



Design Of A Local Incubator

48. Humura

Saul Elavius and Alexander Alan

Introduction:

On visiting various hen keeping areas (poultry farms) example Maruku poultry farm in Kagera, we observed that there is a problem for villages to afford industrial incubator, which leads to the production of few chicks.

So, we decided to find out a way on how to make a local incubator that will be at a low cost hence accelerating the eradication of poverty in village among the poor families.

An incubator is a machine used for hatching eggs of domestic birds such as hen eggs.

According to our project we came out with an idea of making a local incubator of two models aiming on all nature of all kind of poor families to afford them for high products of chicks of a good and quality in eradicating poverty and creating

Method:

Before constructing the incubators (local incubators and making our research in all of the poultry farms Three major points should be put in fore line so as to achieve our aim

1: Our local incubator must relatively cheap so as to be managed and increase profit

2: An incubator works properly under optimum temperature of 38°C

3: Thermometer is very important to show the required temperature.

Through making the research in most of area in Kagera like Kishanda Rubya Kabulala, and Kashenshero .we found that most of the people wants the products from hen like uric Acid (fesses),Eggs and Meat. While the production of these are below 40% in proportional to the population And then the poultry farm can result into other production or activities like fish keeping because the fesses (uric Acid)from the len is being wood as the food to developing fishes.

So through our project we instead to increase the production to about 80% in proportional to people requirement and enhance other activity which is filing activity: Since the areas surrounding lake Victoria is full of water which will be accompanied with the availability of food for fishes(Uric Acid) form the hen.

Then the analysis of date will be made after the constructing the use of our constructed local incubator, which is expected to be positives as our plans on our project:

MATERIALS FOR FIRST MODEL	MATERIAL FOR 2 nd MODEL
1. Feathers or cotton	1. wooden timber cotton wool
2. cow dung	2.Colours i.e. Black and Green
3. wooden timber	3. Kerosene lamp or Charcoal banner
4. Alcohol Thermometer	4. Alcohol Thermometer
	5. Local made thermostat for temperature regulation
	6. Local made oven

Results:

After the egg have been incubated through using the incubator of the first model made by using cow dung. The results were as follows.

Period	Number of eggs incubated	Number of chicks hatched	Percentages
1 st tern	12	11	99%
2 nd tern	24	18	92%
3 rd tern	40	38	91%

From the chart show in above, shows that not all eggs incubated was hatched. This is due to that some of the factors which are supposed to be need maintained were not fulfilled. But all in all the result obtained were very conducive since low percentages of eggs which were hatched was about 7% and the high percentages was 93%. This proves that cow dung incubator can all be applicable when incubating domestic hens and hence factors outlined are very important follow.

Also the results we obtained through using the second model of the cotton wool made incubator were as follows,

Period	Number of eggs incubated	Number of chicks hatched	Percentages
1 st tern	24	24	100%
2 nd tern	30	28	98%
3 rd tern	12	12	100%

From the chart above which describes the use of the second model of cotton wool incubator? Shows that during the first and the third period all the number of eggs incubated chicks were all hatched since the factor were very much considered have going out attracting results. So through the use of two different models of locally made incubator, The cotton wool incubator seems to be more useful hence it gives out good results of 98% of the chicks hatched.

Conclusions:

Through the use of locally made incubator, people of low class level as well as those of high class levels will easily use there locally made incubators because they do not involve the use of dowelled material hence can be locally afforded.

This will also minimize the rate of depending on the hen itself to hatch few eggs. Also this will improve the condition of poor class people to hatch many eggs and hence they can sell them to obtain the good standard of living and other essential materials

And more eggs can be hatched depending on the size of the incubator.

References

The project came on and get be worked on after reading from ordinary physics book four on the principle of incubator. And come on with the idea of constructing our local one.

References:

Acknowledgements:The preparation of this project involved various people. We would like to extend our heartfelt gratitude to all people whose contributions made us more encouraged and later realize to a great success in producing this project specifically we acknowledge all.

Biology teachers who have played a crucial role to enrich our project.

The contribution of the following people from different departments and disciplines will always be remembered including.

MR. OCTAVIAN ENEREST OUR LEADING TEACHER

MR. ALMACHIUS .F. MAFIGI OUR HEADMASTER

Further information:

Download at: www.youngscientists.co.tz/posters