

# Meat in Retail Grocery Stores

availability of fresh meats, frozen meats, and cold cuts in stores surveyed influenced by store size, ownership, location

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*The following article is the last of a series of reports of a survey of characteristics of and services offered by retail grocery stores in five counties in California made cooperatively by the Department of Home Economics, University of California, and the United States Department of Agriculture under the authority of the Research and Marketing Act as part of Western Regional Research Project WM-26.*

**Fresh and frozen meats**—and cold cuts—are offered customers by the majority of 1,028 retail grocery stores surveyed in five counties of California.

From 56% to 79% of the stores in each of the counties—Butte, Fresno, San Diego, Alameda and Los Angeles—carried all three types of meat. The proportion was highest in Butte and lowest in Alameda.

Only very small proportions of the stores surveyed did not carry fresh or frozen meat or cold cuts. Except in Butte, where almost 4% of the stores did not carry any of the three meats, the proportions were less than 2%.

Cold cuts—most commonly available—were carried in 96% or more of the stores surveyed in each county and usually offered in combination with fresh or frozen—or both—meats. Only 4% to 6% of the stores carried cold cuts only.

Fresh meat was available in from almost two thirds to over nine tenths of the stores. Fresh meat and frozen meat were about equally available in Butte and Los Angeles counties. Frozen meat was available somewhat more frequently than fresh meat in Alameda and San Diego but in Fresno the fresh was available in a larger proportion of stores than the frozen. Of the 1,028 stores surveyed, one store in Los Angeles carried fresh meat only and three carried frozen meat only. Of the 1,028 stores surveyed, four in Alameda stocked frozen meat only.

From 3% to 23% of the stores offered fresh meat and cold cuts but no frozen meat. In Los Angeles 12% and in Fresno

23% of the stores carried only the fresh meat and cold cuts. Frozen meat and cold cuts but no fresh meat were available in one fifth of the stores in San Diego and in over one fourth in Alameda. Only 3% to 9% of the stores in other counties carried this combination of meats. None of the 1,028 stores surveyed carried fresh and frozen meat without cold cuts.

## Fresh, Frozen, Cold Cuts

Although very high proportions of stores in each county carried all three kinds of meat—fresh, frozen, and cold cuts—the proportions varied with the location of the stores, their ownership, and size.

All three meats were carried more frequently in the urban stores than in the rural stores in the three counties—Butte, Fresno, and San Diego—where rural stores were found in any appreciable numbers. About two thirds of the rural stores in those counties stocked all three. Of the urban stores, 83% in Butte, 74% in San Diego, 72% in Los Angeles, 70% in Fresno, and 56% in Alameda carried the three meats.

The prevalence of stores offering fresh and frozen meat and cold cuts did not vary from one shopping area to another in San Diego County where 71% to 73% of the stores in each of the areas carried the meats. The largest variation was in Butte where 94% of the downtown stores, 84% of those in neighborhood-secondary shopping areas, and 62% of the isolated stores carried them. They were available in Fresno in about two thirds of the isolated and neighborhood-secondary stores and in 80% of the downtown stores. In Alameda 38% and in Los Angeles 82% of the isolated stores carried all three meats. They were available in almost 57% of the neighborhood-

secondary and 60% of the downtown stores in Alameda. In Los Angeles 71% of the neighborhood-secondary stores and 79% of the downtown stores carried these meats.

In four counties 95% or more of the chain stores—two or more units operated by one owner—carried all three meats. In Fresno 90% of these stores did so. Independent stores offered all three meats much less frequently—about 47% in Alameda, 66% in Los Angeles, 67% in Fresno, 69% in San Diego, and 76% in Butte.

Of the affiliated independents—those affiliated with other independents for cooperative buying, advertising, and the like—the proportion in each county which carried all three meats was considerably higher than the proportion of those not affiliated. From 88% to 91% of the affiliated independents in Butte, Fresno, and San Diego stocked all three meats but only 59% to 67% of the non-affiliated ones carried them. These meats were available in 72% of the affiliated stores and 38% of the nonaffiliated stores in Alameda and in 83% of the affiliated stores in Los Angeles but in only 49% of the nonaffiliated.

