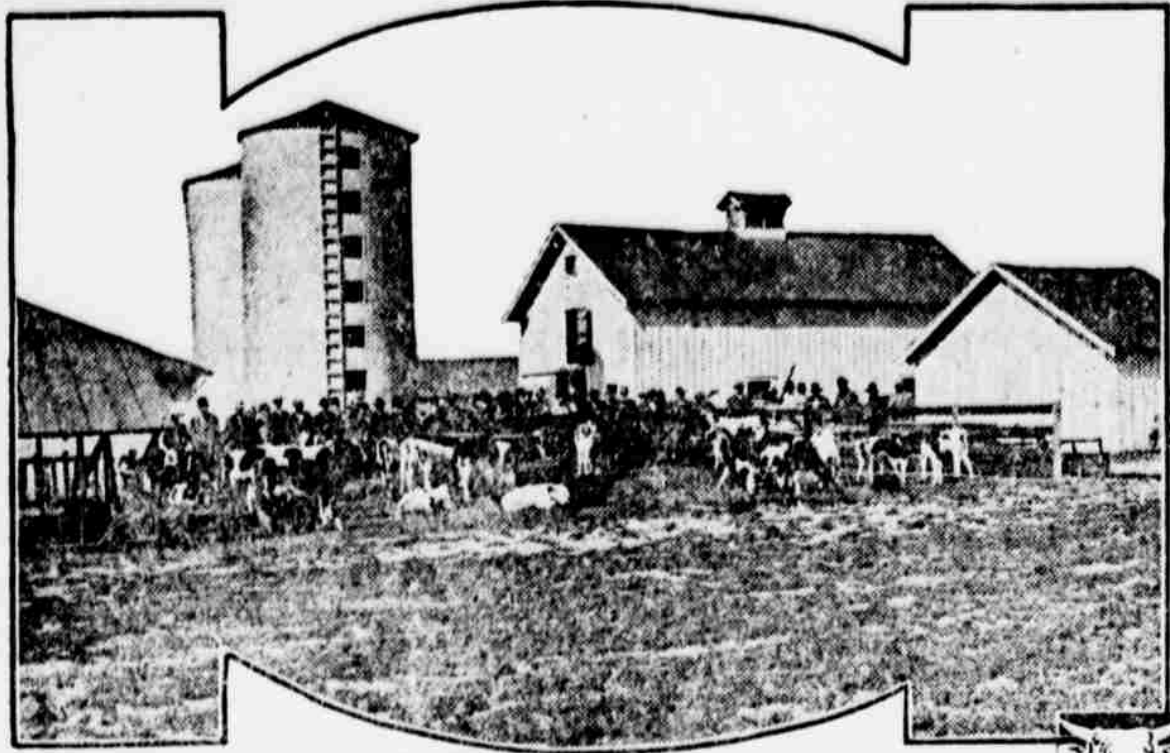


# OUR ENORMOUS DAIRY INDUSTRY



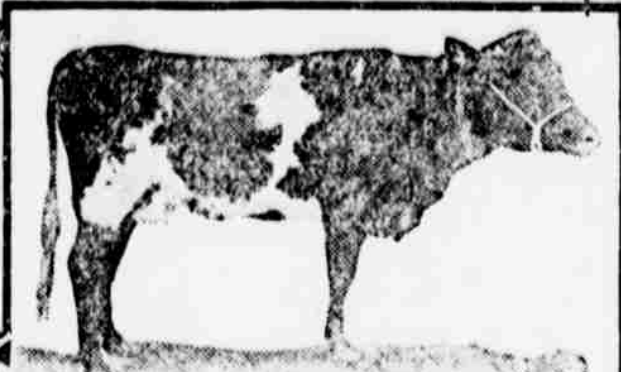
IDEAL ARRANGEMENT OF COW BARN, SILOS, ETC.



