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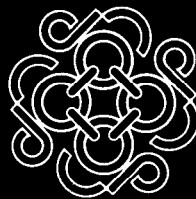
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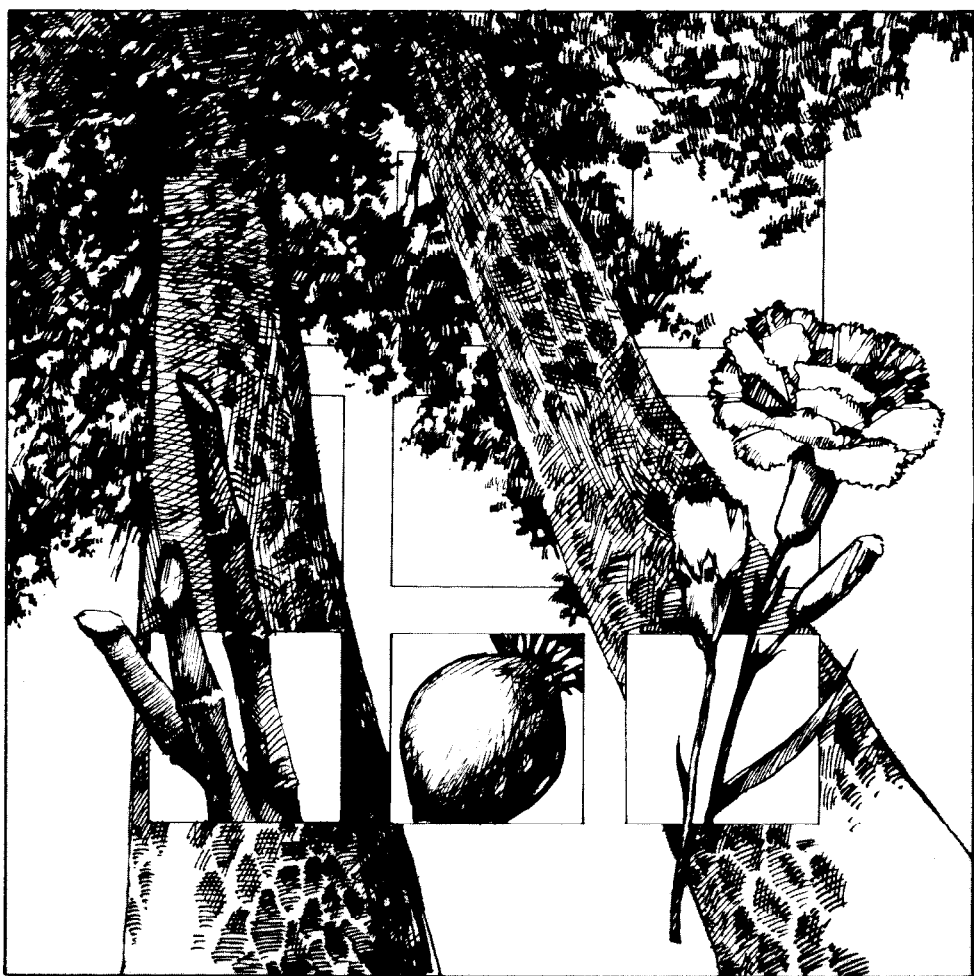
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Special Crops Cooperatives



FARMER COOPERATIVES IN THE UNITED STATES
COOPERATIVE INFORMATION REPORT 1
SECTION 19

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL COOPERATIVE SERVICE



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SPECIAL CROPS COOPERATIVES



Special crops cooperatives handle significant shares in the marketings of sugar and other sweeteners; tobacco; dry beans, peas, and lentils (pulses); seed; forest products; and hay. These cooperatives provide producers a wide range of marketing services.

Also, one or more cooperatives market such crops as flowers and bulbs, hops, nursery stock, wild rice, turpentine, and coffee.

In 1979, some 249 cooperatives handled these special crops valued at about \$1.9 billion. A few other cooperatives whose main business is marketing major crops also market one or more of these special crops.

SUGAR AND SWEETENERS

Cooperatives are involved in processing and marketing of sugar and sweetener products, including cane sugar, beet sugar, honey, maple products, and sorghum syrup. The estimated farm value of crops used to produce these sweetener products in 1979 was \$1.6 billion, up from \$1.3 billion in 1978.

