

HEAVY LOSS OF SUGAR STOPPED

Chemists Perfect Process of Protecting Raw Product From Mold and Bacteria.

PREY ON SWEETENING FACTOR

At Least \$1,500,000 Worth of Sugar Destroyed Yearly by Tiny, Greedy Organisms—70,000,000 Pounds Is Estimate.

Chicago, Ill.—More sugar will be available for everybody through the discovery of a process of keeping it from being injured by molds and bacteria.

Fully one per cent of the Cuban crop, or about 70,000,000 pounds of sugar a year and worth at least \$1,500,000, it is estimated, has been destroyed by the tiny, greedy organisms which compete with the sweet tooth of mankind. As the per capita consumption of sugar in the United States is approximately 81.54 pounds annually the amount hitherto consumed by the 87,000,000 persons for a twelve month period. This would keep the sugar bowls of a large city full. Counting each family as five persons, 175,000 of such groups could be kept sweet tempered during this period from the supply which has been wasted by the invisible hordes.

Mr. Nicholas Kopeloff and Mrs. Lillian Kopeloff, bacteriologist and assistant bacteriologist at the Louisiana sugar experiment station in New Orleans, and members of the American Chemical society, have just completed a bulletin on the method of preventing the molds and bacteria from wresting sweet solace of the beet and cane from mortals.

Loses Sweetness.

Sugar loses its sweetness because molds consume the sucrose, which is its sweetening factor. Although the amount thus lost may be only a fraction of one per cent, and far too slight to be detected by the senses of taste or smell in many cases, it is easily determined by the polariscope, an instrument especially designed for measuring the amount of sucrose present. When sugar deteriorates not only does the polariscope detect the differences, but anyone who is sufficiently observant will note that it will actually take a larger spoonful to give the same sweetening power. Thus, if a barrel of raw sugar should be kept through the summer months and it is infected with harmful micro-organisms, it might be necessary to use an extra half-spoonful at the end of the summer to get the same sweetening power that could be obtained before deterioration took place. As all sugar is sold strictly on the polariscope basis, even small losses aggregate huge sums.

The usual source of these molds is the air, which contains millions of micro-organisms at rest and in circulation. Each individual mold, if it falls on an object which can supply it with sufficient food, such as sugar, can reproduce 300,000 more individuals of the same species in less than a week. This reproduction, however, can only take place in the presence of sufficient moisture, otherwise the organisms lie dormant. Cane sugar primarily undergoes such losses by deterioration in transportation or storage, mainly due to the absorption of moisture by sugar in damp weather or humid climates.

For example, sugars made in Cuba are stored in the hold of a vessel, often with insufficient ventilation, which causes them to "sweat." While coming from a tropical climate into cooler water the moisture condenses on the surface of the sugar. This also occurs when sugar is stored for any length of time, especially at high temperature, as in refineries, where some is melted up at once and the remainder is held in storage for varying periods, as dictated by business needs.

Can Be Prevented.

Having identified the injurious micro-organisms, Doctor and Mrs. Kopeloff developed a method by which the quality of a given sugar might be determined in this respect. By simply consulting a chart after a preliminary analysis, one may now find out whether or not a given sugar will deteriorate or lose its sweetness in storage. The sugars which are unsafe to keep may be melted up first, the sounder sugars being held in storage with safety.

Doctor and Mrs. Kopeloff, by making bacteriological examinations at every stage of the sugar-making process, have found that sugar deterioration can be prevented by substituting dry or super-heated steam for water in the final process of washing sugar in the drums in which sugar is dried. These centrifugals, as they are called, in their whirling suck up air from the floor which may be contaminated with germs. Also, it is common practice to make the color of the sugar lighter by washing the crystals with water, which may be contaminated with molds and bacteria.

In the new process, it is shown that dry steam is successful in killing over 99 per cent of these avid molds and bacteria.

While the practice of steaming sugars is not a new one, the results are shown to have a direct practical value in eliminating losses which have been a considerable factor in the American bill for sweets.

RADIO GUIDES SHIPS IN FOG

Finders of Naval Stations On Shore Give Angle, Mathematics Does Rest.

WAR NECESSITY MOTHERED IT

Navigator Who Wishes to Know His Latitude and Longitude Sends Out Wireless Message and Listening Stations Give Bearings.

