

How Does A Cow Produce Milk Flavor Precursors?

As it is secreted by the cow, milk is virtually without a definable flavor. But it contains many flavor precursors — compounds which, when the milk is heated or exposed to the air or just allowed to stand around for a while, are readily converted to other compounds with distinctive flavors.

The importance of flavor precursors to the dairy industry is underscored by the fact that intensive studies are being conducted by dairy scientists interested in this vital problem.

In one study, scientists at the Pennsylvania State University, working under an ARS research grant, are concentrating on the precursors of two groups of components that affect flavor of milk fat.

These two groups are called methyl ketones and lactones. Dr. Paul Dimick and Penn State associates are interested in the mechanism by which cows produce the precursors of these methyl ketones and lactones. Their studies indicate that these compounds are synthesized in the cow's mammary gland when certain fatty acids become attached to glycerol molecules to form glycerides, or fats. If these fatty acids are separated by heat from their parent glycerol, apparently they are quickly converted to methyl ketones and lactones, which are readily detectable by the off-flavors they cause.

(Fatty acids that combine with a glycerol to form the precursors of ketones are called beta-keto acids; those that combine with a glycerol to form the precursors of lactones are called gamma- and delta-hydroxy fatty acids.)

Heating milk fat along with a minute amount of water liber-

ates a class of compounds known as monocarbonyls, consisting mainly of methyl ketones. Steam distilling the fat similarly strips it of its lactones. By these methods the scientists established the flavor potential of milk fat.

They studied fat produced by their experimental herd for a year to see how the flavor precursors were affected by such variables as season, diet, stage of lactation, and breed of cow.



Prefix Reserved By Local Holstein Man

Ammon F. Reiff, Lititz, Pennsylvania, will have the exclusive use of "Rabbit-Hill" as the prefix in naming all Registered Holsteins bred in the herd. The use of this herd identification name has been granted by Holstein-Friesian Association of America, Brattleboro, Vermont.

By reserving a prefix, a Holstein dairyman establishes a "trade mark" which is used in all published information concerning the performance of his cattle. It becomes the first part of the name of every animal bred in the herd.

The origin of prefix names often stems from farm names, family name combinations or unique geographical or historical features of the farmstead. Members of the immediate fam-

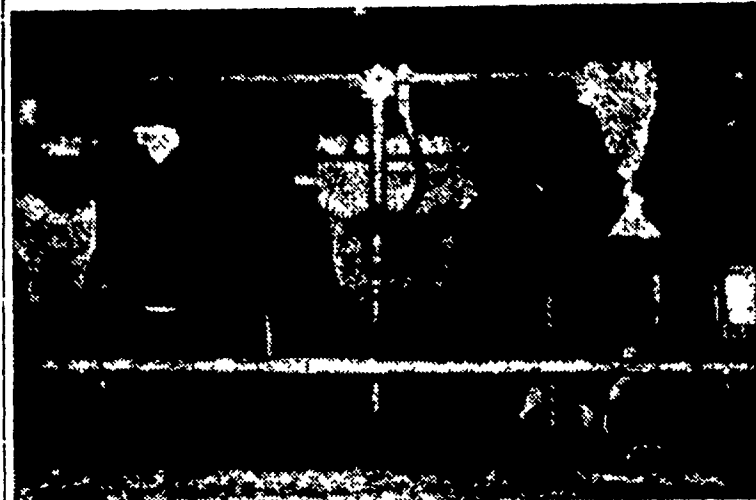
ily of the person for whom the prefix is recorded may also be allowed to use the prefix when the herd is a single unit.

BARBECUE TO BE HELD

A Chicken Barbecue will be held in the Mastersonville Fire Hall by the Fire Co. on Sat., April 13 from 4 to 8 p.m. Full menu will be served. Take-outs available. Children's portions also will be served. Graybill Miller will be barbecuer.



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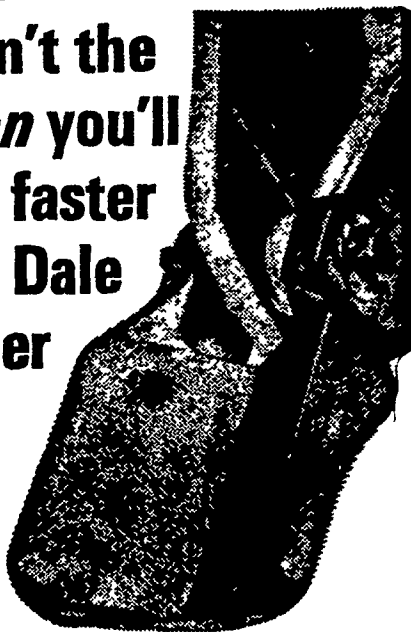
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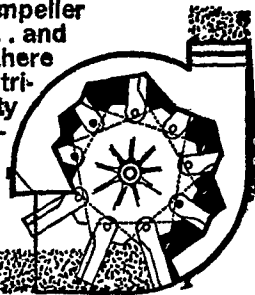
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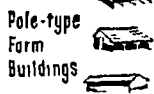
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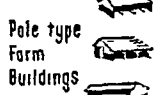
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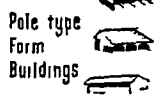
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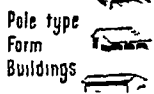
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