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Feed Causes and Correction of:

Low Butterfat Test

Excessive grain feeding depresses forage intake and may result in an abnormally low butterfat test. The problem becomes more acute, and occurs at a lower level of grain feeding when high moisture shelled corn or pelleted corn rations are fed. And, it takes a lower level of shelled corn than ear corn, to cause a low test. This is because ear corn contains about 20% cob which, as a roughage, helps prevent a low test unless other forage is completely withheld.

Immature forages, such as lush pasture, hay or silage, are frequently low in fiber content and may contribute to the low test problem. Fine grinding, grinding and pelleting of the forages or extremely fine chopping of silage, also cause a low test when fed as the only forage with liberal amounts of grain.

To return a low fat test to normal, it is usually necessary to reduce the amount of grain fed to a point where cows will consume about $1\frac{1}{2}$ lb. of hay (or hay-equivalent as silage) per 100 lb. of body weight (18-20 lb. per head daily). This is often complicated by feeding forages that are low in fiber content, that have been chopped too finely, or are low quality and poorly consumed. In such cases, it may be necessary to offer good quality baled hay for 7-10 days before the butterfat test will return to normal. The effect of forage intake on percent fat in milk is shown in Figure 1.

Increasing the fiber content of grain rations by using 1/2 or more oats, ear corn, or 1/4 to 1/3 wheat bran will also help. Fine grinding of grain rations should be avoided in low test situations. Heavy grain rations, composed of mostly shelled corn or wheat, should be fed at a lower level than lighter rations containing corn cobs, oats or wheat bran.

Experiments have shown that supplementing the ration with several compounds has improved butterfat test of cows fed low-hay and high-grain rations. A grain ration of 2-3% sodium bicarbonate (baking soda), plus 0.5% magnesium oxide, or a ration containing 10-15% partially delactose whey have also prevented lower fat tests. The minerals are unpalatable and are usually mixed with grain or silage to insure adequate intake.

Reducing grain intake to increase forage consumption is the most effective method of returning the fat test to normal, but it may involve a temporary drop in milk production.

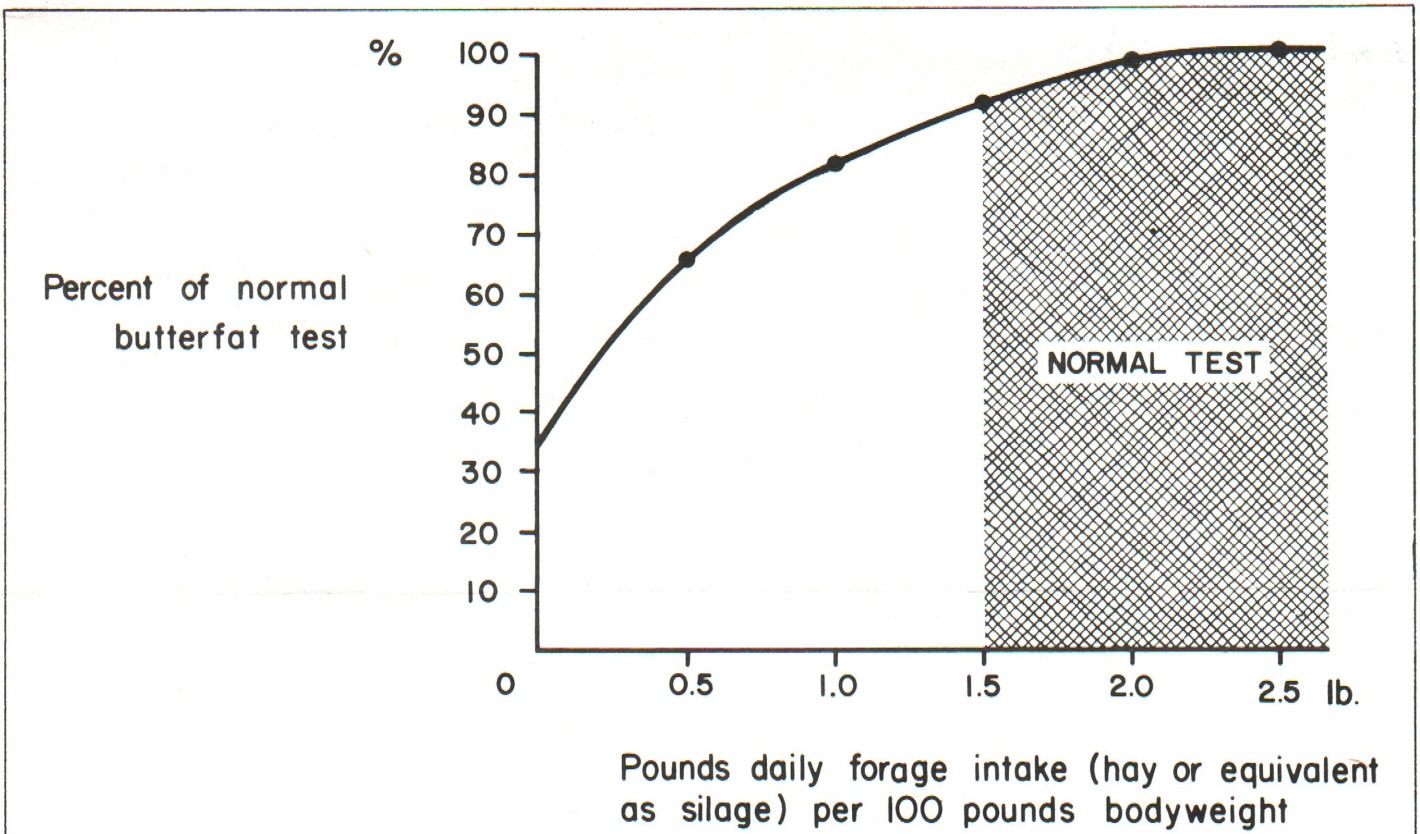

Figure 1. Effect of forage intake by dairy cows on percent fat in milk. Low forage intake and low test may be caused by feeding excessive amounts of grain, immature low fiber forages, or forages that are unpalatable.

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