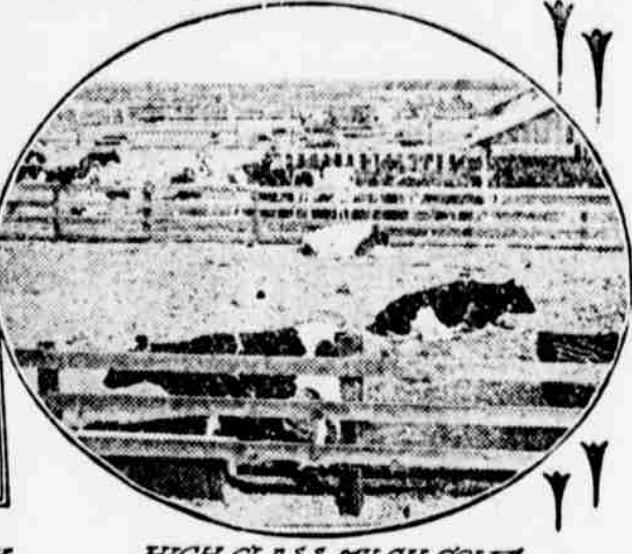
AGRICULTURAL COLLEGE STUDENTS IN PRACTICAL WORK



RESULTS OF GOOD MANAGEMENT



SCRIBBOW - PRODUCTION 90 POUNDS OF BUTTER IN ONE YEAR.



HIGH CLASS MILCH COWS

During the last twelve months the American cow helped her master make three and a half billion dollars—Old Bossy is a regular gold mine when given proper treatment

By ROBERT H. MOULTON.

**T**HE value of the products of the American dairy cow is greater than the value of all the metallic minerals produced, such as gold, silver, copper, lead, zinc, pig iron, etc. It is also larger than the total value of the non-metallic minerals, namely, bituminous coal, Pennsylvania anthracite, petroleum, natural gas, brick clay and cement. Milk production of the United States for 1915 was 11,500,000,000 gallons, or an average production of 537 gallons per cow. This production is equivalent to about 115 gallons per capita population of the country. At an average price of 20 cents per gallon, the year's production of milk is valued at about \$2,320,000,000 to the farmers. On January 1, 1916, there were estimated to be 21,988,000 dairy cows in the United States, valued approximately at \$53.90 per head, or an aggregate grand total valuation of \$1,185,119,000 for all milk cows. The United States exported 9,850,705 pounds of butter, valued at \$2,302,480 in 1915.

Americans are great consumers of butter, and yearly more than 1,800,000,000 pounds is manufactured in this country, a large proportion of which is made at the farm home. The rural creameries have proved a big factor in farming business, and form the center of marketing operations. The valuation of butter made in factories approximated more than \$182,000,000 last year, while this season gives every indication of reaching the \$200,000,000 mark. Farmers are finding that co-operative effort in the manufacture of butter obtains a higher market for them.

The loss made in butter on farms has been tremendous. Dairy experts, by actual investigations, calculate that of the annual \$182,000,000 product, on the basis of 30 cents per pound for butter at the local market, the annual loss averages between two and five cents per pound, or from \$30,000,000 to \$80,000,000, due to the careless methods employed on the average farm. This great item of loss would save enough in a year almost to buy a moderate-priced automobile for every farmer not today owning one.

The increased high cost of dairy feeds has demanded that the dairy farmer become a specialist in cow rations. The profitable production of milk on a dairy farm involves two very difficult problems: The formation of a herd that will give in the milk full liberal returns for the cost of feed and care, and caring for the milk to keep it in the best marketable condition. It was found several years ago that two or three cows might be large producers while the remainder of a herd of a dozen cows would possibly fall to give sufficient milk to pay their board bill. This fact has caused the organization of the community cow-testing associations in various parts of the country, this work having as its object the calculation of the individual cow's production. By the aid of the Babcock testing apparatus, modern dairymen place their cows on record, giving due credit for butter-fat produced. This work has built up one of the highest specialized features of present-day farming.

