



Welfare effects of introducing and separating/reintroducing individual goats

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Abstract:

In goat husbandry, several management procedures are associated with regrouping of animals, e.g. introduction of unfamiliar goats or temporary separation and subsequent reintegration. In two experiments, we thus aimed to quantify the effects of a) introducing (for five days) an unfamiliar goat into an established herd using both horned and hornless groups, and of b) separating (two days) and reintegrating (three days) individual goats. In both experiments, we collected data on social interactions, lying and feeding behavior, and concentrations of fecal cortisol metabolites. Data were analyzed using linear mixed-effects models. In the first experiment, introduced goats showed substantially longer lying times, shorter feeding times and elevated concentrations of fecal cortisol metabolites. Further, introduced goats received most agonistic interactions on the first day. These changes were found in all groups, but were more pronounced in horned goats. During the second experiment, we investigated whether an increased level of contact (visual and tactile) with the original group during separation could reduce the negative effects of separation and reintegration compared to only allowing for acoustic contact with the group. Separated goats showed shorter feeding times during separation and higher fecal cortisol metabolites concentrations during both periods. Increased contact during separation mitigated these effects. Both the introduction of an unfamiliar individual into established groups and the temporary separation of individuals from the rest of the groups led to clear stress responses and should thus be avoided whenever possible. If separation is unavoidable, visual and tactile contact should be permitted to mitigate adverse effects.