New York.—Fogs, clouds and storms are losing their terrors for naval men. In the not very distant past a ship that could navigate when the sun was hidden became the subject of wild seafaring tales, but the radio direction finder has eliminated many of the perils due to the absence of the sun. Today a navigator who wishes to know his latitude and longitude has only to send the following wireless message: "This is the (ship's name). Where am I?" And the data supplied by the various listening stations will give him his bearings. The wireless direction finder is not a new device—finders were patented as long ago as 1907—but war developments have emphasized the value of the instrument for general navigation, says a writer in the New York Evening Post.

It consists of a loop of wire attached to receiving machines. When messages are being received the waves set up a current in the two sides of the loop. If the waves strike both sides of the coil equally there is no difference in voltage. But when the waves strike the coil in such a manner that there is a difference in voltage between the two sides of the coil the receiving machines indicate the extent of this difference. By making mathematical calculations based on this difference it is possible to determine the direction of the ship which is sending

He Wouldn't Stop Work for Wedding.

Detroit.—Devotion to duty prevented Nicholas Alexander, cook, from taking an hour off to get married.

His fiancée, Isabelle M. Sahay-caw, applied at the county clerk's office for a marriage license and, in response to the clerk's question as to why the bridegroom-to-be had not come, she said Nicholas was too busy. She said further that they had agreed to marry a year ago but they had a quarrel and Nicholas tore up the license he had taken out.

After long and mature deliberation Isabelle came to the conclusion that she had been wrong and that if she did not admit it she ran a good chance of losing Nicholas forever.

She went to him in a penitent mood and found him receptive, but on one point he was adamant. He would not leave his work for a minute to get married, and if she wanted to become his wife she had to take out the marriage license, engage a minister and bring him to the kitchen where the ceremony was to be performed. They were married.

Rooster Just Like Mother.

Winsted, Conn.—A yearling Rhode Island Red rooster owned by Elmer Robbins is brooding a number of chickens that weigh from one and a half to two pounds each. The young rooster also fills a mother's role by calling the chicks when he uncovers worms. At night the chickens huddle beneath his wings.

NEBRASKA IN BRIEF

Timely News Culled From All Parts of the State, Reduced for the Busy.

SCORES OF EVENTS COVERED

At a mass meeting of farmers and business men at Chappell, held for the purpose of discussing the car shortage situation, a committee was appointed to confer with Union Pacific officials in an endeavor to secure immediate relief. Elevators of Chappell contain 75,000 bushels of wheat, and there are from 25 to 50 trucks and wagons standing at the elevators from day to day, waiting opportunity to unload. Many farmers have their granaries full of wheat, and thousands of bushels are piled on the ground. The situation is indeed serious.

Clarence C. Lange of the government air mail service won the air race from Omaha to the Dawes county fair at Crawford, a distance of 470 miles. It was the first airplane race ever attempted in Nebraska. Lange covered the distance in three hours and fifty minutes, making one stop at Grand Island. Edward Gardner of the Nebraska Aircraft Co., of Lincoln finished second, Warren P. Kite of the Grand Island Aero Co., finished third. Only three contestants participated in the race.

Lieutenant Floyd Thompson of Grand Island, who has just returned to that city from New York, ridicules the idea that the explosion in Wall Street, which killed thirty-five persons and injured 200, was the work of anarchists. He was a witness of the disaster and declared it is generally believed in New York that a Dupont wagon, laden with high explosives, blew up while on the way to a nearby building under the course of construction.

Nebraska Presbyterians in the last two years have added to their pastors' salaries an average of \$400 each, according to a recent statement of Dr. William H. Kearns of Omaha, one of the district secretaries of the New Era movement. There are 179 Presbyterian ministers included in the synod of Nebraska overseeing a total of 213 churches.

Steele City, Jefferson county, has for many years supported three churches, Methodist, Congregational and Baptist, each with a small attendance, making it burdensome for the active members. By agreement, each church has surrendered its charter and organized a Presbyterian church, where all will worship.

From two to fifteen years in the state penitentiary at Lincoln was the sentence imposed on John Olson, Omaha contractor, by Judge Burton at Fremont, for the attempted murder of Haru B. Luken last May 12.

Two brick buildings are completed and a third one has been started in Nashville, a new town site ten miles north of Omaha. Several houses have already been built. The new town is on the Northwestern railway and Washington highway.

Old timers predict that Box Butte county will have the best corn crop this fall in 30 years. In one field near Alliance 800 acres planned on sod broken last spring will yield forty bushels an acre.

