

A Wise Formula

To the cost of the raw material add the expenditures for labor and overhead charges and you have the manufacturing cost.

Use this formula when figuring the cost of your home. It is the total cost that counts, not the individual items.

Bear that idea in mind when you undertake to manufacture another house and keep in mind, also, the value of the finished product.

Use good materials, lessen your labor cost and increase the value of the building. We recommend for your use

**ARKANSAS
SOFT PINE
LUMBER**

It is the kind that stays put. Try it. We will be pleased to recommend other materials you may need. We have had much experience and our knowledge is yours for the asking.

CARL TOCK

DWIGHT NOTES

Carl Tock for lumber and coal.—Adv. Mrs. Irving Eames was a Pontiac visitor Thursday.

For board and room, inquire Mrs. W. E. Fenn, Phone 213-R.—Adv. 31-1. Buy Marigold Oleomargarine at Drew's and save on your butter bill.—Adv.

Mrs. Iva Graves left Wednesday for a few days' visit with relatives at Galesburg.

Mr. George Flagler returned home Thursday evening after spending a day in Chicago.

Mrs. M. Ferguson has returned from a few weeks' visit with relatives at Campus and Emlington.

For Sale—6-room house with bathroom and electric light. Price \$1700.—Andrew Nielsen.—Adv. 19-4f

Mrs. Oattie Blaine and children have returned from a month's visit in Denver and other points in Colorado.

William Broderick purchased a farm in Highland township last week through the Frank L. Smith Agency.—Adv.

Misses Emma and Marie Smith will return to Kansas City, Mo., today, after several weeks' visit here with relatives.

Miss Lois Boston, of Yorkville, spent several days here this week the guest of Mr. and Mrs. Roy Boston, the former being her brother.

Iva Graves and Chief of Police Andrew Hansen spent Wednesday in Chicago. Night Policeman Charlie French was on duty for the latter during the day.

A great many people in this vicinity have arranged to go on the Frank L. Smith land excursion to Iowa shortly after threshing, and any person expecting to make the trip should make arrangements at once.—Adv.

William Carey spent Thursday in Chenoa on business.

V. S. Wright was a Chicago passenger Friday morning.

Mrs. Farrington, of Chicago, is the guest of her son, Rev. F. F. Farrington and family.

Miss Josephine Simmons, of Kankakee, is visiting her grandmother, Mrs. C. Thole, a few days.

Rev. F. F. Farrington returned from Chicago Thursday evening after spending a day in the city.

Mr. Omar Roosa, principal of the High School last year, is visiting Dwight friends this week.

Mr. and Mrs. Boston and children and Miss Lois Boston left Friday for Yorkville for a few days' visit.

Mr. and Mrs. Fred Knudsen, of Milwaukee, Wis., are visiting friends and relatives in this city this week.

Mr. and Mrs. Thomas E. Barry and children left Wednesday to spend a two weeks' vacation in Michigan.

Mrs. Rettlinger, of Chicago, and Mrs. Henry Brill, of Pontiac, spent Thursday in this city the guests of friends.

There will be a meeting of the Sunday school teachers and officers Sunday afternoon at 3 p. m. at the Congregational Church.

Mr. C. D. McWilliams returned the first of the week from a few weeks' outing at Harbour Springs, Mich. His family will remain there until Sept. 1.

Mrs. L. A. Welcker entertained a number of her friends at cards Tuesday afternoon in honor of her guest, Miss Opperman, of Michigan City.

Mrs. Archie Atkinson and little son returned to their home in Bloomington Wednesday after several days' visit here with her mother, Mrs. Patterson.

Please send all communications for this paper to "Star and Herald, Dwight, Ill." and not to individuals. Delay is often caused by sending to the latter.

During the hot weather my photo gallery will be closed every second and fourth Sunday of the month. There is a photographer in your town. L. Dierks.—Adv. 25-ff

Mr. and Mrs. Henry Fox and daughter, Elizabeth, left for their home in Kansas City Thursday evening after a several weeks' visit with Mrs. Henry Fox, Sr., and family.

If you are contemplating the purchase of a piano, consider and you will buy "a Krutzmann," a high grade piano at a reasonable price. Sold only by C. M. Baker & Son. We also sell the Auto Piano.—Adv.

J. C. Hetzel is now living at 1165 E. 31st, Los Angeles, Calif. He says in a letter from there that the weather is warm, but nights cool. Plenty of fresh fruit, melons, etc., but scarcity of lemons and oranges on account of severe winter.

Why iron beside a hot stove this warm weather when Hot Point Electrical Irons are so cheap. Costs only six cents an hour while using. Best iron on the market, 15 days free trial. Price \$3.50. Leslie Orr, Tel. 113-W.—Adv.