Services Performed

Cooperatives provide milling, refining, and marketing services to sugarcane growers, with milling and refining functions usually performed by separate organizations. Many sugarbeet growers are members of cooperative bargaining associations that negotiate for price and other contract terms. Other cooperatives provide sugarbeet growers processing and marketing services.

Honey cooperatives provide beekeepers processing and marketing services. Cooperative supply, procurement, and marketing services are available to maple product producers, and at least one cooperative processes sorghum syrup for its members.

No cooperatives process corn sweeteners. Processing corn into sweetener products, and particularly the relatively new high fructose corn syrup (HFCS), now much in demand, requires sophisticated technology and a large capital investment. Although producers have shown interest in organizing cooperatives to process corn sweeteners, investment requirements and alternative uses for their corn have so far discouraged such ventures.

Some 61 to 68 sugar and sweetener cooperatives have operated since 1951-52, when data for these cooperatives were first shown separately (table 1). In 1979, the number of cooperatives reported dropped to 47, reflecting mostly discontinuances among sugarbeet associations. Membership declined almost steadily from 1951-52 to 12,000 in 1978, or about a third of earlier levels. In 1979, membership increased to about 14,000. Value of sales for all sweetener cooperatives increased over the same period from \$147 million in 1951-52, to \$1.2 billion in 1979. Year-to-year variations in dollar sales were mostly upward, reflecting normal business trends except in unusual marketing seasons, such as 1974-75, when sugar prices more than doubled and 1976-77, when prices fell to new lows.

Sugar accounts for more than half of U.S. sweetener production. About half of the total sugar supply is imported as raw cane sugar. The other half is domestically produced and is now about half beet and half cane. Operating cooperatives, including sugarcane mills, cane sugar refineries, and sugarbeet factories, processed about 43 percent of the 1978 domestically produced crop.

The estimated 1979 farm value of domestically produced sugarcane was \$661 million, and of sugarbeets, \$745 million, for a cane-beet total of \$1.4 billion.

The domestic sugar industry has been in a cost-price squeeze in most years since the demise of the Sugar Act in 1974. Domestic raw sugar prices, after peaking at 29.5 cents a pound in 1974, fell to a low of 11 cents a pound in 1977 but were back to 15.6 cents in 1979 and 30.1 cents in 1980. Because the United States relies on the world sugar market for about one-half of its sugar supplies, domestic prices are tied directly to world prices, which move cyclically. Grower-processor contracts are of a participating nature, and low prices mean losses for both parties, which ultimately lead to reduced acreage and plant closures.

Between 1975 and the end of 1980, 13 sugarbeet processing plants and 21 raw sugarcane mills, including 4 in Puerto Rico, ceased operation. One company closed 4 beet processing facilities following the 1978/79 season and no longer produces sugar. In late 1980, 52 raw mills and 44 sugarbeet factories operated. The industry no longer has the capacity to

Table 1—Sugar and sweetener cooperatives by number, memberships, and value of sales, specified years, 1951-52 to 1979

Fiscal year ¹	Cooperatives handling	Memberships*	Value of sales ³
	Number	<i>Thousands</i>	<i>Million dollars</i>
1951-52 ⁴	65	34	147
1955-56	65	37	125
1960-61	68	30	371
1965-66	67	26	509
1970-71	64	22	656
1975-76	61	15	1,337
1976-77	62	16	1,161
1978	54	12	1,387
1979	47	14	1,209

¹Ending between July 1 and June 30 for all years except 1978 and 1979 which ended Dec 31.

*Memberships for cooperatives specializing in sugar and sweetener products only.

³**Net** value of sales excludes intercooperative business.

⁴**Sugar** and sweetener cooperative data were available separately for the first time in 1951-52

process the volume of sugar produced in 1975.

Cooperatives have shared in these difficult times. Cooperative facilities have been among those that closed, and bargaining associations have been directly affected.