Dedication ceremonies for the new Fenger hospital at Omaha, the first Danish memorial hospital in the United States, were held last Wednesday. The building complete, cost \$548,000.

Buelier Metcalfe of Omaha has been appointed assistant to Attorney General Palmer, with headquarters at Washington. He was captain of the old Sixth Nebraska regiment.

Frank Davis of Sterling has been employed as manager of the New Farmers' Union mercantile store at Filley, which opened for business a few days ago.

At a public farm sale, conducted on the C. A. Berg farm near Blue Springs, horses brought from \$100 to \$200, and cows sold for as high as \$106.

Politicians touring the state assert that women in all communities are taking tremendous interest in the campaign.

Intimates of the Industrial School at Kearney raised 18,000 bushels of potatoes this year, valued at \$22,500.

Corn sold for \$1 a bushel at Beatrice last week for the first time since before the war.

Reports from Leavenworth, Kan., are that Leslie A. Tibbets, of Wyoming, serving a one year term in the federal prison there for deserting the army, made his escape with another prisoner.

Ronald R. Williams, six weeks' old son of Mr. and Mrs. Rolla Williams of Anselmo, who has a great-grandfather, two great-grandmothers, two great-grandfathers, two grandmothers and two grandfathers, has perhaps the longest list of ancestors of any person in the state. Besides he has scores of aunts, uncles and cousins.

The Benkleman fish hatchery, consisting of 33 acres of land with springs, ponds, dwelling house, hatching house, barn and sheds, has been purchased by the state for \$7,500. The state now owns three hatcheries—one at Gretna, one at Valentine and the third at Benkleman. The last legislature appropriated \$15,000 to buy the Benkleman hatchery, and for its maintenance and improvements. No decision has been reached as the location of the new fish nursery in Antelope county, for which the legislature provided a fund of \$2,500.

A hot contest for football honors is expected between teams comprising the Nebraska conference. Twelve colleges will compete this year, which is three schools larger than the preceding season. They are: Nebraska Wesleyan, York College, Doane College at Crete, Cotner University, Hastings College, Wayne Normal, Kearney Normal, Peru Normal, Midland College, Fremont; Grand Island College, University of Omaha and Central College.

Those in close touch with the political situation in the state declare that if the women of Nebraska vote this fall in the same proportion that the women of Maine voted on September 13 the total vote of the state will be swayed by 100,281. This means in a measure that the newly enfranchised voters will hold the balance of power in Nebraska and can throw the state to either party if they so desire.

Inability to dispose of by-products, lack of capital and the tight money market are given as the reason for closing down the Loup Valley Packing plant at Grand Island. The stockholders have decided to dispose of the liquid assets and await a more settled condition of the money and meat markets before taking steps to resume operations.

The department of agriculture at Washington, after an investigation of cattle-feeding in Nebraska, has reported losses of \$3.17 per head to feeders in the winter of 1918-1919, and of \$10.69 per head for cattle fed last winter. It found that it cost \$14.91 per hundred pounds to produce cattle in 1918-1919, and \$13.83 last winter.

People for miles around Oak heard the terrific roar accompanying the bursting of a water tank for the Northwestern railroad at that place. The water tower was built 11 years ago and was the only place for trains to get water between Superior and Geneva.

Mr. and Mrs. O. A. Smith, former employees of the institute for feeble-minded at Beatrice, who were arrested last week for the alleged systematic theft of goods from the institution for the past few years, protest their innocence and have secured attorneys to defend them.

The farmers of Saunders county are drilling wheat, and it is estimated that the acreage will be nearly as great as it was last year. There will be approximately 2,000 acres of the new Kanned wheat sown in the county this season.

Lloyd and Leon Harlan were arrested at Schuyler recently, charged with pulling the tongue from a mule belonging to Charles Sweet, Elkhorn township farmer. Spite work is said to have caused the act.

The Consolidated Electric company at Beatrice has decided to complete the construction of the electric line from Holmesville, through Rockford and Filley, as far east as Virginia. The line will cost about \$20,000.

Paul Jensen of Omaha and Ray McFillen of Beatrice, traveling men, were killed when a Buick roadster, driven by Jensen, plunged off a small concrete bridge near Beatrice.

Two hundred and fifty tons of cured meat, valued at over \$200,000, was destroyed when fire gutted the smoke-house of the Swift Packing company at Omaha.

Voters of Saline county at a special election defeated a movement to remove the county seat from Wilber, where it has been for forty years, to Crete.