A great and intricate problem is involved in

supplying cities with milk and in meeting the growing demands of such centers with pure milk. Chicago alone consumes 1,000,000,000 quarts of milk annually, while thousands of cans of condensed milk and pasteurized milk are used for breakfast. Milk is shipped from farms as far as 300 miles away, reaching the city in time for breakfast the next morning. Because of the immense demand for milk, the necessity of having it of the highest quality and the need for an economical method of collection and distribution, great milk companies were formed several years ago, which erected milk-collecting stations in Illinois and adjoining states, along the railroads, where milk is received for shipment. The milk thus received direct from the farmers is handled in the best possible manner, shipped in 40-quart cans, by the carload. The "milk train" is one of the common phases of all railroads connecting with a large American city today.

The task of supplying great cities with milk has become a highly specialized industry. The process of gathering, transporting and distributing the fresh milk supply of a large city is one of the complex tasks confronting those who provide the country's daily food. The entire milk production of the country must be cared for every day. Fresh milk is the only product that must quickly come to the consumer. It cannot be stored when there is a flood of it and carried over until there is a shortage, although modern refrigeration has served to solve a part of this problem. Today's supply must meet tomorrow's demand.

When one realizes that the city of Chicago must have 5,000,000 pounds of milk daily, it is easily understood that prompt conversion of this product into money is no small task. The changes in the geographic distribution of the population of the United States, in the centers of agricultural production, and in the methods of transportation have had a marked influence on the localization of the dairy industry. In early days the dairy farmer supplied demands within a restricted area, but the development of railroads and refrigeration has had considerable effect on the character of the industry in its centralization.

Milk has been a food and drink for young and old ever since prehistoric times, and the reason for this is that milk is one of the most desirable of human foods. It remained for modern analytical processes to prove that milk is the cheapest and most valuable of food products, especially when compared with meat. The department of agriculture has discovered that for 25 cents worth of a given product, milk is a more valuable food than meat.

The grim words employed by the South Carolina board of health, "A fly in the milk may mean a baby in the grave," have gone over the land and left their impression upon the minds of farmers and milk consumers. Flies bear germs, and a single germ in a milk bottle breeds a deadly million in a few hours. Too often during the last 50 years we have read of epidemics of typhoid and similar diseases being traced directly to a contaminated milk supply.

Of all human foods, possibly none is more susceptible to contamination than milk, particularly in hot weather when in the months of June, July and August, the babies of the country die by the thousands. Diseases of the digestive organs cause 40 per cent of the deaths in many cities. Cow's milk is the exclusive food for a great majority of the American children up to the time they are one year old, and it is the chief food of practically all children from the age of one to five. The whiteness and opaqueness of milk serve as a covering and shelter for insoluble substances.

The theory that clean milk possesses long-keeping qualities has been found true with certified milk. Instances are on record where certified milk has been taken on an ocean voyage and not only brought back in good condition, but also kept sweet until 30 days old. When your milk is sour after a few hours, it is certain that it is not clean milk. A number of certified milk dairies in the United States sent exhibits of milk to the Paris exhibition in 1900, and the milk kept sweet for two weeks,

and in some instances 18 days, after being bottled following a summer journey of 3,000 and 4,000 miles. This merely serves to illustrate what milk consumers may expect for the future pure products. American cheese, of which the exports decreased from nearly 150,000,000 pounds in 1881 to less than 2,500,000 in 1914, is again finding its way to foreign markets in rapidly increasing amounts. For the last half of 1914, 2,500,000 pounds were exported, while January saw some 3,000,000 pounds shipped to foreign countries, and February 7,500,000, so that the aggregate for the first three months of 1915 amounted to 13,000,000 pounds. The demand for ice cream has been a great benefit to the dairy industry by the absorption of the milk surplus. Millions of gallons of ice cream are manufactured from artificial ingredients, due to lack of dairy products to meet the growing demand for this toothsome and refreshing article. Nevertheless, nearly 18,000,000 gallons of ice cream are annually manufactured from cream and milk. This branch of the dairy industry has achieved its greatest growth during the last decade, owing to the increased number of summer resorts and parks.

