# FARM NEWS

## LARGEST GRAIN CRIB IN U. S.

### Warehouse of 6,000,000-Bushel Capacity Erected at $3,000,000 Cost

By NEA Service

GALVESTON, Tex., Jan. 28.—What is believed to be the greatest port grain elevator in the United States, and one of the largest in the world, will be opened here soon, after 18 months of constant work day and night.

The storehouse has a capacity for 6,000,000 bushels of grain. Its cost is $3,000,000.

The largest grain elevator on this continent and, perhaps, in the world, is "Elevator No. 6" of the Canadian Wheat Pool at Port Arthur, Ont. Its capacity is 7,500,000 bushels.

"Elevator B," as the one here is designated, is of steel and concrete construction, fronting on the Galveston channel. A total of 14,000 pilings, 300,000 bags of cement, 60,000 yards of concrete, and 4,400 tons of structural and reinforcing steel were used in its construction. It rises to a height of 235 feet and covers a content of 217,800,000 cubic feet.

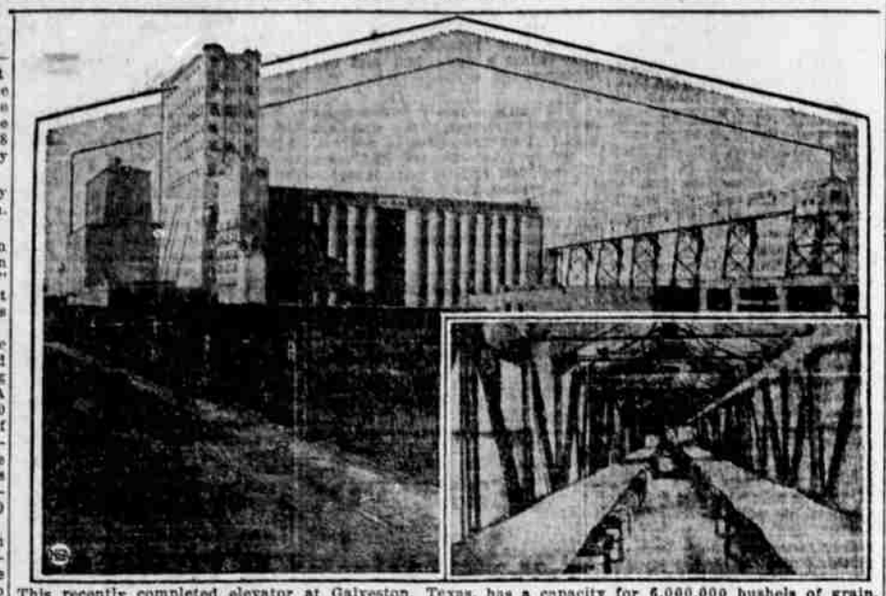
Wheat and other grains from all over Texas and other southwestern states are expected to be shipped here for exporting to South America and other countries.

**Electrically Operated**

Built at a cost of more than $3,000,000, the storehouse is composed of six units, all electrically operated and designed to cut manual labor to a minimum. Three of the units contain 427 bins for storing the grain. Other units are the headhouse, grain drier and a first aid building for caring for sick workmen.

Modern mechanical contrivances have been installed which will permit the unloading of 50,000,000 pounds of grain, or 500 carloads, in a single day, and the loading of three vessels at the rate of 200,000 bushels an hour.

There are six 42-inch distributing belts on which the grain is placed. These belts, running like an endless chain, take the grain into the bins or to steel galleries 1,000 feet in length for loading purposes.



This recently completed elevator at Galveston, Texas, has a capacity for 6,000,000 bushels of grain. At right are two of the 42-inch belts which convey the grain to and from storing bins.

**LOAD SHIP IN 40 MINUTES**

After the grain is loaded on a ship, it is but a matter of 40 minutes until the vessel is in open sea and on its way to ports of West Indies, Great Britain, Germany, Italy, the Scandinavian countries, the Near East and South America.

Total weight of the structure is estimated at 250,000,000 pounds. When it is filled to capacity, this weight increases to 600,000,000 pounds.

An inscription on the elevator reads: "May the grain in these bins be good grain and may it spread joy and sustenance throughout the world."

## EXPERIMENT WORK SAVES FARM DOLLARS

OREGON STATE COLLEGE, Corvallis, Ore., Jan. 21. (UP)—Dollars and cents return from research conducted by experiment stations of land grant colleges in the United States amounted to $842,470,995 in a single year—1928—according to a two-volume report of the U. S. education bureau.

Among many specific illustrations of the practical value of agricultural research given in the report were two from Oregon State College experiment station. Development of Federation wheat at Moro branch station was cited in the report as being worth approximately $2,000,000 in a single year, 1924-25, when fall sown varieties suffered winter killing.

