



A Chemical Free Method for Controlling Ectoparasites

64. Tanga Technical

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Introduction:

For so long time agriculture sector has been important sector for the world's development especially in the third world countries like Tanzania. Nevertheless the sector has incurred a lot of costs and expenses in controlling ecto-parasites which affect livestock like ticks, lice, fleas etc. Many of the chemicals used to control these ecto-parasites are detrimental to nature. Chemicals such as DIP, DUP etc. are said to be a source of mutations, others cause blindness, respiratory anomalies and cancer hazard.

In our project we introduce a method which is friendly to the nature and not harmful to human health. This medicine is made from the sap of a natural tree named as "Ooltemwai"

Method:

This name of the tree is from Maasai language. Ooltemwai is the tree mostly found in tropical regions like Manyara, Arusha and others and is scientifically named *Commiphora swynnertonii*. We believe that through the use of this method we can control ectoparasites, secure human health and improve agriculture in third world countries like Tanzania. We are expecting this medicine to be better since is effective in killing harmful ectoparasites and it has no chemical content. Also easy to be applied, cheap, affordable and friendly to the environment.



The sap is collected in a vessel fitted with a normal filter or alternatively a piece of cloth.

Material used; A natural growing tree called "Ooltemwai"

- Panga, fractional distillation column, filter and a collecting vessel, Heat source

Ooltemwai sap preparation The cut is made on the shoot of the tree to extract the sap. The sap is then boiled or warmed so as to obtain a pure Ooltemwai sap. The pure sap is therefore cooled and being stored in a dry container.

Application Of Ooltemwai Sap

40ml of the sap can be mixed with one liter (400ml added to 10litres) of water then applied or sprayed on the skin of the cattle by using a spray pump.

The sap should be sprayed all over the skin of animals especially to parts that are much attacked by ectoparasites

The sprayed cattle have to be retained for 15minutes and it is advised to spray the sap during morning time.

For best results, number of animals to be sprayed should be well known.



Results:

The preparation of the sap solution was done stated above.

20 Cows attacked by ticks were selected.

The number of ticks were counted and there total was obtained before spraying with the numbers shown in the table above.

The sap solution was sprayed to the cows then left for three days.

After three days the cows were checked to find any ectoparasites.

After three days we observed no ticks at all on the skin of most of 20 cows and

The numbers are shown in the table aside.

COWS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
TICKS	5	2	2	7	4	1	9	6	14	2	4	2	3	8	11	1	7	2	8	5



Before and 3 days after application

Dorobo names of medicinal plants	RFC	Disease treated by the plant
Ooltemwai	1	Ectoparasiticide (kills ticks, fleas, mange mites, bed bugs) Dental pain Worms Expeller Sexually transmitted Infections (STI) Chest problems, and coughs Wounds / recalcitrant ulcers

Other uses of the Ooltemwai plant (1)

COWS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
TICKS	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-

Conclusions

We conclude that through the use of this method (**Ooltemwai solution sap**) can lead to tremendous improvement in agriculture sector, improve livestock keeping, reduce chemical exposure and hence bring development and change lives of people who engage themselves in livestock keeping especially in the third world's countries like our country Tanzania.

Conservation of *C. swynnertonii* should be an important activity to ensure sustainable availability of the plant. Therefore, agronomical studies should be done on propagation and on whether it can be introduced in other areas.

References

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