METHODS OF BEAK TRIMMING

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A review was requested by the Rural Industries Research and Development Corporation to obtain information on the range of beak-trimming methods available or under development. Information on the effects of beak trimming on the welfare of poultry have been thoroughly covered in other reviews (e.g. Hughes and Gentle, 1995). Beak trimming is performed early in the life of commercial hens to decrease injuries caused by the behavioural vices of cannibalism, bullying, feather and vent pecking and to avoid feed wastage. It involves partial removal of the upper and lower beak using an electrically heated blade. Without a correct beak trimming program egg producers risk heavy losses of chickens and pullets from cannibalism and, in the laying stage, from protrusion and vent pecking. Beak-trimming of birds at 7-10 d is favoured by the Industry but research over the last 10 years has shown that beak-trimming at 1 d-old causes the least stress on birds. Correct beak-trimming can result in greatly improved layer performance but improper beak-trimming can be detrimental. Re-trimming is practiced in most flocks, although there are some flocks that only need one trimming. Given the continuing welfare scrutiny of using a hot blade to cut the beak, attempts have been made to develop more welfare friendly methods of beak-trimming. Despite the developments in design of hot blade beak-trimmers the process has remained largely unchanged. That is, a red-hot blade cuts and cauterises the beak. The variables in the process are blade temperature, cauterisation time, operator ability, severity of trimming, age of trimming, strain of bird and beak length. This method of beak-trimming is still overwhelmingly favoured in Industry and there appears to be no effective alternative procedures.

Sharp secateurs have been used to trim the upper beak of both layers and turkeys. Bleeding from the upper mandible ceases shortly after the operation and there is considerable beak regrowth. This method has not been used on a large scale because of anecdotal reports of cannibalism outbreaks in birds with re-grown beaks. A robotic beak-trimming machine has been developed in France, which permits simultaneous, automated beak-trimming and vaccination of 1 d-old chicks at up to 4500 chickens per hour. Use of the machine has not been successful due to weight variation in the chicks, incorrect loading causing chicks to drop off the line and variable degree of beak-trimming. Capsaicin can cause degeneration of sensory nerves in mammals and decreases the rate of beak re-growth by its action on the sensory nerves. Capsaicin is a cheap, non-toxic substance that can be readily applied at the time of less severe beak-trimming, but suffers the disadvantage of causing an extreme burning sensation in operators who come in contact with the substance during its application to the bird. A method was reported which cuts the beaks of 1 d-old chickens with a laser beam. No details were provided on the type of laser used, or the severity of beak-trimming, but there was regrowth of the beak. Feather pecking and cannibalism during the laying period were highest among the laser trimmed hens.

Liquid nitrogen has been used to declaw emu toes but was not effective. There was regrowth of the claws and the time and cost involved in the procedure limits the potential for using this process to beak-trim birds.


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