**Great Returns**

Experimental work in poultry at the state college station also was mentioned in the report to congress. The breeding-up work, which finally resulted in development of the world's first 300-egg hen, was given much credit for the $10,000,000 poultry industry in Oregon. This work was started in 1908 when there was not a single commercial flock in the state.

To bring this immense annual return of $842,470,995, only $25,000,000 was expended for research activities of the 48 land grant college experiment stations, the report stated. This amounts to about 43.5 cents for every $1,000 of capital invested in agricultural production as compared with $13 expended for research to every $1,000 invested in industry. On the basis of gross incomes, the report showed that agriculture got $2.05 for research to every $1,000 of gross income, while industry put $10 into research for every $1,000 of gross sales.

HILLSBORO — Washington county has more purebred dairy herds on official test for butterfat production than any other Oregon county, according to figures obtained by County Agent W. F. Cyrus from the dairy department of Oregon State College.

DALLAS.—A series of meetings in six communities of Polk county were arranged for January 22 and 23 to discuss seed crops and weed control. E. R. Jackman, extension specialist in farm crops at Oregon State College, will assist J. R. Beck, county agent, with the meeting.

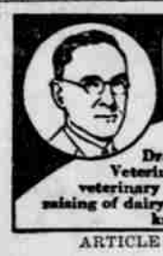
HEPPNER. — Morrow county wheat farmers are paying freight on some 25,000 bushels of dockage to Portland each year. This is one fact brought out in a wheat survey of the county begun by County Agent C. W. Smith in November, and now nearing completion. As there are only three elevators in operation at the present time, either a better job of threshing or more county loading point cleaning equipment is necessary, Smith said.

BAKER.—Careful culling of all low producing animals is being practiced by Oregon dairymen in an attempt to counteract the present low prices of butterfat. Members of Baker valley cow-testing association disposed of 11 such animals during the last month, according to a report made to the county agent's office by Kenneth McGillivrey, tester.

THE DALLES.— Four demonstrations comparing the deep furrow drill with the ordinary method of drilling grain are under way in the Bakeoven and Juniper Flat communities of Wasco county, reported County Agent W. W. Lawrence.

Farmers co-operated with Lawrence in demonstrations that involved more than 100 acres.

## DAIRYING



—By—
Dr. L. D. LeGear, V. S.
St. Louis, Mo.

Dr. LeGear is a graduate of Ontario Veterinary College, 1892. Thirty-eight years of veterinary work. Eminent authority on diseases and raising of dairy cows, other livestock, and poultry. Nationally known lecturer, writer and author.

ARTICLE XVI

### Eliminating Milk In Raising Calves

**Prepared Meals Are Now Being Substituted With Good Success After the First Few Weeks**

Editor's Note — This is another story in a series of articles on dairying written by the well known national dairy and poultry authority, Dr. L. D. LeGear, V. S., of St. Louis, Mo. The entire series will appear in this paper. Our readers are urged to read them carefully and clip them out for future reference.

"To get good cows, raise 'em," is an expression often heard among dairymen. That being true, the next question is how to raise them. In my preceding article I showed that calves can be successfully raised on skim milk and that if the proper method of feeding was used, the skim-milk-fed cow would compete with her sister who ran with the mother as a calf, in every particular.

It is estimated about half of every hundred dairy calves come from cows where the milk is sold as whole milk. The problem, therefore, is how to raise the calves with the minimum amount of milk. When you consider that a calf will consume around 50 gallons of whole milk a month, you can soon figure out what it costs to board that calf for the first six months, or until weaning time.

The nation has been absorbed for years in various experiments to find a substitute for milk in calf-raising. Improvements are being made right along. Both the commercial and home-mixed calf-meals are now quite satisfactorily used. The problem of course is to produce a food that is easily digestible, that has a chemical content similar to milk, and the necessary vitamines and proteins. Some of the materials commonly used are ground yellow corn, middlings, oat flakes or ground oats, linseed meal and skim milk powder.

The mixtures are prepared with water or milk and fed in the shape of warm gruels. The proportion is about one part of meal to nine parts of water. The feeding schedule for a calf under this method would be about as follows: "One pound of gruel daily, with the milk during the third week, and then gradually increase the gruel and cut down on the milk. The milk can be eliminated entirely at the end of 45 days and by that time the gruel will be running about 12 to 15 pounds a day. The gruel diet may be eliminated at the end of four months if desired, as by that time the calf will be eating hay and grain.

A mixture recommended by the Fisconsin Experiment Station consists of 4 parts of ground yellow corn, 3 parts of ground oats, 2 parts of wheat bran and 1 part of linseed oil-meal. This is fed in connection with skim milk—very light at first and gradually increase.

Another method of feeding with a minimum amount of milk is to give the calf a good start on milk, and then jump immediately to grains and roughage. Many experiments have been tried, and are being tried, to find out just when the change over should take place and how.