Fred Elder, formerly of Dwight, has resigned as division passenger agent at Springfield, and F. B. Chase, a former C. & A. conductor, has been appointed. Fred has a very flattering offer in California, and will leave for there soon. His many friends hope he gets something better, as he is a fine railroad man.

Home Team Lose Two.

Wednesday at West Side Park the Saunemin Stars made their first appearance of the season and defeated the F. L. Smiths by a score of 7 to 2. Hamilton, of Reddick, was on the slab for the Stars and when Eddie is right he is an awful hard man to beat and he was right Wednesday, as he allowed the Smiths but five hits.

The Stars brought a mighty good team with them, including "Brownie" Naas and "Dockie" Miller of the Cabery team; "Zeke" Ferris, former big leaguer; S. B. Lanno, who plays with the Smiths excepting when they meet the Saunemin team; and several other players from different teams.

They started scoring in the first inning, a three-base hit by Cady, a single by S. Lannon and two infield outs scoring two runs. One was scored in the fourth on a single by Ferris and a two base hit by Smith. Three more were scored in the eighth on three hits and a couple of errors and one more in the 9th on an error and a hit.

The home boys scored their two runs in the fifth inning on two hits and an error, Mickelson scoring the two runs with a Texas leaguer over second.

The game was close and exciting up to the eighth inning, when the visitors took a four run lead, practically ending the game. The Saunemin boys always bring a good team and there is always something doing when they come here for a game. They will be here again Sunday, Aug. 17, and the Smiths will try hard to get revenge on that date.

Following is the score:

FRANK L. SMITHS.		H. R. P. O. A. E.			
Nielson, lf	0	2	0	0
Kern, 2b	1	2	0	0
Boyer, 1b	0	13	1	0
Flood, c	0	5	1	0
Gutel, 3b	1	1	1	0
Berneiser, cf	0	0	1	1
Burns, rf	1	1	1	0
Paderni, ss	0	3	6	2
Mickelson, p	2	0	0	0
		5	27	13	3

SAUNEMIN STARS.		H. R. P. O. A. E.			
Cady, cf	2	2	1	0
Lannon, lf	2	1	0	0
Naas, 3b	1	2	0	0
Miller, 1b	1	1	3	2
Ferris, 1b	1	10	1	0
Smith, rf	1	0	4	0
J. Lannon, c	0	6	2	0
Watts, 2b	0	1	3	0
Hamilton, p	0	0	1	0
		8	7	27	12

Egans Colts, of Joliet, defeated the home team at West Side Park Sunday by a score of 3 to 2. The game was close and exciting from start to finish. The home boys lost the game by trying to hit the ball instead of laying down a bunt. In the first inning, with a man on first and second and no one down, Boyer hit into a double play and in the ninth, with a man on first and third and no one down, Burns hit to the second baseman, doubling Gutel. Bailey for the visitors pitched very good ball, but the Smiths are much the better team and would win from them easily on most any occasion.

Found Skeleton of Mammoth. The skeleton of a mammoth in a good state of preservation was recently discovered at Dubinski, in the Staroy-Oskol district of Siberia.

Fine Job Printing at this Office.

HOME COURSE IN SCIENTIFIC AGRICULTURE

ELEVENTH ARTICLE. FEEDING FARM ANIMALS, NO. 1.

By E. W. ALLEN, Assistant Director of the Office of Experiment Stations, United States Department of Agriculture.

THE feeding of farm animals, like the use of fertilizers for crops, rests upon quite well defined general principles. The materials of the body are continually breaking down and being consumed, and to keep the animal in a healthy and vigorous condition there must be a constant supply of new material. If, in addition to repairing the wastes of the system and furnishing it with heat and energy, growth is to be made (as in the case of immature animals) or milk secreted an additional supply of food is required. To supply food in the right proportion to meet the various requirements of the animal without a waste of food nutrients const-



Photo by Long Island experiment station.

MOTOR FARM WAGON FILLING THE SLAB.

utes scientific feeding. It is by carefully studying the composition of feeding stuffs, the proportion in which they are digested by different animals and under different conditions and the requirement of animals for the various food nutrients when at rest, at work, giving milk, producing wool, mutton, beef, pork, etc., that the principles of feeding have been worked out. In applying these principles in practice the cost and special adaptations of different feeding stuffs must of course be taken into account.

