

**Productive task** :

Task 1 – Estimate body weight, of your friend (at least 5) and compare your calculated weight with actual weighing balance weight.

Task 2-

Estimate body weight of at least 2 goats or 1 cow with your instructor.

**Concept** :

After going through this OER learner will be to calculate weight of the dairy animals.

**Tools** :

1. Animal for weighing, 2. Weighing machine or platform scale, 3. Measuring tape, 4. Measuring rod.

**Class-Age Group** : **8th +**

**Animal Body weight estimation**

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*Open Education Resource*

**Introduction –**

Weight is important parameter in deciding health status of any human or animal. By the same rule in animal husbandry business, weight of any productive cow/goat is very important in achieving balance and sustainable milk/meat production in dairy business. Even though weight of an animal is depend on many factors, like quality and quantity of feed, feeding time, disease or internal health of anima, climate etc. But most of the time weight of an animal is directly related to quality and quantity of feed. If our animals are fed correctly it not only gives us maximum output but also saves our input cost of feeds & fodder.

But every time this is not possible to take dairy animal on big weighing balance/scale to know their exact weight, so a simple procedure and calculations are made from which gross weight of the animal can be estimated. This method of weight estimation is based on basic physics we leant in 6-7th standard.

Before going into actual topic let’s see one cartoon story first -

**Cartoon Story:**

Ooh MY GOD, I got this such a useless cow, she is not giving me milk of even 2 lit / day.



Cow_Kicking_Over_A_Milk_Pail_Royalty_Free_Clipart_Picture_090104-200753-059048[1] - Copy



Ag AaiG ! Oooohh , you kicked me even though I am feeding you daily …..…..



Ooh my dear owner, have you ever thought of my health before expecting milk from me

What? Do you mean that I am not feeding you well?



Cow_Kicking_Over_A_Milk_Pail_Royalty_Free_Clipart_Picture_090104-200753-059048[1] - Copy

Yes that’s right. Have you ever estimated my weight first and the fed me? Sometime you feed me more than my capacity and sometime you completely neglect my feeding.

What your weight? How can I do this and how this is related to your health and milk production?

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Of course it’s related with my health and milk. Please go and ask a doctor who treat me and then expect milk from me.

OK I will go and learn this and try to feed you in proper way. But then I want promise from you that you will never kick again.

Cow_Kicking_Over_A_Milk_Pail_Royalty_Free_Clipart_Picture_090104-200753-059048[1] - Copy

Hello, kisan how are you? Do you have any problem?

Yes sir, I want to learn about how to estimate cow weight and how to feed them properly for more milk production.

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Ok , that’s good. Come I will teach you…….



Friend, from above story you may have learnt that in dairy farming business, if we want to harvest maximum output from mulching animals (cow/buffalo) health of the animal most important asset for you! So let’s learn how to estimate weight on cow requirement for proper feeding. Same method you can further use for weight estimation for goat and even for yourself!

Weight is very important indicator of healthiness of any animal; if weight of cow is in proportion to its age and lactation period then, we can expect good milk yield and new progenies. By estimating correct weight of mulching animals we can not only estimate it’s health but also plan proper feeding rate / fodder type and it’s economics too!

**Interaction Session:**

* **How we can measure weight of such big animals?**
* **Do we need to take them on weighing scale like human beings?**
* **Do we need to hang them on hanging balance like poultry birds?**

**NO not really, it is estimated by simple geometry calculation you may have learnt in 6th or 7th class.**

**Let’s see PPT given below to understand it** [**Click Here for PPT**](measure%20weight%20of%20animals.pptx)

**Precaution / safety instructions need to be taken while taking cow measurements:**

* **Mulching animals are not always very welcoming for taking their measurements, so make sure that animal allowing you handle them safely.**
* **While taking body measurements animal need to stand straight and still.**
* **Keep proper distance while taking body measurements of animals.**
* **Avoid heavy noise / feed animal for making them friendly.**
* **Students need to do this activity in presence of instructor / teacher / mulching animal owner.**

**Self Assessment questions:**

* Visit your nearest Animal Husbandry dispensary to understand importance of weight measuring of animals and feeding of animals.
* Write down formula for calculating body weight of animal.
* Discuses importance feeding of animals.

**Productive activity:**

* By using above method try to estimate weight of goat and compare its actual weight by measuring it on weighing balances.
* Calculate weight of cow if its body measurement is as – Length 170 cm diameter of cheats – 175 Cm.
* By using above method, try to estimate body weight of your friend.

**HPNPDL Session:**

* Find out science and geometric principles behind this method of age estimation.
* In the given formula of weight estimation, try to find out how dividing factor would be derived?

For more understanding this method you can also read PDF document given below-

**PDF 11-12.- Animal weight estimation (English) -**

<http://ag.arizona.edu/backyards/articles/winter07/p11-12.pdf>