For instance, some breeders recommend feeding whole milk for three weeks, and skim milk for five weeks, before going into the grain and hay diet. That is a pretty short period in my opinion, although a raiser of Holsteins tells me he has fed 170 pounds of whole milk and around 700 pounds of skim milk during the first two months, and switched to grain and roughage with success. In all cases changes in feed should be made gradually.

There are those who believe that no substitute for whole milk is practicable. Therefore they start with whole milk and gradually dilute it with water. One proportion recommended is three parts of whole milk to one part of water, after the first month, to be continued until the calf is eating a sufficient quantity of grain and hay. The success of this plan rests upon the ability of the herd owner to get the calves started early on grain and hay, and then see that they eat it in equal amounts.

Powdered skim milk is also used for feeding calves. It is dissolved in warm water and fed immediately. It may be alternated with skim milk on farms where the supply of skim milk varies. The powdered milk keeps well and is easy to handle. The cost of powdered milk is about half what you can sell an equal amount of whole milk for. One pound of powdered milk to nine pounds of water, at a temperature of 100 degrees Fahrenheit is about right.

Another substitute for milk is whey, from the cheese factory. The whey needs to be sterilized as in a fermented condition it is bad for the calf, unless of course the cheese is made on the farm and the whey fed at once. Start at the end of the third week and gradually switch the diet from whole milk to whey. At the end of six weeks the whole milk can be dispensed with altogether and grain and hay substituted.

Calves should never be allowed to become poor. This will stunt their growth and retard normal development. They should have good feed, good good attention, kept in good condition and growing every minute. Legume hays are better than timothy for growing calves because of the minerals they contain for making bone and muscle. Alfalfa and clover hay must be fed carefully, as they are laxative.

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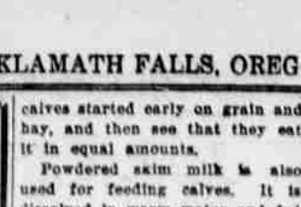
## First Potato Futures Market

Here is a view of the activity at the world's first potato futures market, recently opened in the Mercantile Exchange, Chicago. More than 2,000,000 bushels of Idaho russets were bought for March delivery during the first morning's operation of this market. Prices of potatoes will be fixed at this trading center.

## Uncle Sam's Planting Pointers



### Winter Boxes

BY D. VICTOR LUMSDEN
Bureau of Plant Industry, U. S. Department of Agriculture

A window or porch box filled with bright blossoms adds much to the attractiveness of a home. In winter, while outdoor garden activities are at low ebb, a few hours spent in building window boxes will prove profitable and enjoyable.

Study the outside of your home and determine whether receptacles for ornamental plants could be used advantageously. The window or porch box can be as large as usefulness will permit, the length depending on the space it is to occupy, but the height and depth of the box should not be less than one foot each way. If smaller than this there will not be enough soil to maintain adequate moisture for the plants during the summer.

**Any Wood Will Do**

Lumber may be procured from a mill or lumber yard and it is not difficult to construct the boxes. Almost any kind of wood will do, but boxes of cypress, redwood, or some of the other woods that resist decay will last longer. Use of galvanized screws or nails will also add to the life of the box.

Cut pieces to form the type of box desired. Drill holes in the bottom of the box, a one-inch hole for each square foot of area, and locate them to provide adequate drainage.

**Paint Essential**

Before the pieces are fastened together give them a priming coat of paint, completely covering all the surface. It is essential that the wood around the holes in the bottom of the box be well protected with paint to prevent decay. Allow the paint to dry thoroughly and then give the wood another complete painting. After this is well dried the box can be fastened together and the final coat of paint applied. For this coat choose a green, gray or other neutral color, or white so as not to compete with the attractiveness of the plants.

If wooden brackets are needed to support the box, they should also be cut and painted the same color as the box before they are assembled.

Store your boxes and they will be ready to fill and plant as soon as warm weather arrives.

The male of a swan family is called a cob, and the female a pen.

## Federal FARM FACTS

Agricultural exports were still on a decline when the U. S. Department of Agriculture made its last survey in November, 1930. Shipments were the lowest since 1921. All commodities were down, the department reports.

There will be a greater holdover of cotton this year than for some time, due to decreased exports and the largest production of cotton in 1930 since 1926. Last year's production, according to the U. S. Bureau of Agricultural Economics, was 26,440,000 bales, or about 2,000,000 bales lower than the record crop of 1926.

The general level of farm prices, now at the index of 97, is at its lowest peak in 15 years, according to the U. S. Bureau of Agricultural Economics. At this figure it is 28 points lower than the index of December, 1929. Prices of eggs, butterfat, hogs and cotton showed the greatest decline.

During the past year co-operative extension workers of the U. S. and State Department of Agriculture have carried out 929,744 demonstrations teaching better methods of farming and homemaking. This was an increase of 78,218 over preceding year.

About 134,000 forest fires damaged about 46,000,000 acres of forest land in the United States during 1930.