The animal body is made up mainly of four classes of substance—water, ash or mineral ingredients, fat and nitrogenous matters. Water constitutes from 40 to 60 per cent of the body and is an essential part. From 2 to 5 per cent of the weight of the body is ash. This occurs mainly in the bones. The fat varies greatly with the condition of the animal, but seldom falls below 6 per cent or rises above 30 per cent. The nitrogenous material or protein includes all of the materials containing nitrogen. All those outside this group are nitrogen free, or nonnitrogenous. Nitrogen occurs in plants and animals in various compounds grouped under the general name of protein. The flesh, skin, bones, muscles, internal organs, brain and nerves—in short, all of the working machinery of the body—are composed very largely of protein. The albuminoids are a class of compounds included under protein.

The food of herbivorous animals contains the same four groups of substances found in the body—viz, water, ash, protein (nitrogenous materials) and fat and, in addition to these, a class of materials called carbohydrates, defined below.

However dry a feeding stuff may appear to be, it always contains a considerable amount of water. The amount may be only from eight to fifteen pounds per 100 pounds of material, as in hay, straw or grain, but in green corn fodder and silage it amounts to nearly eighty pounds and in some roots to ninety pounds. This water, although it may add to the palatability of a food, is of no more benefit to the animal than water which it drinks.

Ash is what is left when the combustible part of a feeding stuff is burned away. It consists chiefly of lime, magnesia, potash, soda, iron, chlorine and carbonic, sulphuric and phosphoric acids and is used largely in making bones. From the ash constituents of the food the digestive organs of the animal select those which the animal needs, and the rest is voided in the manure. As a general rule, rations composed of a variety of nutritious foods contain sufficient ash to supply the requirements of the body. Corn, however, is poor in ash, and when fed extensively to growing animals, like pigs, it may be necessary to add to it

some ash material, as wood ashes, charcoal or bone-meal.

Fat or the material which in analysis is dissolved from a feeding stuff by ether includes, besides real fats, wax, the green coloring matter of plants, etc. For this reason the ether extract is usually designated crude fat. The fat of food is either stored up in the body as fat or burned to furnish heat and energy.

Carbohydrates are usually divided into two groups: (1) nitrogen free extract, including starch, sugar, gums and the like, and (2) cellulose or fiber, the essential constituent of the walls of vegetable cells. Cotton fiber and wood pulp are nearly pure cellulose. Coarse fodders, like hay and straw, contain a large proportion of fiber, while most grains contain little fiber, but are rich in starch, sugar, etc. (nitrogen free extract). The carbohydrates form the largest part of all vegetable foods. They are not permanently stored up as such in the animal body, but are either stored up as fat or burned in the system to produce heat and energy. They are one of the principal sources of animal fat.

Protein (or nitrogenous materials) is the name of a group of materials containing nitrogen. Protein materials are often designated as "flesh formers," because they furnish the materials for the lean flesh, but they also enter largely into the composition of blood, skin, muscles, tendons, nerves, hair, horns, wool, the casein and albumen of milk, etc. For the formation of these materials protein is absolutely indispensable. No substances free from nitrogen can be worked over into protein or fill the place of protein. Under certain conditions it is believed protein may be a source of fat in the body, and finally it may be burned, like the carbohydrates and fat, yielding heat and energy.

The value of the fat for producing heat is nearly two and a half times that of carbohydrates or protein. The sources of fat in the body are the fat, carbohydrates and probably the protein of the food, and the exclusive source of protein in the body is the protein in the food. These groups of food materials are termed nutrients. To a certain extent at least the nutrients may replace one another, although, as stated above, no other nutrient can take the place of protein. The fat and carbohydrates perform similar functions, and, to a large extent, carbohydrate materials may replace fat in the food, even when a large fat production is demanded of the animal, as in the case of the cow.

The composition of feeding stuffs, or the proportion in which the nutrients occur, is determined by chemical analysis. Only a portion of the nutrients is of direct use to the animal—i. e., only that digested. A part of the food is dissolved and otherwise altered by the juices of the mouth, stomach and intestines absorbed from the alimentary canal, and in the form of chyle passes into the blood and finally serves to nourish and sustain the body. The other portion is excreted.

As the rates of digestibility are not constant for different foods and as only the digestible portion is of any nutritive use to the animal, it is essential to know in the case of each feeding stuff what part of its protein, fat and carbohydrates (the total quantity of which is shown by analysis) is actually digested by the animal. This is determined by digestion experiments with animals, and to secure approximately accurate figures the trials are repeated with a large number of animals and under various conditions. The digestibility of such coarse fodders as straw, coarse hay, etc., is relatively low. The digestibility, like the composition, varies somewhat for the same kind of feeding stuff grown under different conditions and fed to different animals.

Calculations have been made of the amounts of digestible protein, fat and carbohydrates contained in 100 pounds each of a large number of more commonly used feeding stuffs. They are the figures which the farmer has to consult to find the approximate food value of a material in selecting his feeding stuffs or making up a ration. They are available in various publications, including those of the United States department of agriculture.

