise of these plants.

Unfortunately both of these practices are widely undertaken and are responsible for much of the deterioration evident in hedges accross the County. Alternative approaches are examined in the following sections.

Hedgetrimming Good Practice

The principles of good practice for hedgetrimming are summarised in a companion document, Technical Guidance Card 3. The two documents have been developed in order to contribute towards the achievement of two key objectives, firstly to improve the health of the existing hedgestock, secondly to enhance it's wildlife value.

It has been suggested that older growth is unmanageable by the available machinery and that the finish when cutting older material is unsightly but in fact many modern machines are more than capable of dealing with two or even three year old growth and the finish is dictated more by the condition of the cutting tool than any other factor. Where blunt machinery is employed the finish will inevitably be poor.

It has also been suggested that the cuttings from older growth being more profuse and harder than one year old growth can provide problems for livestock farmers with cut thorns lodging in the feet of cattle and becoming entangled in the fleeces of sheep, creating a handling problem.

However discussion with farmers participating in Countryside Stewardship schemes suggests that such concerns are largely unfounded. It is suggested that well maintained machinery employed in the correct manner i.e. with trimming starting at the top of the hedge so that falling material catches on lower growth and is therefore subjected to the mulching action of a second cut can largely overcome these potential problems.

Current practice favours the annual trimming of hedges, with cutting being undertaken in the late summer or autumn. We would suggest that generally speaking this is unnecessary and that it can be detrimental to the health of a hedge and greatly reduce it's value to wildlife.

Evidently in some situations such as roadsides or where access may be impeded by excessive growth, annual trimming will be necessary, however in most cases it is not and it is often counter – productive.

In practice most hedges would appear to be subjected to annual trimming because there is a widespread perception that it makes the hedge look tidy.

Arguments against annual cutting

Less frequent cutting can be a factor in maintaining the long term health of a hedge, however as we will discuss shortly the intensity and system of cutting is a more fundamental issue. The principal advantage of cutting less frequently is to enhance the value of the hedgerow resource to wildlife.

6: A blackthorn hedge in bloom.

Most hedgeplants do not flower freely on wood less than two years old. One of the glories of spring is the blanket of flowers which adorn untrimmed plants (Illustration 6). It seems to pass largely unremarked that many annually trimmed hedges bear little blossom.

Aesthetic considerations aside this is of considerable importance to wildlife on the farm. Hawthorn in particular is a major source of nourishment, in the form of nectar and pollen, to newly emerging insects at a time of year when few other sources are available. As well as providing a food source for other species,notably birds, some of these insects are beneficial in an agricultural context, particularly pollinating species (Illustration 7).

7: Wild bees are increasingly recognised as having a valuable role to play in the pollination of crops.

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Inevitably if flowering is restricted fruiting will be too. Berries are a key autumn and winter food source for many birds including declining species such as the Song Thrush and migrants such as the Fieldfare (Illustration 8) and Redwing.

8: A Redwing feeding on hawthorn berries.

© RSPB photographer, E.A. Janes

Whilst it is difficult to establish the extent to which wild bees and other pollinators organisms are able to exert a positive influence on crops, research has demonstrated that wild pollinators, particularly bumble bees can improve the yields of crops such as field beans and fruiting species such as strawberries. They may also be valuable in increasing the uniformity of crop ripening in oilseed rape, where non uniform ripening leads to seed loss.

"Bumble bees provide an essential pollination service for some crops and wild flowers. In some cases this is a background pollination service which can be supplemented by bringing in honey bee hives when the crop is flowering. In others cases bumble bees are the only effective pollinators". S.Corbet, N.Saville, J.Osbourne

Recommendations for cutting frequency

In order to ensure an annual supply of food resources on the farm for wildlife some hedges should be left uncut every year. Standard recommendations suggest that cutting be undertaken on a rotational basis across the farm, with hedges being cut every two or three years. This would entail either half or one third of a farms hedges being cut in any one year.

This is the simplest approach but any system of management which leaves part of the hedgerow network , or even just part of a hedge uncut every year will have positive benefits for wildlife. For example, where a hedge borders a wide verge on one side with a crop on the other the hedge could be managed on a two or three year cutting rotation.