The larger stores carried all three meats much more frequently than the smaller ones. Except in Los Angeles all the stores with 15 or more equivalent full-time employees carried fresh and frozen meats and cold cuts. In Los Angeles 97% of these stores did so. In Butte, San Diego, and Alameda counties all the stores with 7-14 employees also stocked the three meats. In Los Angeles 98% and in Fresno 89% carried them.

In Butte, 96% of the stores with 3-6 employees and in Alameda 91% carried all three meats. In Fresno, San Diego, and Los Angeles 82% to 84% carried them. In contrast, of the stores with only one or two employees 64% in Butte, about 58% in Fresno and San Diego, 54% in Los Angeles, and 34% in Alameda carried all three meats.

## Frozen Meat and Cold Cuts

Only in Alameda and San Diego counties did appreciable proportions of stores carry the combination of frozen meats and cold cuts.

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Proportions of Stores Carrying Meats

County	Fresh			Frozen			Cold cuts		
	%	%	%	%	%	%	%	%	
Butte	85.3	85.3	96.3	78.9	6.4	6.4	4.6	3.7	
Fresno	91.4	71.0	99.4	68.4	23.0	2.6	5.3	0.7	
San Diego	76.1	92.2	99.4	72.9	3.2	19.4	3.9	0.6	
Alameda	63.8	84.3	95.8	56.0	7.9	25.9	6.0	1.8	
Los Angeles	84.3	81.2	98.2	71.8	12.3	8.7	5.4	0.9	

## VINEGAR FLIES

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less time than required with 2.5% dieldrin dust. SG 77 was the most effective of the inert dusts. Also it deposited well on the vertical walls of the jars in which the flies were contained. This was also true of the dieldrin dust. However, the other silica aerogels, as well as most of the other inert dusts, deposited little or no residue on the vertical glass surfaces, so a great amount of dust was allowed to accumulate on the bottoms of the jars so that the flies would become completely covered with it.

Two other silica aerogels—Hi Sil and Santocel C—as well as the more effective clays—Attaclay and Olancha Clay—resulted in 100% mortality in periods

ranging from one and one half hours to three hours.

When samples of botanical diluents, sulfur, slaked lime, pyrophyllite, talc, Celaton NN-41—a diatomite—Friarite, and road dust were tested, they had little or no effect on the flies. The relative ineffectiveness of some diluents, such as Barden clay, is compensated to some extent by their ability to deposit a heavy layer of dust.

The effectiveness of dust deposits is greatly enhanced if sufficient material is present so that much of it is readily picked up by the insect and becomes widely distributed over its body. Certain diluents that are inherently highly effective—such as Attaclay, Olancha Clay, and silica aerogels—would probably be greatly improved by an additive that

would increase their ability to deposit well on smooth surfaces.

When heavy dust deposits of Attaclay and Olancha Clay were wet by atomizing water on them, and were then dried, they were not so effective in killing vinegar flies as the initial dry deposits because they were not picked up in an adequate amount by the insects. However, when the dust deposits were so light that excess dust could not be removed from the glass surfaces by tapping the dusted jars on the table, wetting and subsequent drying of the dust did not adversely affect their effectiveness.

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## MEATS

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In Alameda County these stores were largely nonaffiliated independent stores with one or two employees. They accounted for 31% of the independent stores—36% of the nonaffiliated and 18% of the affiliated ones—and for 40% of the stores with one or two employees. Four of the eight isolated stores surveyed in Alameda carried frozen meats and cold cuts and 25% of the downtown stores and those in neighborhood-secondary shopping areas did so.

In San Diego where one fifth of the stores were limited to frozen meats and cold cuts, those stores were—for the most part—nonaffiliated independents with one or two employees. In this county the stores carrying frozen meats and cold cuts accounted for 23% of the independents—26% of the nonaffiliated and 12% of the affiliated stores. They constituted over 29% of the stores with one or two employees and almost 12% of those with 3-6 employees. They accounted for 21% of the stores in neighborhood-secondary shopping areas, 18% of the isolated stores, and only 7% of the downtown stores.

### Fresh Meats and Cold Cuts

Stores carrying fresh meats and cold cuts were slightly fewer in number than those stocking frozen meats and cold cuts. Most of these stores were in Fresno and Los Angeles and were largely nonaffiliated independents with less than six employees.

