

KIWI CALF FEEDING SYSTEM

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Thank you for taking the time to ask about the Kiwi Calf Feeding System. Bottle feeding calves is often unhealthy (resulting in unnecessary deaths), time consuming and expensive. While on a trip to **New Zealand** in January 1994, we saw dairy farmers had **improved calf health** and cut down on the time and expense of feeding dairy calves through the use of an approach that can be easily implemented in the United States.

The Kiwi approach has three essential elements: **1. A fenced, grass paddock** of one to two acres. **2. Plastic 35 gal. or 55 gal. barrels** fitted with a **special nipple**, or teat, of durable, long lasting rubber designed to fit in a 3/4 inch hole in the side of the plastic barrel. **3. Available shelter** for bad weather.

Using this Kiwi developed system **eliminates** most of the time and labor of daily cleaning of bottles and nipples as well the need to confine calves in unhealthy hutches. **Available grass in the paddock**

gets the calf eating forage sooner than traditional methods. It also has the advantage of building muscle through exercise because the calf is able to move around normally.

The **calf sucking on the hard rubber nipples** produces large amounts of saliva that **balances the PH in the stomach** towards the acid side, rather than alkaline, causing the calves to have a healthy appetite and absorb more nutrients and **reducing death due to scours**.

The **primary reason for confining calves to hutches is ease of bottle feeding**. With the **Kiwi Calf Feeder System** calves can be put immediately (after insuring each calf gets colostrum) on pasture. It is not recommended to put new calves in a small pen where disease is easily spread. **Shelter**, of course, is necessary during harsh weather. Portable shelter, moved after each weaning is best. **Calves in open pasture will be healthier**. The feeder should be left in the pasture and not cleaned until the calves are weaned, although exceptional weather may be taken into account in this regard.

One **55 gallon, plastic barrel will handle 14 to 15 nipples suitable for a dozen calves**. Nipples should be positioned about 24 inches from the ground at 5 inch intervals around the circumference of the barrel. The **height is important so the calf's head is in an upright position** insuring the milk goes into the 4th, or "milk", stomach and not into the first stomach where much of nutrient value will be wasted. Smaller barrels (for smaller groups of calves), say 35 gals, should be setup in the same way: nipples 24 inches off the ground, 5 inches apart. The nipples are designed to fit snugly into 3/4 inch holes drilled in the barrel, They are also designed to firmly insert plastic tubing about 30 inches long with an inside diameter of 5/8'i and an outside diameter of 7/8". **We have found it easier to insert the tubing into the nipple before inserting the nipple in the hole**.

When everything is set up and ready to go, take the barrel to the calf pasture and dump the milk, or high quality milk replacer, in it. **Judgment must be exercised to insure calves get adequate milk**. For example, if each calf is to get half gallon per feeding and you have ten calves, ideally five gallons of milk should be put in. But, **because some calves suck faster than others**, you may have to put in more than five gallons to insure all calves get adequate nourishment. When you think about it, calves on cows get varying amounts of milk depending on whether or not one cow produces more milk than another. Calves that drink more grow and wean faster and return higher profits. **Always have fresh, clean water available**. Most people put **water in the barrel between feedings and leave it with the calves**. This gives calves something to suck on instead of each other.

TRAINING: Calves need to be **briefly trained** to use the feeder and its hard rubber nipple. They also need to be briefly trained to **overcome the delay of the milk being sucked up the 30 inch tube**. This can be accomplished quickly using the following method:

Put 3 or 4 nipples five inches up from the bottom of a **five gallon plastic bucket with six or seven inches of tubing attached to the back of each nipple and fill the bucket with milk** just over the level of the nipples. When the calf sucks it gets milk instantly and it becomes accustomed to both the hard nipple and, as the milk level declines, to sucking hard enough to bring the milk up from the bottom of the bucket. Once this is accomplished **switch the calf to the barrel** with your fingers or hold the bucket next to the nipples on the barrel.

New Zealand dairy farmers use this feeding method to feed all their calves, often over a hundred at a time. It works, **it's healthier and it saves time and money.** Thanks for taking time to look at the Kiwi Calf Feeding System. **IT WORKS! We know you will like it.**



If you have questions and/or want to purchase nipples at **\$ 5.00 each, including tubing, in lots of 20 only**, e-mail Frank at ferhinehart@centurytel.net or call us at 417-589-8010.