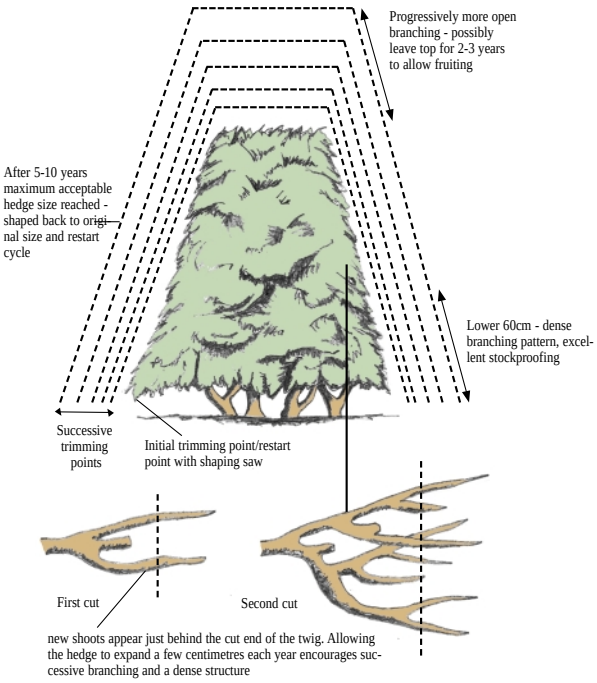
If annual cutting is deemed a necessity you should avoid cutting back to the same point each time. Trials have shown that hedgeplants regenerate more vigorously if they are cut back

The Economics of Sustainable Hedge Cutting

A study undertaken by Silsoe College suggests that there are actually savings to be made by cutting less frequently even when taking account of the effects of crop shading. Using three models for an arable, dairy and mixed farm their results showed significant savings could be made in all cases by changing from an annual to a three yearly cutting regime.

Such a regime has considerable benefits for the continued vigour of the hedge and for wildlife.

above the point of the previous cut in the following year . This will also result in greater levels of flowering and fruiting. Ideally this system should be followed for three years with the hedge being trimmed back to the original point in the third year. This will result initially in a severe finish, however occasional heavy trimming has been found to stimulate strong shoot regeneration from the cut stems , resulting in a denser and more effective hedge (Illustration 9)



9: Hedges regenerate more vigorously if cut back above the point of the previous year's cut.

Trimming coppiced, laid and new hedges

New growth regenerating from carefully laid hedges will come up very strongly. Generally it is considered best not to cut in the first year, but in order to ensure a dense finish cutting should be left no longer than this unless the hedge is being managed on a long term laying rotation or being allowed to grow out for other reasons. When cutting laid hedges cutting should be undertaken in the same direction as the hedge was laid and care should be exercised to avoid any stakes which may have been used.

Coppiced and new hedges should not be trimmed with machinery until three years old. Light trimming to stimulate a denser growth form can then be undertaken every other year, with the cutting point being raised each time until the hedge achieves the desired size and shape.

Timing of Cutting

The golden rule is never cut during the bird nesting season (mid –March to end of July) . Wherever possible cutting should be delayed until the winter when the berries have been taken by the birds. Hedges which are to be managed on a two year rotation should be cut from the end of January –beginning of March) in order to maximise berry production, autumn cut hedges should ideally be left uncut for three years.

Size and Shape

Generally speaking the greater the volume of a hedge the better it is for wildlife, the R.S.P.B. recommend that hedges should be kept at least 1.4m high by 1.2m wide. Larger hedges also offer considerably better shelter to stock.

10: Dense hedges at least 2m high attract the greatest variety of birds.

For example, "downwind of a hedge of 1.5m (5') in height the shelter value for cattle extends 1.9m (6') into the field, and 9.1m (30') for sheep." (Hedge Shelter and Shape. FWAG technical Information Sheet).

Bear in mind that different species have different requirements therefore if you have no specific wildlife objectives the ideal is to aim to produce a variety of hedge sizes across the farm.

Hedges on a north/south alignment, adjacent to tracks or at field corners represent the best choice for hedges that are to be allowed to grow out as they will have the least impact on crops. Dense hedges at least 6'6" (2m) high attract the greatest variety of birds. (Illustration 10)

Much has been written about the ideal shape for hedges, it is suggested here that the optimal shape is one which allows light to reach the lower branches of the hedgeplants. This will allow the maintenance of a dense hedge base for the longest period of time. In areas where heavy snowfalls hedges cut into an A or flat topped A (Illustration 11) shape will shed snow more readily than parallel sided hedges.

11: 'A' shaped and rounded hedges shed snow more readily.

FWAG may be able to offer assistance in drawing up a hedgerow management plan a farm, they are also a useful source of advice if you wish to manage for a particular species.

Field Margins

For many species of wildlife including game birds An even more important factor than the volume of the hedge is the management of adjacent vegetation in the field margin. Vegetated field margins provide cover and nesting/overwintering sites for organisms which are otherwise unable to persist on farmland. Grey Partridge (Illustration 12) make extensive use of well managed field margins as nesting sites and as a source of food for the adults and chicks. The dramatic decline in Grey Partridge numbers has been linked to the absence of these resources.

