

Long-term (hopefully) Cheetah Fly (*Hippoboscus longipenis*) control in the holding camps of AfriCat Welfare Centre, Okonjima, District Otjiwarongo, Namibia.

Primary concern: How to control effectively the large numbers of the Cheetah fly (*Hippoboscus longipenis*) fly on: Cheetahs, Leopards and Lions in a captive environment.

We looked at the numbers/burden of flies on captive vs free ranging cats –the numbers were totally out of proportion, more towards captive cats. The number of flies were many, that they bothered the cats constantly to the point, that it was visibly obvious: the cats were stressed, their behaviour was not constant, rather “aggressive to a certain degree”.

We looked at their life cycle, looked at different options of approach to reduce the numbers, taking the practicalities into consideration.

The following **control measures** were considered:

Burning the camps to reduce breeding and hosting sites,

Utilize *rubbing trees* / sites treated with chemicals that hopefully would attach to the fur to deter the flies,

Use ‘*channels/trap*’ type of funnels for “go-thru’ spraying,

Medicate systemically / per-os with non-on species registered medicine, (extra-polated onto wild cats - with the explicit understanding: extra-lable use!)

The fourth alternative, with the expressed knowledge of extra-lable use:

Presently 3 commercial registered products are available for the use in domesticated cats:

Bravecto: Tablets per os every 3 months, active against fleas and ticks

Comfortis: Tablet effective against fleas

Seresto: Collar to be able to apply onto the neck, effective against fleas and ticks

Not seeing the cats daily, (positive for objectivity), the set predetermined observation evaluation markers were applied to measure success or failure.

The **markers** were:

Fly numbers: lateral body, neck area, loin groin area

Visual approach of animal as such pre-entry into the feeding camp and towards human – me – and the feeders – known good people,

Their *approach towards* the food / meat

The type of *chewing behaviour* / aggression with constant calm chewing motion while eating

Coat / Fur quality

Body weight / Body Score (BS 1-poor to 5 severe over weight)

Environment (Feeders were bothered)

Observation period: Every 4 weeks every individual cat was intensely observed closely against the set markers.

Observation Findings:

Nearly fly free after 4 week's treatment, but very marked outstanding feature were:

Fly numbers; Although cheetahs and leopards were *fly free*, while on the feed-run, I was bothered by those flies, i.e. the fly is in the environment, but not on the cat, thus presumably the applied medicine is/should be effective.

Expression – their "aggressive/stressed?" behaviour changed towards being relaxed, and showing similarities again towards their counterparts on free range land – measured / visualized from their facial expression (different interpretations to a different people)

Feeding behaviour changed towards an ongoing, constant "aggressive", enjoyable bite and chew motion during feeding.

Coat quality improved to become again shiny and elastic, and over a 3-month period showed weight gained,

Body Score: varies from BS -3/5 to +3/5 all except 2 cats up to -4/5 suspected (susp.) slightly improvement?,

The cats' living environment was maintained at the same level as previously:

All their offered food (no additional vitamin / mineral supplementation), care, environment, etc. all maintained at the same level.

In February 2016, only the lions showed a visible, sudden, marked raised level of tick infestation, visible on the short smooth skin body parts, (due to sudden rain), in numbers not acceptable.

At that point they still had visible fly numbers on / around their body, vs, clean captive leopards and cheetahs.

The commercial product was changed to a different one (from Comfortis to Bravecto) and with-in a couple of days all 4 lions were visibly fly and tick free; (one lion was darted in March 2016 for another reason, at that point also specifically examined for flies and ticks all over the body – free of visible external parasites).

Benefits: Short and Long Term:

Reduced constant stress level,

Susp. slight alteration in body metabolism to lesser protein drain – catabolic effect,

Susp. lesser ulcerative effect on the GIT mm, i.e. lesser degree of ulceration (speculative effect – needs scientific evidence),

Susp. a positive effect on the immune system, (speculative effect – needs scientific evidence),

No Hippoboscus flies were seen on the cats and feeding personal,

As these products are specifically tested and registered on companion animals but not in free-ranging wild fields,.

Only constant future constant monitoring with regard to physical and clinical observations, gastroscopy and blood and serological parameters evaluation, on a wider ranging cat population (captive vs. free-ranging cats) will shed some light to the long term product effect, with regard to the welfare of the medicated cats.

Conclusion:

The aim to reduce numbers was achieved,

Quality of life for the captive cats improved visibly,

3 different commercial available products were used, (1 product able to apply to one cat only),
Management knows the wording: Extra-label use with all its possible consequences!

Hardly any difference in visual observations was noticed between the 3 products,
All had their primary intended required effect to reduce the fly burden,

A cost analysis had been performed, to outline the financial implications (some variations will
be looked at to reduce treatment costs, but still maintain quality of life for the captive cats),

This project is financed directly on short term by AfriCat HQ,

A suggestion was made to maintain this Rx schedule for one year, (Nov 2015 – Oct. 2016).

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