Monitering van veekraal-geassosieerde vliegbevolkings by Karan Beef voerkraal

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Monitoring of feedlot associated flies fly populations at Karan Beef feedlot. Flies associated with feedlots have important impacts, especially regarding economic impacts such as meat production, feed intake of cattle, the influence on production costs due to chemical fly control as well as environmental impacts due to possible bio-accumulation of insecticides and the development of insecticide resistance in insects. The painful irritation caused by haematophagous flies cause cattle to stomp their feet and bunching of cattle to avoid fly irritation. This avoidance behaviour has a negative effect on mass increase. Integrated fly management programs is the preferred solution to address these impacts

The first step in the development of an integrated fly management program is an investigation into the composition of the fly population in feedlots for the development of threshold levels for chemical control measures. This project reports on an initial determination of fly populations in a feedlot. The composition of fly populations was determined with different fly trap types in areas noted for severe irritation on cattle. Nzi passive tsetse type trap, green Chinese baited trap and 'redtop' baited traps were used. Collections were carried out from January 2012 to May 2012.

The three most important fly species collected which cause the biggest feedlot problems were the stable fly (*Stomoxys calcitrans*), the house fly (*Musca domestica*) and a few horse fly species (Tabanidae). The Nzi trap was by far the most effective trap for the collection of the haematophagous flies. The Nzi trap was further used to determine the daily distribution of *Stomoxys calcitrans* and showed that most flies were collected between 11:00 and 15:00.

Further research is carried out on the development of an integrated fly control program against nuisance flies in feedlots with the ultimate objective to decrease the economic and environmental impacts in feedlots and to increase profitability.

Vlieë geassosieer met voerkrale het belangrike impakte veral ten opsigte van ekonomiese impakte soos op vleis produksie, voedselinname van beeste, die invloed op produksiekoste as gevolg van chemiese beheer van vlieë asook omgewingsimpakte weens die moontlike bio-akkumulasie van chemikalieë en die ontwikkeling van insek weerstand. Die pynlike irritasie van bloedvoedende vlieë veroorsaak dat beeste hulle pote stamp en saambondel om irritasie deur vlieë te vermy. Hierdie vermydings gedrag veroorsaak dat massatoename negatief beïnvloed word. Geïntegreerde vliegbeheer programme is die aangewese oplossing om die ekonomiese- en omgewingsimpakte aan te spreek.

Die eerste stap in die ontwikkeling van 'n geïntegreerde vliegprogram is 'n ondersoek na die samestelling van die vliegbevolkings in voerkrale vir die ontwikkeling van drempelwaardes vir chemiese beheer maatreëls. Hierdie projek rapporteer oor die aanvanklike ondersoek van vliegbevolkings in 'n voerkraal. Die bepaling van die samestelling van die vliegbevolking in en rondom Karan Beef is bepaal deur verskillende tipe vliegvalle in voerkraal gange oop plekke waar die vlieë die meeste irritasie vir die beeste veroorsaak. 'n Nzi passiewe tsetse tipe val, 'n groen Sjinese lokval, 'n blou Sjinese lokval en 'n *redtop* lokval was gebruik. Die monitering is gedoen in die tydperk vanaf Januarie 2012 tot Mei 2012.

Die drie belangrikse vliegspesies versamel in die valle wat die grootste probleme in voerkrale veroorsaak, was die stalvlieg (*Stomoxys calcitrans*), die huisvlieg (*Musca domestica*) en perdevlieg (Tabanidae) spp. Die Nzi val was by verre die mees effektiewe val om bloedvoedende vlieg spesies te versamel. *S. calcitrans* is geïdentifiseer as die spesie wat die meeste voorgekom het. Vlieë was versamel deur die Nzi val om die veelheid van *S. calcitrans* op sekere tye van die dag te bepaal Die meeste *Stomoxys individue* was gevang in die Nzi trap tussen 11:00 en 15:00.

Verdere navorsing word uitgevoer op die ontwikkeling om 'n effektiewe geïntegreerde beheer program teen skadelike vliegspesies, met die uiteindelike doel om die ekonomiese en omgewingsimpakte impak in voerkrale te verminder en winsgewendheid te verbeter.