Processing Milk Powders For Their Particular Uses
Hedge Shipotle

The first successful milk drying process was the atmospheric double drum process. The advantage of this dryer is its simplicity, ease of operation, and a high drying rate. The disadvantage of this dryer is its high temperature, which can lead to the denaturation of the whey proteins and the colloidal property of the milk proteins being greatly reduced. The evaporative drying, however, is largely preserved and this type of powder is well suited for liquid milk feeding.

The spray drying process became commercially successful after the introduction of precondensing the milk. Whole milk powder made from precondensed milk has a much better keeping quality. The particles of the precondensed whole milk are larger and present a much smaller surface area to the air.

Particular Uses

The spraying of milk is a process of converting milk into milk powder. This is done by heating the milk to a very high temperature and then rapidly cooling it to a temperature that will prevent the milk from coagulating. The milk is then spray-dried to form a powder.

Since the early experiments with spray-drying milk, the process has been improved and is now a standard method of milk processing. Milk powder is produced by spray-drying milk in a continuous process.

The spray-drying process has several advantages over other milk processing methods. It is a fast, efficient method that can produce a variety of products. The milk powder produced by spray-drying is also more stable than other milk products.

The spray-drying process is used to produce milk powder for a variety of applications. It is used to produce infant formula, dry frankfurters, and dry custards. It is also used to produce milk powder for use in baking, cooking, and other food products.

The spray-drying process is a versatile method that can be used to produce a wide variety of milk products. It is a fast, efficient process that can produce a variety of products. The milk powder produced by spray-drying is also more stable than other milk products.

Investigations On The Control Of Coding Milk On The Payne Walnut In Central California
A. E. Michelbacher and W. A. Middlekauff

The coding milk, Carpospora pomonella, occurs throughout California and is one of the most important pests of walnuts.

In southern California, investigations on the control of this pest have been conducted by members of the entomological staff at the Citrus Experiment Station, Riverside, and in central California, the study has been carried out by members of the entomological staff at Berkeley.

The information contained in this report covers only the work done by the Berkeley station and is applicable to central California conditions.

The investigations were carried out in 1943 and have since been conducted princi-
pally at Linden on the Payne variety of walnut.

Timing Spray Applications

A study of the habits of the coding moth in relation to the timing of spray applications was under-
taken.

Moth flights have been determined both by the utilization of bell pants for trapping the adults and by direct observations. Records for the years 1943 to 1946 inclusive show that there are two broods of moths that must be considered. The first occurs in late April or early May and the second in July.

In order to protect the walnut crop from the first brood it is necessary to apply a spray in early May, as the time when the developing walnuts are still very small. The first standard lead arsenate used at the rate of 4 pounds of 100 gallons of water has been the standard in-
sicide used in California. In order to obtain satisfactory control with this ma-
terial a second spray is necessary.

Investigations have shown that this second treatment can be applied with good results any time from the latter part of May until the middle of June.

Walnuts cut through blossom end to reveal young coding moth caterpillar injury to developing nuts. The caterpillars are indicated by the white arrows.

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If the early spray is neglected, ob-
servations have shown that under conditions of severe attack, 25 per cent or more of the walnut crop may be infested before the end of May. This will illustrate the importance of applying an early spray in those areas where the coding moth is a major pest.

Broom breed caterpillars mostly en-
ter the nuts at the blue bloom end, and the great majority of these nuts are doubtful whether the results justify the added expense.

In 1946 a number of growers in the Linden area applied the stand-
ard lead arsenate treatment to at least a portion of their planting.

No injury whatever was reported among the untreated and all the treated crops.

The advantage of this dryer was that it was distillation, superior in treating milk to milk in its vitamin A po-
tency.

Dairymen with high producing cows had difficulty in meeting the demand for market milk. A conclusion drawn in error some thirty years ago mistimed the milk con-
suming public, and the dairymen followed suit.

Carotenose was found to be the pig-
meth ha t and the butterfat contained in the whole milk powder.

The spray-drying process became commercially successful after the introduction of precondensing the milk. Whole milk powder made from precondensed milk has a much better keeping quality.

This was to be expected, consider-
ning the variation in spray observed among the walnut trees during the years 1943 to 1945 inclusive. Actually, some that were harrassed before severe damage from the infested trees occurred.