The American Legion at Columbus is laying plans for a four-day festival, Nov. 10, 11, 12 and 13, with a special program for Armistice Day.

The population of Saunders county is 20,589, a decrease of 500, or 2.8 per cent during the past ten years, according to census bureau figures.

The new parochial school building of the Lutheran church at West Point was dedicated last Sunday. The building cost about \$15,000.

Estimates of the corn yield from various southeastern counties, barring early frost, range from 25 to 75 bushels per acre.

Impressive ceremony marked the laying of the cornerstone for the new Valley county court house, being built at Ord.

Figures furnished the State College of Agriculture at Lincoln by farmers of Dakota county, show that the labor of growing corn up to July 20 cost an average of more than \$10 an acre.

The state railway commission issued an order authorizing express companies to increase intrastate rates 1 1/2 per cent and interstate rates sufficiently to conform to recommendations of the interstate commerce commission.

Federal census figures show Dixon county has a population of 11,815; Garden, 4,572, and Hitchcock, 6,045.

IMPROVED UNIFORM INTERNATIONAL SUNDAY SCHOOL LESSON

(By REV. P. B. FITZWATER, D. D., Teacher of English Bible in the Moody Bible Institute of Chicago.)
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LESSON FOR OCTOBER 3

THE BIRTH AND CHILDHOOD OF JESUS.

LESSON TEXT—Matthew 2: 1-15. GOLDEN TEXT—Thou shalt call his name Jesus; for he shall save his people from their sins.—Matt. 1:21.

ADDITIONAL MATERIAL—Isa. 7:14-16; Micah 5:2; Luke 1 and 2.

PRIMARY TOPIC—The Wise Men Visit the Child Jesus.

JUNIOR TOPIC—The Child Jesus Escapes From a Wicked King.

INTERMEDIATE AND SENIOR TOPIC—The Coming of the King.

YOUNG PEOPLE AND ADULT TOPIC—The King Comes as a Little Child.

Since we now have six months of study in the Gospel according to Matthew, every teacher should grasp the book as a whole and present each lesson in its relation to the central purpose of the book. The central theme of Matthew is Jesus Christ the King—the fulfiller of the Messianic hope.

I. The Birth of the King (1:18-25).
The Messiah was to be the seed of a woman—the son of a virgin (Gen. 3:15; Isa. 7:14). This was fulfilled in the birth of Jesus. The genealogy as given in Matthew 1:1-17 shows his legal right to the throne; but had he been that only, he could not have been the Savior from sin. He must be both human and divine (Isa. 9:7). The Messiah was begotten by the Holy Ghost and born of the Virgin Mary, thus becoming Immanuel, which term means in all its fullness, God for us; God with us; God in us.

II. The Magi Seek Israel's King (2:1, 2).
The King had a most heartless reception. The kingdom was not ready for him. His advent was heralded by a star which guided souls from a foreign nation to seek and worship him, pouring out their gifts to him. These wise men were either Arabian or Persian astrologers, students of the stars. The appearance of an unusual star attracted their attention. Perhaps they were acquainted with the famous prophecy of Balaam (Num. 24:17). Doubtless through the influence of the Jews who remained in Chaldea, or the direct influence of Daniel extending to this time, they had become acquainted with the hope of a Messiah. The light they had was dim, but they lived up to the best they had. To those who act upon the best light they have, God always gives more. To those who refuse to act upon the knowledge given, God not only refuses to give more, but brings into confusion that which they already possess (Matt. 25: 28).

III. Herod Seeking to Kill the King (vv. 3-8).
The news brought by the Magi struck terror to Herod's heart. He was not alone in this, for all Jerusalem was troubled with him. The news ought to have brought joy. A glimpse at the social customs in and about Jerusalem at that time, will enable us to understand why this news brought uneasiness to the people. They were living in the greatest of luxury. Fine dresses, sumptuous feasts, fine houses, etc., led to gross immorality. We can thus readily see why Herod and all Jerusalem should be troubled. They did not want a Savior who would save them from their sins; they wanted to continue in them. Herod demanded of the priests and scribes information as to where Christ should be born. They soon were able to tell him, showing that they had a technical knowledge of the Scriptures, but no heart for the Savior set forth therein. The luxuriousness of the wealthy, the frivolities of the fashion-loving, and the gross immoralities to which they lead, make Jesus Christ unwelcome in many quarters today.

