Very few people anywhere realize its value as stock food. Few will believe that it is more than half as valuable as the best timothy hay, and that, when properly housed and fed, stock will thrive when straw constitutes a large part of their food.

Its digestible constituents, which really cover the true measure of value, as compared with timothy hay, are albuminoids as nine to thirty-four; fiber, nineteen to sixteen; carbohydrates, seventeen to twenty eight; fat, four to twelve; or, in money value, if the best timothy hay is worth $12, straw is worth $9.00.

But it must not be inferred that ordinary straw, as piled up and soaked from top to ground, has any such value. It is only good, bright, clean-housed straw, of which the same can be said of the timothy hay. If stacked, and poorly stacked at that, more than half its value would be wasted. Nor must it be inferred that stock will thrive if fed wholly on even the best barn-housed straw. The fact is, straw is very deficient in albuminoids and fat; its ratio is only one to thirty, and animals whose only food is straw would starve to death if fed long enough—starve because the nerves and muscles would not be sufficiently nourished. Nevertheless, good barn housed straw makes a capital food and is well worth the expense of shelters in which to house it. Even timothy hay alone is not a profitable food. Its ratio, one to nine, is to wide for the best results.

Suppose an animal be fed a mixture of clover hay and straw, half and half, the digestible albuminoids would be 4.1 %, while in timothy hay it would be only 3.4 %. The digestible carbohydrates in the mixture would be 37.6 %, while in timothy it would be 45.2. So it will be seen that this mixture would be much superior to the timothy.

But if to the straw be added one fifth its weight of cotton seed meal the mixture would countain 7.2 % albuminoids to 45 % carbohydrates, the nutritive ratio of which would be 1 to 6.5, which is much superior to timothy hay. If a ton of timothy hay be fed to stock they will get of digestible elements sixty-eight pounds of albuminoids, 904 pouds of carbohydrates, and twenty-four pounds fat. If a ton of mixture be made containing 1,800 pounds straw and 200 pounds cotton seed meal it would contain 78.8 pounds albuminoids, 618.4 pounds carbohydrates. and 23 8 fat, with a ratio of one to eight and one-half, a ration on which stock would thrive better than on the best timothy hay, and costing but a fraction as much.

But in order to have stock do their "level best" with straw as the basis of food some succulent food should be included with the daily ration. For this purpose nothing is better or cheaper, or more available than corn silage. In the absence of this, any kind of roots will answer. Or, if no kind of succulent food can be provided, then a mixture of oil meal and cotton seed meal, or of wheat bran and both the meals would be better than the cotton seed meal alone.

The difficulty in feeding straw and cotton seed meal is the liability of these two foods to induce costiveness, as that is the tendency of both these foods, and by putting in a portion of linseed meal, or this and wheat bran, this tendency would be corrected.

From present indications cotton seed meal will be cheap the coming winter, and every man who is so fortunate as to have a straw crop of any kind should be very careful to put it under cover if possible; if not, to see to it that it be put into a nice, compact stack, well topped out, so as to preserve it in the best possible shape, and thus by the use of the other foods as indicated, he can keep his stock in tip-top order, and in nine cases out of ten he will find when spring comes he has a surplus of hay. Of course wheat straw is what has been considered, as more than 90 % of all straw raised in this country is wheat. Many other straws are better than wheat even, and of course what has been said of that is more applicable to them. So take good care of all the straw.—*Hoard.*

STABLING COWS IN FLY TIME.

Ed. Hoard's Dairyman—This is one of those questions that occur annually. It is always old and always new. It is interesting always to the dairyman because it is important. To those who do not believe in "*fussing*" with cows it is not very interesting, but to the dairyman who is trying to work up in his calling it is a means of profit he cannot afford to let slip. Many men will tell you that they do not believe it is good for cows to be shut up in a hot stable in hot weather; these men, however, are those who never tried stabling their cows during fly time. No one who ever tried it will tell you it it not best for the cows. Would'nt you rather stay indoors out of the hot sun during the heat of the day? Of course you would; so would the cows. If you wanted to take a nice noonday nap would'nt you rather go into a nice, cool room, pull the curtains down so if there should chance to be a fly his bite and buzz will not disturbe you? Certainly you would; so would the cow. If you don't believe it, try it; that will be proof enough.

The theory is all right and so is the practice. You can just as well do it as not. It costs nothing, not even time, and it brings in money and saves you money. It brings in money because the cows will give more milk. and it saves more money because you will have a nice pile of manure by fall to put on your land right where you need it instead of having it dropped in some wallow hole or in some woodland or thicket where it is utterly wasted or where it is not needed at all. Cows do not feed much during the heat of day in fly time but get where they can best protect themselves from the flies and there fight them to the best of their ability.

I do not think fly screens are practicable. It is impossible to keep flies out of a cow stable by having screen doors etc., the same as we do for dwelling houses By darkening the stable, however, they do not bother the cows and they are allowed to rest in peace. We darken the windows by hanging up old fertilizer sacks. When they are ripped open they are simply a piece of loosely woven canvas or burlap and by using two of these making them double for each window, it darkens the stable just right and yet they are open enough so that the air can readily pass through them. If the wind blows hard they can be fastened with hooks at the sides and bottom or tacked all round just as you would a wire screen, and your stable is both cool and dark.