For example, in 100 pounds of green corn fodder with an average amount of dry matter (27.7 pounds) there are contained approximately 1.10 pounds of digestible protein (materials containing nitrogen), 12.8 pounds of digestible carbohydrates (starch, sugar, fiber, etc.) and 0.37 pounds of digestible fat, and these materials when consumed in the body will yield 23,076 calories, or units, of heat, furnishing energy for work and bodily heat.

An ox standing in the stall requires less food nutrients than one which is worked hard every day. In standing in the barn it still requires some protein, fat and carbohydrates to perform the necessary functions of the body to maintain heat in winter, to grow a new coat of hair, etc. But if it is fed the same ration as when working hard the tendency is to get fat or waste the food.

The cow requires not only materials for maintenance, but must also have protein, fat and carbohydrates to make milk from. The milk contains water, fat, protein (casein, or curd), sugar and ash, and these are all made from the constituents of the food. If insufficient protein, fat and carbohydrates are contained in the food given her the cow supplies this deficiency for a time by drawing on her own body and gradually begins to shrink in quantity or quality of milk, or both. The stinging feeder cheats himself as well as the cow. She may suffer from hunger, although her belly is full of swale hay, but she also becomes poor and does not yield the milk and butter she should.

IF YOU ARE ILL

from any disorder of the STOMACH, LIVER or KIDNEYS, or if your bowels are inactive at times, or you should suffer from headaches, get a 50 cent bottle of SEVEN BARKS of your druggist. If you are run down and don't feel as young and chipper as you used to, give SEVEN BARKS a fair trial; it will purify your blood, clear your system and brain, and make life worth living. It is absolutely harmless, is highly palatable, and will not disturb the most delicate stomach.

For sale at druggists at 50 cents per bottle. Don't fail to try it. Address LYMAN BROWN, 68 Murray St., New York, N.Y.



Rail and River EXCURSION

Sunday, August 17
TO
HENRY, ILL.

Round \$1.25 Trip
VIA

**CHICAGO, INDIANA &
SOUTHERN R. R.**

Leaves Dwight 8:15 a. m.
Arrives Depue 10:15 a. m.
Leaves Depue 10:25 a. m.
Arrives Henry 11:40 a. m.

No objectionable features.
Three hours on a beautiful river.
Five hours at a beautiful park.

BASE BALL GAME
For particulars consult
C., I. & S. TICKET AGENT



PROTECTION

It is indeed a trying ordeal to see all your earthly possessions destroyed by fiery flames, but what a consolation to think about that

INSURANCE POLICY which furnishes you protection, and how gratifying it is when you can face the fiend with the assurance that all losses are fully covered. Are you amply protected? If not let us write you up.

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LAND MAN
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Electric Service in the House

As an Investment
The property is improved.
It will sell better.

As a Lighting Agent
The best in the world.
Arrangeable any way.

As a Labor Saver
The current will perform
the drudgery.

Economy
Properly used Electric
Light is the cheapest.

Is YOUR house wired? If not we can make an attractive proposal to equip it.

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Of Northern Illinois

Right!
"The cheapest looking thing I ever saw at a bargain counter," remarked the cynical bachelor, "was a husband waiting for his wife."

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FARE REFUNDED
Round trip on a \$20 purchase; one way on a \$10 purchase.

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or those received by phone filled to your entire satisfaction.

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LADIES' TAILORED SUITS

LOT 1. Ladies' Tailored Suits in fancies, greys, tans and blues. Special.....	\$7.50
LOT 2. Ladies' Suits in light and dark fancy mixtures, serges, diagonals and whip cords. Very Special	\$10.00
LOT 3. Stylish Nobby Suits, in all colors, good styles.....	\$15.00 and \$20.00

COATS

Nobby Coats in tans, blues, shepherd checks, and greys. SPECIAL.....	\$5.00
A handsome assortment of coats in wool, metalasse, fancy materials and serges. Very Special at	\$5.00

IN THE MEN'S CLOTHING DEPARTMENT

We are overstocked with Boys' and Children's Suits and commencing Thursday we will sell below cost Boys' and Children's Norfolk and Buster Browns. Following are the reduced prices:

\$2.50 Suits at \$1.49	\$4.50 Suits at \$2.79	\$6.50 Suits at \$3.99
\$3.00 Suits at \$1.89	\$5.00 Suits at \$2.99	\$7.00 Suits at \$4.29
\$3.50 Suits at \$2.19	\$5.50 Suits at \$3.29	\$7.50 Suits at \$4.69
\$4.00 Suits at \$2.49	\$6.00 Suits at \$3.69	\$8.00 Suits at \$4.99
	\$8.50 Suits at \$4.29	