Visit our web site at
www.brushcreekfarm.com

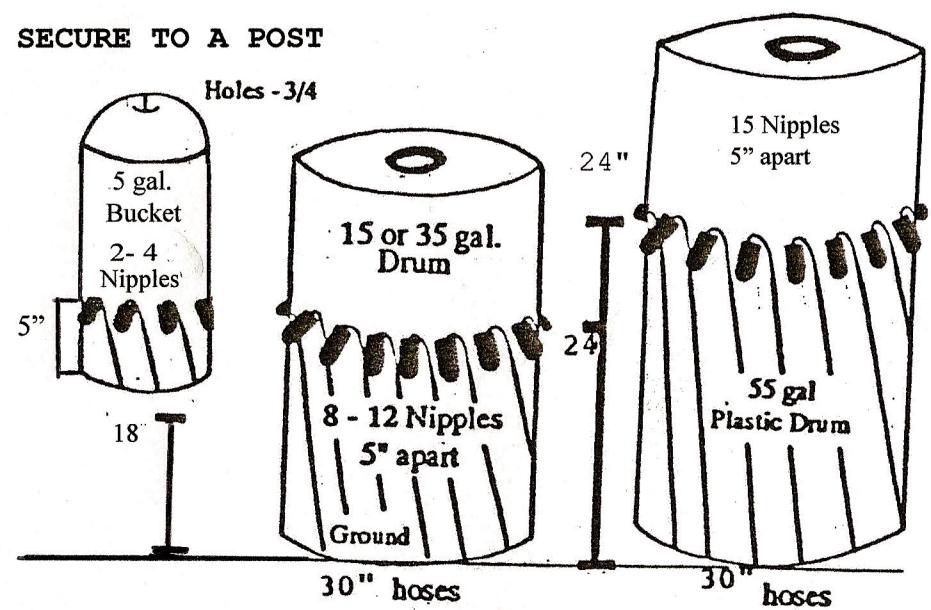
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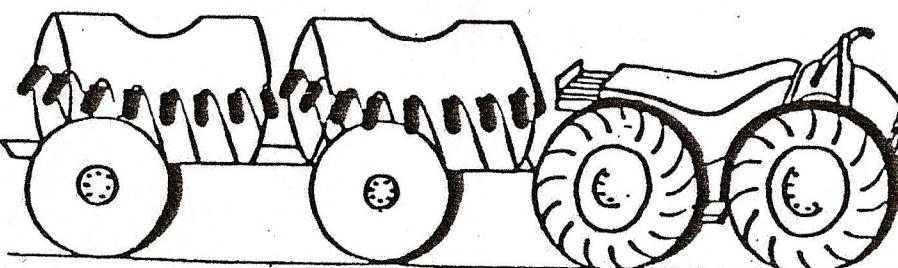
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SECURE TO A POST



35 or 55 gal Drums on Wheels-15 Nipples each with 24" PVC hoses



BARREL VERSUS BUCKET

Pressures of modern farming tend to make the average stock farmer completely disregard the physiology of the calf's digestive system. But a knowledge of this system and consequent requirements is vital if the calf is to be reared successfully.

When a calf is born, its **fourth stomach (the abomasum)** is three or four times the size of its first stomach (the rumen). This is because the **fourth stomach is the main digestive organ in early life**.

When it starts sucking, wagging its tail and bunting the cow's udder, a groove at bottom of the esophagus (food tube) forms a pipe. The suckled milk runs through this pipe directly into the abomasum (by-passing the first, second and third stomachs).

When the calf is fed from a **bucket placed on the ground** so that its head is down, the pipe does not become fully formed and some the milk gets into the **rumen where it is wasted** (drawing on right).

When sucking, the calf will feed often, **approximately every two hours**, and each time it does so, a **clot forms in the fourth stomach**. At the end of the day, this stomach is **packed full** of a number of comparatively small clots, each being acted upon by the digestive juices, **leaving no space for any other foodstuff** (drawing on left).

From birth, **fresh clean water** should always be provided. As the calf grows, he nibbles more solid food each day and drinks the correct amount of water. All of this goes into the rumen or first stomach, which gradually develops and grows.

When the calf is ready for weaning at around six weeks, **the rumen is three times the size of the abomasum** and is capable of taking on the main task of ruminant digestion.

