

# OUR ENORMOUS DAIRY INDUSTRY



IDEAL ARRANGEMENT OF COW BARN, SILOS, ETC.



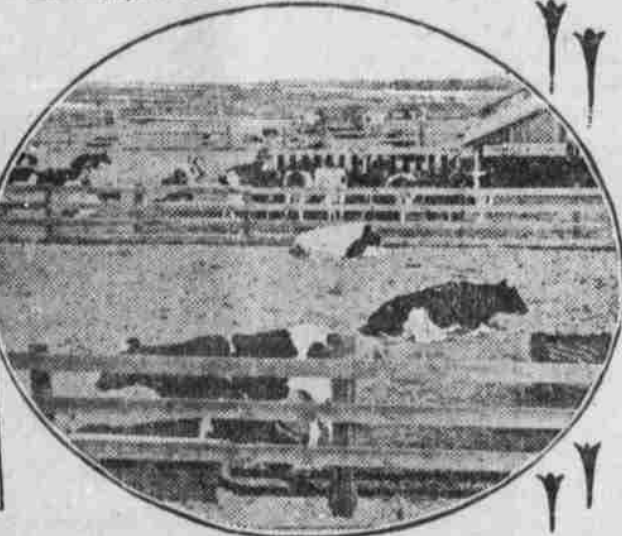
AGRICULTURAL COLLEGE STUDENTS IN PRACTICAL WORK.



RESULTS OF GOOD MANAGEMENT



SCRIBBOW - PRODUCTION 90 POUNDS OF BUTTER IN ONE YEAR.



HIGH CLASS MILK 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 11,590,000,000 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 \$2,332,480 during 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 pail 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 fail 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 \$100,000,000, standing foremost among the popular luxuries of the day in the United States.

### THE APPLE AS MEDICINE.

A modern roofer 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 potat es," 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 postwomen while the war is in progress.

# WHO IS WHO NOW

## NEW SUPREME COURT JUSTICE



John Hessin Clarke of Cleveland, O., whom President Wilson has appointed an associate justice of the Supreme court of the United States, is fifty-nine years old and a bachelor. He was born at Lisbon, O., was graduated from the Western Reserve university in 1877 and admitted to the bar in 1878. Up to the time he was made a district judge by President Wilson in 1914 he had practiced law in Ohio and had also edited a newspaper at Youngstown. His newspaper, the Youngstown Vindicator, has long been one of the prominent Democratic organs in the state.

In 1903 Judge Clarke was the Democratic nominee for United States senator, but was beaten by the late Mark Hanna, who was re-elected.

In Cleveland, Judge Clarke for a long time was associated in politics with the late Mayor Tom Johnson and Secretary Baker. He has been classed as a progressive Democrat, and has taken part in several reform movements. In 1896 he bolted Bryan's nomination, but returned to the party fold in 1900. He was a Wilson delegate at the Baltimore convention.

## LINKS SCIENCE AND INDUSTRY

American business men agree that applied science and industry must be linked together in this country by stronger bonds than have heretofore existed if American industry is to meet the new conditions and to take full advantage of the new opportunity created by the war.

"But that thought is not new," said Dr. Samuel W. Stratton, father, creator and director of the bureau of standards, when he was drawn into a conversation on the subject. "In fact, we have been getting ready for ten years for just such conditions as exist, and we were doing so without any thought of war, either."

In other words, for ten years a large part of the efforts of the bureau of standards has been directed toward being helpful to industry and commerce. "For," said Doctor Stratton, "there is hardly a branch of industry that is not tied up in some way with considerations of standards."

A native of Litchfield, Ill., born July 18, 1861, Doctor Stratton took his B. S. in mechanical engineering at the University of Illinois in 1884 and promptly was attached to the teaching staff of that institution, where he remained until 1892, when the University of Chicago took him over in the physics department. He was full professor of that department when he entered the government service in 1901 as director of the newly created bureau of standards.

## HAS FUN WITH HIS FACE



Representative Simeon D. Fess of Ohio is proud of the fact that he is, as he himself declares, "absurdly unprepossessing."

"If I were really a handsome man," says Fess, "I would not have half the fun with myself that I now do."

Whenever he goes anywhere to lecture, as he does frequently, Fess likes to sneak off the train and keep away from reception committees until the hour of his lecture. The committee is usually half incredulous, when it sees him, about his being the real lecturer, and the way the members exchange disappointed glances with one another gives Fess much quiet sport.

When he was special lecturer in history for the University of Chicago, Fess went to a town in Pennsylvania to speak one night, and while waiting for his turn he sat next to a fashionably dressed woman, who talked to him patronizingly about the program for the evening. She asked him if he knew anything about Fess, and Fess said he knew nothing except that he was a man of commanding personality. In due course Fess excused himself to take his place on the platform, and he saw the astonished woman get up and leave the hall in disgust.

## MRS. LANSING'S SUCCESS

Washington society, following the appointment of Robert Lansing as secretary of state, expressed keen interest in the part his wife would play in social activity there. Mrs. Lansing has proved to be one of the ablest social leaders Washington has seen in years. She is well equipped for her duties, which are next to those of "the first lady of the administration," for as Miss Eleanor Foster, daughter of John W. Foster, secretary of state under President Harrison, she was given an early training in Washington's social activities.

Mrs. Lansing is one of the most striking looking women in administration circles. Although as wife of the secretary of state she takes precedence over many older women, her charm of manner and rare tact have gained great popularity for her.

Much of Mr. Lansing's success is attributed to the aid of his wife. She received a broad education and has read extensively, and has always followed her husband's work on international law with much interest. It is said she has often given him valuable advice on many important matters in connection with his duties.

