

Reducing injury and mortality in broiler chickens during transport

Animal welfare has been of great importance in key global markets and especially in European Union member countries for some time now.

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In Chile, the subject has become relevant since the signing of the Free Trade Agreement with the European Commission in 2003 and the entry into force of Law No. 20.380 on the protection of animals. Furthermore, the poultry industry realised that stress during handling resulted in sometimes substantial economic losses.

Moreover, certain stages of the productive life of poultry can increase this level of stress, such as the transfer of incubators to livestock buildings, heat stroke, vaccinations, and loading and transport to the slaughterhouse which can result in large scale economic losses due to disease outbreaks, declines in production, losses in livestock buildings, and higher withdrawals for fractures and bruises at the slaughterhouse, dead animals on arrival, and

the presence of PSE meat. This situation resulted in farmers looking for alternatives to reduce stress during handling.

This study focuses on the use of an essential oil air diffuser, Fumagri Comfort, with calming, sedative, and immunostimulatory properties, to name but a few of its qualities, to promote poultry welfare. Evaluations were based on lesions found on carcasses.

Equipment and method

The study was conducted in two poultry production sectors. Based on a random sample four barns containing female broiler chickens of at least 37 days old were selected; one treated group in two barns and one control group in the other two barns (see Fig. 1).

The treatment consisted of a blend of essential oils diffused in the air by a diffuser (Fumagri Comfort).

The blend was composed of three essential oils: Cajeput (antiseptic, expectorant), Litsea cubeba (calming, sedative, anti-inflammatory, and antifungal) and Tea tree (anti-inflammatory, antibacterial, antiviral, and stimulates

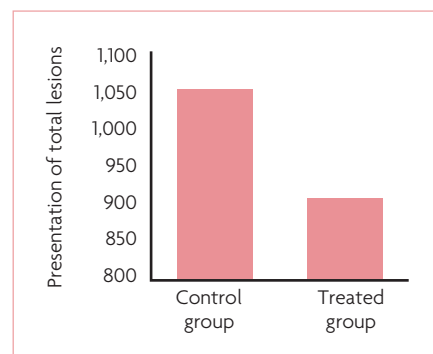


Fig. 1. Comparison of the total frequency of lesions in the group treated with Fumagri Comfort and the control group.

immune response). Three consecutive 30 minute applications were made at 24 hour intervals and at doses of 0.3g/M3, at the time of day when the temperature was the lowest (under 26°C).

The following observations were recorded at the slaughterhouse: dislocated wing, lacerations (tail, breast), bruises (breast, legs, wings), scratches, and broken wings or legs.

Results

Table 1 shows the main findings concerning the reduction in the percentage of lesions on poultry following use of Fumagri Comfort.

The main effect observed was fewer lacerations to the breast with a reduction of up to 80%, which is a statistically significant difference.

In economic terms, the reduction of lesions to the breast is relevant because this is the cut with the greatest commercial value. In general, the reduction in the number of lesions had production implications, through lower withdrawals, resulting in a positive economic impact.

Conclusions

Use of the blend of essential oils administered by a Fumagri Comfort air diffuser had the effect of reducing the number of lesions, in particular lacerations to the breast. ■

Table 1. Summary of the main observations of fewer lesions with Fumagri Comfort prior to the slaughter of broiler chickens.

Sector	Production area	Lesions	Reduction (%)
1	Plucking area	Dislocated wing (capture)	25
		Scratch (queue)	34
	Livestock building	Scratch	4
	Capture	Leg bruise	24
		Wing bruise	5
		Dislocated wing	22
	Slaughter room	Laceration (breast)	73
2	Plucking area	Dislocated wing	24
	Livestock building	Scratch (tail)	23
		Scratches	27
	Capture	Dislocated wing	50
	Slaughter room	Dislocated wing	37
		Laceration (breast)	80