In Fresno, where such stores were most common, about 30% of the nonaffiliated independents but only 9% of the affiliated ones carried this combination of meats. Over 29% of the stores with one or two employees and 17% of

those with 3-6 employees likewise carried these meats. Stores carrying these meats constituted 20% of the downtown stores, 23% of the isolated stores, and 24% of those in neighborhood-secondary shopping areas.

In Los Angeles the combination of fresh meats and cold cuts was available in 12% of the isolated stores and in about the same proportion of stores in neighborhood-secondary shopping areas. The two types of meat were carried by 22% of the nonaffiliated independents and by only 7% of the affiliated ones. They were available in over 19% of the stores with one or two employees and in 10% of those with 3-6 employees.

### Stores Offering Fresh Meat

Fresh meats were somewhat more commonly available in urban than in rural stores. From 67% to 87% of the rural stores in Butte, Fresno, and San Diego counties carried them. From 77% to 94% of the urban stores in four counties had them but in Alameda only 64% of these stores carried fresh meats.

There was not much difference in the availability of fresh meats in downtown stores and in those in neighborhood-secondary shopping areas in the different counties although there was variation from county to county. These meats were carried by 65% of the downtown and neighborhood-secondary stores in Alameda, 84% to 87% in Los Angeles, 90% to 94% in Butte, and 90% to 100% in Fresno, and 76% to 79% in San Diego. In most counties the proportions of isolated stores carrying them were slightly smaller than stores in other areas.

Fresh meats were almost always carried by chain stores—96% to 100%—except in Fresno where 90% carried them. Smaller proportions of independent stores—from 57% in Alameda to

92% in Fresno—carried fresh meats. From 82% to 100% of the affiliated independents in each county and from 47% to 89% of the nonaffiliated carried fresh meats.

In each of the counties almost all of the stores with seven or more employees carried fresh meats. Over 90% of the stores with 3-6 employees carried them except in San Diego where 86% did so. The proportions of stores with one or two employees which carried fresh meats were considerably lower than the proportions of those with three or more employees. In Alameda 45%, San Diego 64%, Los Angeles 73%, Butte 75%, and Fresno 87% of the stores with one or two employees carried fresh meats.

### Stores Offering Frozen Meats

The proportions of each type of store which carried frozen meats were similar to the proportions carrying fresh meats. The proportions carrying them were higher in urban stores than in rural stores in Butte and Fresno. From 72% to 92% of the urban stores carried frozen meats in the five counties.

Frozen meats were available in 79% to 100% of the downtown stores, in 70% to 94% of those in neighborhood-secondary shopping areas, and in 70% to 88% of the isolated stores.

In each of the counties 96% to 100% of the chain stores carried frozen meats but only 69% to 92% of the independents carried them. From 90% to 100% of the affiliated independents had frozen meats, but only 62% to 89% of the nonaffiliated.

Practically all the stores with seven or more employees carried frozen meat. The proportions of those with 3-6 employees were also high—83% to 100%. However, the proportions of stores with one or two employees which had frozen

meats were smaller than those with three or more employees in each of the counties—61% to 82%.

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## MALEIC HYDRAZIDE

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lateral buds grew sooner and more rapidly than those close to the tip. In some cases the apical bud was inhibited for several weeks after the lateral buds started growth.

Stem terminals of certain plants may abscise with even moderate concentrations of MH but such abscission is not serious. The young terminal leaves of some plants have poor color and may be unsightly if they remain on the plant for the period of the inhibition. Young terminals of *Pyracantha* and other plants that do not abscise may not develop good green color until after the MH effect has been dissipated.

Nondamaging concentrations of MH did not appear to suppress the development of blossoms of those plants investigated but some distortion of leaves and blossoms has been reported on chrysanthemum.

Several resprays have not shown adverse effects on lemons, ivy and Star Jasmine.

The Chinese Juniper—*Juniperus chinensis* variety *mas* or variety *foemina*—normally produces a small amount of needle-like juvenile type foliage on some parts of the plant, but after being sprayed with 0.20% MH as MH-30 it produced the juvenile type foliage on all parts of the plant. That effect lasted for more than a year before the mature, scale-like foliage that is closely appressed to the stem was again produced. The MH treatment completely changed the appearance of the foliage and also suppressed length growth, which resulted in a more compact plant than those not treated.