The ice cream factories of the United States annually demand 30,000,000 gallons, or 250,000,000 pounds, of cream; 250,000,000 pounds of whole milk, and 15,000,000 gallons of condensed milk. Taking 14 cents as the average price paid for each gallon of milk, ice cream factories each year pay the enormous sum of \$32,000,000 to farmers for raw materials. The ice cream when retailed brings a price of \$160,000,000, standing foremost among the popular luxuries of the day in the United States.

### THE APPLE AS MEDICINE.

A modern scoffer has recently asked whether it would be possible that Eve yielded to the serpent because he told her that apples were good for the complexion. Whether this argument was needed or not, there is no question that it is a true one. Nothing in all our varied and fascinating range of fruits holds quite the same quality as the apple.

A raw, ripe apple at its best is digested in 85 minutes, and the malic acid which gives it its distinctive character stimulates the liver, assists digestion and neutralizes much noxious matter which, if not eliminated, produces eruptions of the skin. "They do not satisfy like potatoes," some people, to whom they have been recommended as food, have said, but the starch of the potato, added to the surplus of starch we are always eating, renders it undesirable as an article of too frequent consumption.

### ALL CLIMATES AT ONCE.

The supply department of the Panama canal organization has been endeavoring to develop a supply of fresh vegetables that would not have to be shipped in cold storage, as is necessary with those sent from the United States. A colony of Spanish-Americans has recently taken up the cultivation of vegetables on the slopes of the volcano Irazu. The gardens begin at an elevation of 5,000 feet, where tropical fruits are raised and end at an elevation of about 7,000 feet, where the more delicate fruits of the temperate zone are raised. The soil is a porous loam of volcanic ash, 15 feet in depth and very rich. Shipments have already been begun by a weekly steamer, and if more satisfactory transportation can be arranged, these gardens will be able to supply the Canal Zone with a large quantity of fresh vegetables and fruits.—Christian Herald.

### ACTIVITIES OF WOMEN.

Nearly all the work on the Paris newspapers is now being done by women. There are over 2,500 woman stock herders and raisers in the United States. In addition to over 1,000 postwomen employed before the war, the British postal department has added over 2,000 more to act as temporary post women while the war is in progress.

**Imitation Pearls.**  
Clever imitation pearls have been made by filling thin glass bulbs with a solution of fish scale murex. Another method is to coat the inside of the glass bulbs with a ten per cent gelatin solution which is allowed to become only partially dry before a small amount of sodium phosphate is added, then the drying process is continued slowly. The imitations look much like genuine pearls, but they can be detected by noting the place where the bulbs have been sealed.

Compression of the wrist is said to be harmful, but if the right young man makes the attempt the average girl is willing to take chances. Although there are 1,600 miles of railway lines in Uruguay, there is only one tunnel in the country. A girl likes to listen to soft nothings—when they mean something. Being popular consists largely in remembering what to forget.

## Don't Poison Baby.

**F**ORTY YEARS AGO almost every mother thought her child must have PAREGORIC or laudanum to make it sleep. These drugs will produce sleep, and a FEW DROPS TOO MANY will produce the SLEEP FROM WHICH THERE IS NO WAKING. Many are the children who have been killed or whose health has been ruined for life by paregoric, laudanum and morphine, each of which is a narcotic product of opium. Druggists are prohibited from selling either of the narcotics named to children at all, or to anybody without labelling them "poison." The definition of "narcotic" is: "A medicine which relieves pain and produces sleep, but which in poisonous doses produces stupor, coma, convulsions and death." The taste and smell of medicines containing opium are disguised, and sold under the names of "Drops," "Cordials," "Soothing Syrups," etc. You should not permit any medicine to be given to your children without you or your physician know of what it is composed. **CASTORIA DOES NOT CONTAIN NARCOTICS**, if it bears the signature of Chas. H. Fletcher. Genuine Castoria always bears the signature of *Chas. H. Fletcher*.