12: Grey Partridge.

Arable farmers often complain that field margins are a nuisance, being a source of pests and weeds however there is an argument that suggests that these are largely self inflicted problems.

'Why is it that species such as cleavers and bare brome have suddenly became grass and broadleaved weed "public enemy number one" , when years ago they were present but never serious pests ? Misplaced agrochemicals killed off the existing competitive swards, created bare ground and with the addition of misplaced fertilisers, provided a foothold for invasive, competitive, nitrogen loving species such as these. Invasive weeds in field margins are a problem of our own making.' Nick Southerton and Robin Page ,Game Conservancy.

Aside from the wildlife benefits in agronomic terms it makes sense to manage field margins in a fashion which favours the establishment of a dense perennial sward able to exclude problem species. This strip should be at least one metre wide, under IAC's rules it is currently (March 2001) permissible to maintain a 2m strip either side of the centre line of a hedge without affecting eligibility for this subsidy. Countryside Stewardship includes payment options for 2m and 6m margins, these options are worth considering and can often make sound financial sense, particularly when it is remembered that the field edge invariably produces the lowest yields.

Arable field margins do require management . With the margin ideally being cut on a rotational basis , in conjunction with the hedge trimming every two or three years.

Excellent technical advice on methods for limiting spray drift and fertilser application into hedge bases is contained in the TIBRE (Targeted Inputs for a Better Rural Environment) Handbook available from SNH (Scottish Natural Heritage). This handbook contains detailed advice on how commercial and environmental benefits can be gained through the modification of existing practice and the application of technology. It is highly reccomended to arable farmers. Obtainable from, Scottish Natural Heritage, 2/5 Anderson place, Edinburgh, EH6 5NP. Tel: 0131 446 2423. Fax 0131 446 2405

When erecting livestock fences adjacent to hedges it is similarly beneficial to allow for the inclusion of at least a one metre margin. This will benefit wildlife but will also relieve livestock pressure on a hedge. Bark stripping and damage to the base of the hedge including puddling can affect the vigour of hedgeplants and reduce their ability to offer shelter.

Hedgerow Trees

Hedgerow trees can make a huge contribution to the wildlife value of a hedge and are a key landscape feature in many parts of the county (Illustration 13). Many existing trees are nearing the end of their life and if not replaced will have a major impact on the character of the landscape. Ash saplings exist in many hedges and represent the simplest way to replenish the existing tree stock since all that is required is for some plants to be spared the attentions of the flail.

The choice of which plants to allow to grow on should be determined by the straightness of the stem of the existing plant, there is no point allowing a plant to grow off a stem which in later years will be unable to support itself. Ideally trees should be no closer than 20m and irregularly spaced along the hedgeline. Attaching high visibility tags will help the hedgecutter to identify which plants are to be left.

13: A mature ash - one of most common hedgerow trees.

SUMMARY

However benign the trimming regime used all hedges, if they are to be retained, will eventually need to be laid or coppiced. It is most cost effective to undertake this before the hedge becomes too difficult to work with.

Wherever possible hedges should not be cut annually and should be allowed to reach a height of at least five foot and a width of four. Hedgerow management should be undertaken on a rotational basis with not all of the hedges on a holding being managed at once.

Following the recommendations contained in this document and it's companion documents will enable you to ensure the continued well being of your hedges and to greatly improve them as a wildife resource on the farm.

Useful References

A Farmers Guide to Hedgerow and Field Margin Management. Nick Southerton & Robin Page. Game Conservancy Limited. 1998.

Farming and Wildlife. A Practical Management Handbook. John Andrews & Michael Rebane. RSPB, 1994.

Field Boundaries Technical Advice Sheet 1. Hedgelaying and Coppicing. Durham County Council 2000.

Field Boundaries Technical Information Card 3.Hedgetrimming. Durham County Council 2000.

Farmland as a habitat for bumble bees. S.Corbet ., N. Saville , L. Osbourne. In 'Forage for Bees in an Agricultural Landscape'. Editor Andrew Matheson. I.B.R.A.

Hedges and Hedgerow Management. Bomfords.

Hedging- a practical handbook. Alan Brooks and Elizabeth Agate. British Trust for Conservation Volunteers. 1998.

McConnel. Power Arm hedge and Grass Cutters.

The Protection of Field Boundaries. Minutes of Evidence. Environment, Transport and Regional Affairs Committee. Environment Sub-Committee. House of commons Session 1997-98.

TIBRE Handbook. Scottish Natural Heritage.

ou book
FWAG handouts
Devon hedge pack
Kirby
Boatman monograph No 58
Farming and wildlife
Silsoe study
BTCV Hedgelaying
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