Training Merino sheep to respond to visual and auditory cues

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Abstract

The feasibility of training sheep to approach a stimulus was investigated in three experimental groups and a control group of fine wool Merino sheep (n = 11 in each group). The experimental groups (n = 11) were trained to approach either a visual (V), auditory (A), or visual + auditory (V+A) stimulus over eight training sessions and were subsequently tested in a T-maze for memory retention on six occasions over a 4-month period. Four testing occasions were spaced at greater than 30 days apart while two were less than 3 days apart. Sheep learned to approach the cues during the training period and the tests indicated that the sheep retained memory of the cues for over 130 days without reinforcement. The controls received no contingency exposure and made no choice in the T-maze test. The proportion of correct stimulus choices (□s.e.m.) in theT-maze averaged over the four longer-spaced testing occasions were V 0.61 (0.06), A 0.50 (0.11), V+A 0.77 (0.04). These differences approached significance (P = 0.058). Sheep trained to the V+Astimulus performed significantly (P < 0.05) betterin the T-maze than sheep trained to the Astimulus alone. Comparisons over the shorter-spaced testing durations indicated that the sheep quickly learnt not to approach the stimulus (temporary extinction) when no food reward was available. Individual temperament of the animals was not related to their learning. This study highlights the potential for the use of VandAcues in manipulating the movement of sheep which may be useful for farm management purposes.