## MAKE BIG GUNS ABSOLUTE

Western Inventor Devises an Aerial Torpedo That Giveth Promise of Effectiveness.

What may eventually prove to be a highly effective war implement, and, if so, possibly render present heavy artillery obsolete for long range operations, is a self-controlled aerial torpedo that has lately been developed in Colorado. It is described in the August number of Popular Mechanics Magazine. In a general way, the instrument attempts to accomplish over land what the United States navy's new wireless torpedo does at sea. Its principle and method of operation, of course, are entirely different. As is to be inferred, it consists of a small aircraft—much like an ordinary bi-plane—carrying a large, high-explosive torpedo which it is designed to drop at any predetermined spot within a certain radius. The projectile, which is about twelve feet in length, forms the body of the machine and is divided into two compartments. The propeller is mounted at the front end of it, while the shaft extends through the entire torpedo to the rear compartment where an 18-horsepower motor is housed. The speed and course of the machine are regulated by means of a gyroscopic mechanism, while a timing device of some sort releases the engine containing missile at the proper instant for it to strike its target.

## RED, ROUGH, SORE HANDS

May Be Soothed and Healed by Use of Cuticura. Trial Free.

Nothing so soothing and healing for red, rough and irritated hands as Cuticura Soap and Cuticura Ointment. Soak hands on retiring in hot Cuticura soapsuds. Dry, and gently anoint hands with Cuticura Ointment. A one-night treatment works wonders. Free sample each by mail with Book. Address postcard, Cuticura, Dept. L, Boston. Sold everywhere.—Adv.

### A Wise Provision.

A good story is being told, apropos of preparedness, on a clever labor orator who lately spoke in Baltimore. In a speech made in another city he absently put his finger in his mouth and in an outburst of energetic eloquence inadvertently hit it. Later on, exigencies more or less common to suffering humanity caused him to part with the offending teeth and replace them with a good brand of artificial ones. But the remembrance of the former still rankled, and when he began his preparations to speak in Baltimore he removed the teeth carefully, and putting them on the table beside him, looked at the audience and quietly remarked: "Safety first."

### Frog Catchers Busy.

It seems that the home side of the frog-catching industry is looking up, because there are disadvantages to people hunting for frogs on parts of France that are battlefields. A handful of men, whose fathers were in the business before them, work frog catching in Epping forest with Seven Dials as base, and it is one of the most highly specialized industries in London. With frog catching snail catching is allied; the frogs go to some restaurants and to the anatomical laboratories of the hospitals, and the snails are chiefly bought as cleaners of suburban domestic aquariums. The snail that is eaten in Soho comes from the vineyards of France.—London Chronicle.

### Laps.

His prowess as a walker was the subject of Jenkins' boasting one day. "One holiday," he said, loudly, "I selected a course measuring four miles over the country, and timed myself. The result was that in one hour I covered 12 miles in three laps." He waited for the exclamations of amazement, which did not come. Instead, one of his listeners remarked in a bored voice: "That's nothing special. I know a young lady who once did 60 miles all in one lap, and she would have returned in the same lap, only I got a cramp so badly in the legs!"

The average annual death rate a generation ago was 31 to 1,000 living; now it is 14.

### Russia's Natural Roads.

Russia is almost a roadless land. It is inconceivable to the foreign visitor who has never left the beaten track of the railways in Russia how a great empire can have subsisted so long and so successfully without even a pretense at roads. The secret lies in the fact that for five or six months in the year nature herself provides roads over the greater part of Russia—admirable, smooth, glassy roadways over hard-worn snow.

The traffic is further cheapened over these roads by the substitution of a sledge-runner for the wheel and axle. This brings the cost of land carriage as near the cheapness of water-borne freight as possible and it is the principal reason why Russia in the twentieth century is still a roadless land.

One seed of cotton planted and replanted will produce 40,000,000,000 seeds in six years.

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