



## Calf Raising is the Subject of Science and Art

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Calf management is the subject of extensive management at farm because; this is a major source of revenue and replacement of heifers in terms of good genomic at livestock farm. Esthetically, this is also a Source of pleasure for investors. There are different modern and traditional practices adopted at farm for their raising. Now, the question arises from where it starts at farm.

It started soon after the Calf is born. Technical Staff make ensure the following mandatory things. Let the dam for adequate period to lick the calf usually 20-25 minutes. Checked the navel cord of calves for the presence of rupture or tear of navel, if have such issue it may be ligated or tie with the help of Thread. In case of assisted calving, calf should be examined for any abnormality (fluid in lungs, trauma). It should be graded for good birth weight because calf having optimum weight are less prone to calf scour and pneumonia. It should be applied tag against dam id (separate series for heifers at farm). It should injected vitamin AD3E and Inj. Selenium.

The thing that is very crucial for calves is Colostrum feeding as soon as possible after death Because Colostrum is rich in nutritious substances i.e. fat, Protein, Carbohydrates, vitamin A, Vitamin E and Vitamin. Most importantly it should be within 30 minute to 1 hour after birth. For the Colostrum feeding two important things must keep in mind. First is adequate amount and 2<sup>nd</sup> is good quality of Colostrum (in terms immunoglobulin's). For the parameter of quality checking Colostrum. There are two instruments which can be used at farm.

- Colostromter
- Refractromter

### Clostrometer

This is a glass made gadget, working on the basis of density measurements, immunoglobins are vital part of Colostrum as IgG, IgM, IgA. It works on the principle, if high level of immunoglobulin's are presents. This will gives the green color on its chart for quality. If medium level is present, it will give blue color and if very low level of Igs. This will gives Red Color Which is discarded and did not keep to offer to calves. Because immunity transfer depends on these quantities, passive immunity is transferred by colostrum feeding that will activate the calves immune system within 21<sup>st</sup> days of colostrum feeding.

### Refractromter

This is a steel made gadget which works on the same principle as CLOSTROMTER but it has a fixed demarcation of scale that tells about the quality of Colostrum.

For the adequate quantity, tube feeding is passed to delivered the 4 liter of colostrum in abomasum. For this purpose, the technically staff must be trained enough because it may cause the death, if aspiration occurred and may cause the damaged to esophagus. After 6 hours the colostrum is feeded again having more than 25 value on clostromter and more than 10 on refractromter to ensure good quality and quantity. Hence, it is highly recommended these gadgets should bring into practice to ensure, hygienic and good quality clostrum for uniform raising of calf crop without a bolt in the blue.

Another important Aspect, is the record keeping to take the decision about Culling of low performing animals, timely breeding, weighting and overall spectra of their health. How it can be main-

tained to address this, Excel file can be maintained and commercially fabricated software's can be used such dairy cow, dairy asan etc.

Bedding of cages to kept the calf is needed to be very neat and clean. This should be comfortable for the new born calves and should be replaced daily to minimum the microbial load i.e. wood shavings, wheat straw and sand can be used for this purpose.

It is recommended clostrum is feeded first two days to calves water should not be over there during 1<sup>st</sup> three days on the 3<sup>rd</sup> day.

Milk feeding is started as per the body weight of calf. It should be 2 to 2.5 liter during 1<sup>st</sup> Fifteen feeding days of birth at one time feeding. I suggested feeding can be twice a day rather than three times. It is a myth, three time feeding gives outstanding result this is true only in some circumstances where calves have maximum body weight and management practices are optimum these are not laborious to staff and calves. Then we can expect good results otherwise a big NO. It is recommended to check the followings hard nuts to have good result for rearing of Calves.

- Feeder
- Feeding time
- Hygiene of fomites
- Quantity of milk
- Temperature of milk
- SCC
- Nipple.

Feeder should has markings for exact quantity and it has smooth nipple that is convenient to suckle by the calves. It is suggested, veterinarian should present at the time of feeding for smooth feeding and observation of Calves.

There is another concept for the CIP (Clean in Place ) of utensils fomites are carriers of infection via viruses, parasites, bacteria, protozoa can communicate to calves.

Calves are very unique from large ruminants with respect of earlier digestive system. They have non functional rumen at birth that starts to develop after 2 month of birth. its development is wholly and solely depends upon solid feed and management. Most important thing is calf starter (Solid diet). What is to feed and how it to be ?The answer of this question, we must keep in mind, the calf

requirements and upcoming development of rumen. Calf starter should be Palatable and high in protein. Daily fresh water is provided to calves.

Stress is any emotional displeasure and social conflicts which activates body hate sentiments. Which reverses the positivity of any living beings. there should be minimum stress on calves in terms of feeding, noise, hygiene, indoor stress, managerial issues.

After 90 days calves can be weaned. what is weaning ? it is gradually reduction in liquid feed and shifting of calves to Solid feed. This stage is very much important because calf gains good weight over here, in preweaning stage calf weight gain dipped because of the reason, is there issues of calf diarrhea and pneumonia. Calf scour is mostly from day 1<sup>st</sup> to 21 days of age diarrhea could be fatal for calves. Its management is very much significant to save the life. Calves becomes dehydrated and goes into acidosis that causes the slugging of the calf. The need is, they are wisely rehydrated and give a suitable antibiotic along this.

Pneumonia is the inflammation of lungs which causes dyspnea and abdominal breathing to manage this, NSAIDS, Bronchodilator, Antihistaminic, florphenicol is suggested.

Vaccination and deworming is another important aspect of calves raising vaccine is started at day 21<sup>st</sup> of age. It is suggested. clostridial vaccine (covexin 10) is injected first. Later on a designated schedule is followed. Injectable deworming is recommended rather than oral dewormer like ivermectin as ivomec1%.

The purpose of this, is to highlight the importance of calves raising AND understands how to avoid to cut a finger and initiates such golden practices by following those calves mortality, incidences of disease, retarded growth can be avoided. This will also help out ours farmers to earn good business and uplift THE economy of our country in terms OF better growth in GDP and providing jobs to jobless.

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