The young leaves and shoots of camellia—*Camellia reticulata*, Capt. Rawes—did not show immediate and extremely diminished growth after treatment with 0.35%–0.375% MH as MH-40 but only slight or no inhibition, even though the concentration was almost damaging. Later it was apparent that the tip leaves on some shoots had not expanded to normal size or developed a normal green color. The buds on these shoots showed inhibition nine months later, but buds on older portions of the plant resumed growth so that a more branched and dense plant resulted.

Limited trials have indicated that 0.25% MH-30 is compatible with insecti-

cides: DDT 50% wettable powder at two pounds per 100 gallons; diazinon 25E at three pints per 100 gallons; and malathion 25% wettable powder at 2–3 pounds per 100 gallons. Very high concentrations of malathion seemed to nullify the effect of MH-30. MH-40 was not tried in combination with insecticides.

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## EARTHMOVING

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arms provide reach for starting to dig, and to carry the removed soil, or spoil. With the pull-type bulldozer the ditch is excavated, cleaned, or trimmed with the machine moving backwards so the tractor does not tread on the wet portion of the ditch. Also, by graded dumping from the blade, the pull-blade machine can spread the spoil as it backs away from the ditch. Because the bulldozer is used for so many various jobs and production depends on the type of work being done figures can not be stated easily.

### Graders

Graders or motor patrols are land smoothing tools not normally used for earthmoving but for earth spreading. Their flexibility permits them to be used for earthmoving by plowing ditch excavations into windrows and then spreading the spoil. Primarily distance type machines, graders have a poor turning radius—compared to other earthmovers—and are not economical as substitutes. Also, their production capacity is low for earthmoving, especially when used for short length production because their size limits adaptability.

### Scrapers

Scrapers are semiself-loading and unloading earthmovers. Designed for surface removal of soil—rather than for pit or ditch work—production is controlled by scraper bowl size and length of travel in the work cycle of loading, hauling, unloading, and returning to reload.

Total production of scrapers can be increased by lowering the time consumed in any part of the cycle. The haul and return distances have as much effect because they are fixed for a given job and the machine has a limited top speed.

Thus rapid loading and unloading and short hauls will maximize their production. Pusher tractors are normally used during loading to increase scraper production in general construction. Limited space in a drainage channel might prohibit the use of pushers for rapid loading.

The per foot cost for drainage ditch construction can be estimated from a comparison of the production rates of the various machines and their suitability to the working conditions.

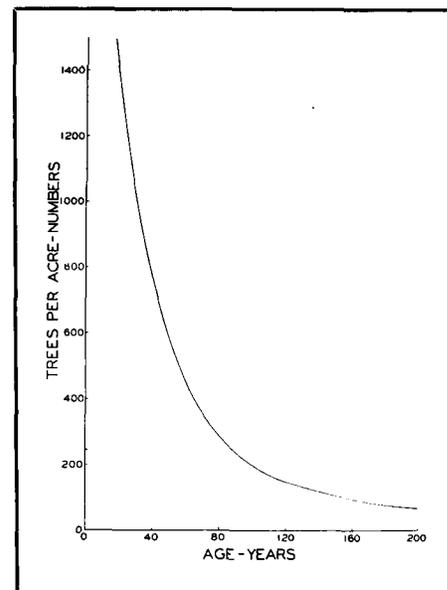
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## TIMBER

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fiber market—will result in a general practice of harvesting younger trees, which will aggravate the forest management problem. The required number of trees per acre at the time of harvest will be greater than it is now in the virgin forest and the number of years necessary for regeneration will become a significant part of the time a tree needs to grow to harvestable age.

Ponderosa pine trees required per acre at time of harvest to fully utilize a good site in the Sierra.



Planned research on the role of fertilizers in the production of timber trees should determine how the soil fertility level affects the potential yield, the initial survival of the seedling, and what relative advantage the seedling may—or may not—gain from fertilizer applications over the associated brush species found on good and poor sites.

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