We have practiced stabling our cows during the day in fly time for several seasons and we would no more give it up than we would give up keeping them in the stable night and day in severe cold weatner in winter. They are fed hay and grain in the morning, (unless they are dry, when they are only fed hay) bedded down with good, clean straw, the cover to the watering trough (which is full of good, clean water) left up, and are not molested untill about five o'clock in the afternoon when they are given more water, fed a light feed of hay, miked, given their grain and then turned out for the night. They enjoy themselves then in pasture even if it is dry and short. Is this "*fussing*" with cows? If it is, all right. It is simply making them comfortable and unless they are made comfortable they certainly will not pay. The only extra labor involved is cleaning the stable, and this is nearly offset by being relieved of putting them in the stable but once each day.

Michigan. Colon C. Lillie.

GOOD COW JUDGMENT

We have sometimes thougt that old and experienced dairy farmers were about as likely to have a lot of notions that the used in place of sound judgment as any body else. It is very easy to drop into the "notion" department and continue to do business. For instance, we have heard since we can remember that one of the points of a good cow was "a deep flank." There is no foundation in real dairy experience for that feature. On the contrary, it is an indication of a thick, beefy tendency in the animal. The high arching flank, one which makes room for the udder is a much truer dairy sign. The breeders of the various dairy breeds have a store of breed marks which they are apt to insist on, and which have no significance what ever as indicating the functional capacity of their cows for the real work of a dairy cow The dark muzzle, tongue and points of a Jersey are diametrically met in the Guernsey by a light tongue, mealy muzzle and light points. The color fad and markings so tenaciously held by many Holstein breeders are simply so many notions, having no bearing on the power or capacity of their cows. In Denmark, that great dairy country, where the Jutland breed of cattle are mainly used, one would think the farmers by this time would have, their judgment down to "hard pan" on the external signs of a good cow. But a writer in the *Farming World*, of Dublin, tells us that if the calves do not show distinctly the Jutland "breed markings," they are "either killed or sold off the place." The writer adds:

"There was pointed out to me a Jutland cow, a little under the average size, but with an extremely well developed udder, and I was informed, about the best milker at present on the place, yet because she was undersized her calves were discarded."

This shows that we need to guard well our natural tendency to fall into mere fad notions about cows. The best way is for every farmer to make a systematic study of cows points with a note book in hand. Notice for instance, all the best cows in the neighborhood, and see how they agree on the question of a deep flank, large pouch, high rugged back bone, and rising pelvic arch at the root of the tail; add to this a full bright eye, and strong nerve power. Of course, all these points are to be coupled with good udder capacity.—*Hoard.*

Prof. Henry on Skim Milk.—Is it Worth 20 cts. a Hundred?—His Opinion of the Skim Milk from Certain Creameries.

In answer to a writer in the *Breeders' Gazette* who asked whether he could afford to pay 20 cts. per 100 for skim milk to feed pigs, with hogs selling at 4½ cts. per 100 lbs. live weight, Prof. W A. Henry, Director of the Wisconsin Experiment Station, made the following statement, which will serve as a guide in buying or selling milk:

As a bare proposition with no contingencies I would say, yes. For young pigs the feeder can find nothing equal to skim milk. It gives them a start that nothing else can. For such, feed three pounds of skim milk to one of corn meal. A mixture of half corn meal and half shorts is perhaps more satisfactory from a practical standpoint, though not theoretically. I think shorts are less harsh in the young pig's stomach. Certainly pigs fed shorts and milk do wonderfully well, while theoretically corn meal is the complement of the milk. As the pigs grow older, unless there is milk in abundance, reduce the proportion of milk gradually.

One pound of milk to each pound of grain with fattening hogs makes the grain wonderfully effective, and even half a pound of milk to one of grain will show good results. Under favorable conditions, where there are no serious losses or accidents and everything goes right, one can easily get 20 cts. a hundred out of his skim milk after reasonable allowance for cost of all the grain with hogs at four and one half cents live weight. But it is not fair to allow the skim milk all of its value in such cases. A part of the value comes from combining it with corn or other feeds, and these should be credited somewhat above their market value when used in combination Again losses are almost sure to occur in handling stock, and all the theoretical value of the feed cannot be allowed in purchasing it. Fifteen cents per hundred is therefore, I think, as much as one dare allow for separator skim milk. Skim milk from deep setting as ordinarily conducted leaves more fat in the milk, and home-made skim milk is often far superior to that of the creamery for pig-feeding. Too many creameries allow their skim milk tank to be germ-breeders, and all sorts of ferments grow there. Then, too often, the washings of the factory are sent up into the tank, and this further reduces the value of the milk through dilution. I know of creameries where I should consider 10 cents per hundred a high value for the skim milk, owing to dilution and the filthy condition of the tank.

As evidence of what may be accomplished by "intensive farming," Mr. D. M. Macpherson, the well known proprietor of the Allen Grove Cheese Factories at Lancaster, Ont., and who was present at the Vermont Dairymen's meeting last winter, writes us (1) as follows:

Lancaster, Ont, July 9, '95.

Mr. Editor,

Dear Sir:—I receive the *Advocate* regularly and read with pleasure and profit the many articles written in the interests of farmers in general; your efforts in these particulars should be generally appreciated and your paper receive wide circulation.

A thought just struck me to invite you to come up to my place and inspect the work I am doing in regard to improved farming methods and the actual results of same as shown on my farm. Am busy securing the hay, which is an excellent crop, averaging

(1) Editor of the *Vermont Farmers' Advocate.*