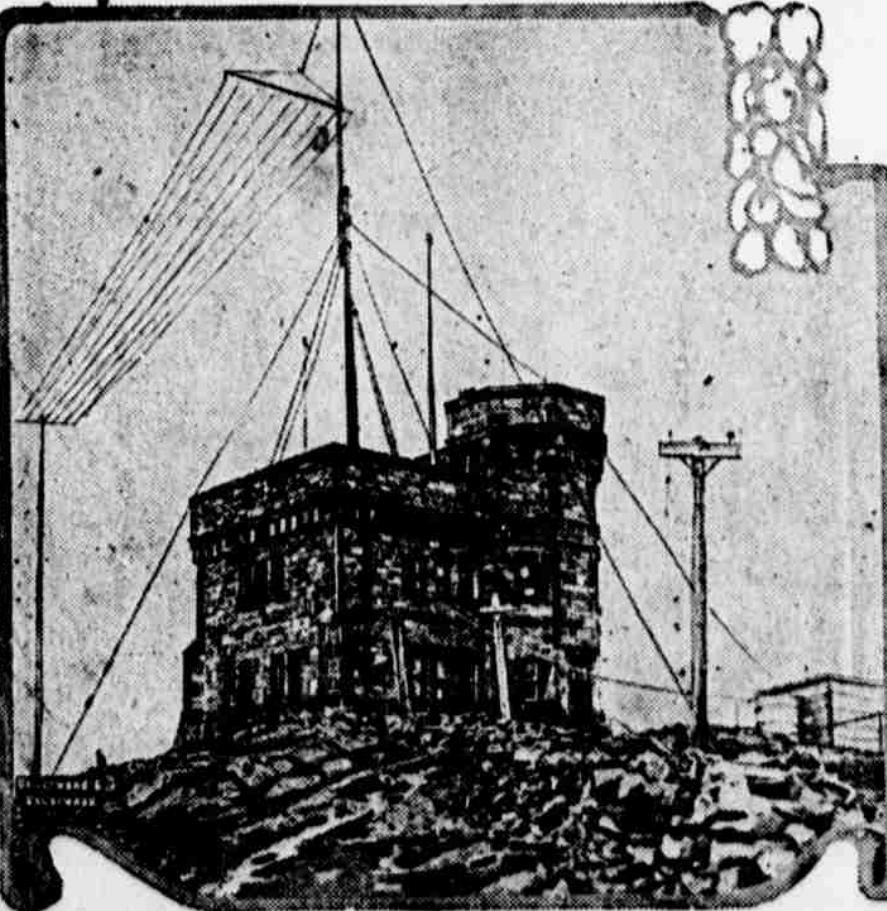
IV. The King Found (vv. 9-12).
The Magi having obtained the desired information, started immediately to find the King. As soon as they left the city, the star which had guided them from the East appeared again to lead them on. When they found him, they worshipped him. Note God's overruling providence in all this. Hundreds of years before, the Prophet said that Christ should come forth from Bethlehem (Micah 5:2). God so ordered that Mary should be brought to the city to give birth to Christ. God ordered that the Magi should depart another way, thereby defeating Herod's wicked purpose. The gifts of these wise men, God put into the hands of Joseph and Mary before going to Egypt. Doubtless they served a good purpose in meeting their expenses during their stay there.

V. The King Protected (vv. 13-15).
To escape Herod's wicked aim, God directed Joseph to take Mary and the child Jesus and flee to Egypt. In obedience to the heavenly vision, he went and remained until Herod's death.

In Giving Aims.
In giving of thine aims inquire not so much into the person, as his necessity. God looks not so much on the merits of him that requires, as to the manner of him that relieves. If the man deserve not, thou hast given to humanity.—Quarles.

Think of Our Own Sins.
So long as we are full of self we are shocked at the faults of others. Let us think often of our own sins, and we shall be lenient to the sins of others.—Fenelon.

Heard Wireless Phone Talk in Europe



This is the wireless telephone station on Signal Hill, St. Johns, N. F., to which operators recently heard a wireless phone conversation that was being carried on in Europe.

Just Two Feet to Death.

Bowling Green, Ky.—Two feet separated Robert Fulton, oil well driller, from death. His employers, a Cincinnati concern, had given up hopes of striking oil and ordered abandonment of the "dry" well. "We'll go two feet further," Fulton said. At the second foot oil was struck, and in the fire which followed Fulton was burned to death.