The first extensive experimental plots reported here, using water sprays of 2,4-D to reduce mature fruit drop in citrus were established in Valencia orange orchards in May, 1941.

Concentrations of 2,4-D tested, ranged from five pounds of 2,4-D in one million gallons of water, to 40 pounds of 2,4-D in one gallon of water. In successive subsequent tests, a re-
duction in drop of mature fruit was found even when the spray was applied after a heavy drop had been in progress.

In this respect the data are very consistent and it is evident that fruit drop in fruit was varied, ranging from 30% to 40% in eleven plots distributed throughout southern California.

It is true that the spray is passed over a great deal of the fruit before it is fully ripe. In this respect the data are very consistent and it is evident that fruit drop in fruit was varied, ranging from 30% to 40% in eleven plots distributed throughout southern California.

New Vegetables For California Farms Result Of Research
Glen N. Davis

A number of varieties of vegetables have been developed in recent years, either individually or jointly by the University of Cali-
ifornia Agricultural Experiment Sta-
tion and the United States Depart-
ment of Agriculture. Some of the vegetables include white radishes, yellow beets, and red potatoes that have been available for several years. Others are of more recent origin.

Cantaloupe

Powdered Milk Resistant No. 45 is resistant to 2,4-D and is not involved in the reduced production of mature fruit in the conventional or resistant varieties of tomatoes. It is resistant to 2,4-D and is not involved in the reduced production of mature fruit in the conventional or resistant varieties of tomatoes.

Cantaloupe

DHT at doses of 5 pounds of 100 gallons of spray have resulted in phomoidal control of the coding moth. How-
ever, the treatments have resulted in destructive leaf and pod feeding. No. 7 produces a small oblate melon and in compari-
on it is somewhat as various for it is completely immune from mildew. It is the melons are not affected in the first indica-
ted by the name of the "slip" they tend to be-
irrigated. Where sprays are thoroughly

Effects Of Plant Growth Regulators On Orange Drop
W. S. Stewart, L. J. Klose, and H. Z. Broidt

In citrus, fruit drop may be consid-
ered a continuous process from the time of flowering to fruit ma-

Superimposed on this background of continuous drop are three periods during which drop is most intense. These are the bud set, June drop, and preharvest drop.

Preharvest Drop Reduced

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**Retreatment And Wrapping Of Frozen Pack Meats Studied For Effects On Storage Qualities**

W. V. Cremo

It is well established that the temperature for freezing meats should be no higher than possible. It should be 0 Deg. F. or lower for longest storage.

Meats, especially beef, are not over-aged and well wrapped should keep satisfactorily for at least 12 months. The choice of frozen pack for the following periods:

- Beef properly aged - not over-
- Lamb and pork - 8-12 months.
- Pork chops - 10-14 months.
- Ground meats - ham buck and lamb - 4-6 months.

Meats properly aged - not over-

- Lamb chops, beef steaks and pork - 8-12 months.
- Pork chops were given a very brief cold-

**Processing Milk Powders For Their Particular Uses**

(Continued from page 1)

- per pound of powder in order to as-
- The use of air from the can containing the whole
- It should be noted that milk powder has a
- This powder was ovined as air inside each
- Consideration was given to the diffu-
- Examined the meat and removed in position
- Better than does locker paper.

**Plant Growth Regulators For Control Of Drop Of Valencia Oranges And Navel Subjected From Research**

W. W. W. Cremo

- On the basis of these data it appears that it will be possible to incorporate preretreatment drop control into already existing equipment, thereby avoiding the additional cost of the plant growth regulator.

- The cost of the 2,4-D in 30,000 gallons of an 8 p.p.m. spray is about $0.50 per 100 lbs. of milk and would be sufficient to treat 10 acres of orange grove.

- An 8 p.p.m. 2,4-D spray has been found to reduce preretreatment drop 30 to 40 percent with no apparent in-

**Investigations On Control Of Codling Moth On Walnuts**

(Continued from page 1)

- The processing of skim milk for the
- For bread making it is necessary to
- Considering the fact that 2,4-D has
- Curling of young leaves can be
- At present it is recommended for

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**Harold Ellis**

Director

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**W. W. W. Cremo**

Assistant Professor of Food Technology and Entomologist in the Experiment Station.

- Haye-Dekker is Research Associate in the Experiment Station, Davis.

- Resistance of Sweet Corn to ear worm is being studied in an attempt to develop a worm resistant strain.