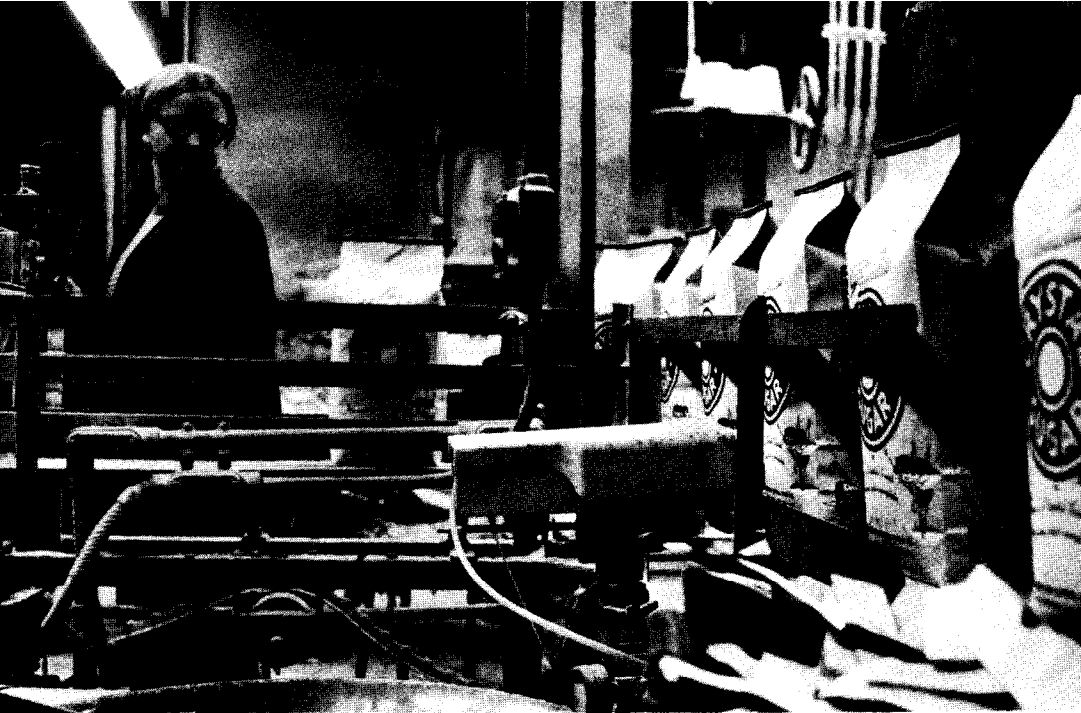
Sugarcane Cooperatives

Sugarcane is produced in Florida, Hawaii, Louisiana, and Texas. In 1979, estimated production for both Florida and Hawaii exceeded 9 million tons. Production in Louisiana was estimated at more than 5 million tons, and production in Texas reached nearly a million tons. Cooperatives service cane growers in all four States.

All sugarcane is processed into raw sugar in mills generally located in or near production areas. Raw sugar moves to refineries to be processed into refined sugar of various types. Refineries are often located hundreds of miles from mills.

First Cooperative Mill

The first U.S. cooperative sugar mill was organized in 1932, at Napoleonville, Assumption Parish, La. Nineteen growers formed the



Sugar is being packed in 100-pound bags at this plant of American Crystal Sugar, Moorhead, Minn.

Cut sugarcane is being loaded from tractor wagons to trucks on its way to the mill of Sugar Cane Growers Cooperative of Florida, Belle Glade, where it will be processed into raw sugar.



Glenwood Cooperative, Inc., and leased an idle mill in Assumption Parish with an option to purchase. Operations the first year were successful under the lease arrangement. Before beginning operations the second year, the cooperative exercised its option to purchase the mill. Glenwood continues to operate.

Role of Cooperative Mills

In 1979, 14 cooperative sugar mills operated in 3 States. Texas had 1 mill; Florida, 2; and Louisiana, 11. These 14 mills served an estimated 900 growers and had \$166 million in product sales. They represented 42 percent of all mainland cane mills and 37 percent of the mainland raw cane sugar production. This contrasts with 1960, when 13 percent of all mills were cooperatives, accounting for only 8 percent of all raw sugar production.

Cooperative mills in Florida and Texas are larger than those in Louisiana. The largest is Sugar Cane Growers Cooperative of Florida (SCGCF), Belle Glade, Fla. SCGCF has improved returns to about 50 grower-members through further cooperative activity with other grower-owned mills and innovative marketing of byproducts. It is a member of the Florida Sugar Marketing and Terminal Association, Inc., Riviera Beach, Fla., a cooperative providing marketing, warehousing, transportation, and terminal services. SCGCF markets its byproduct, molasses, through the Florida Molasses Exchange, Inc., a cooperative in Belle Glade, Fla.

SCGCF also supplies bagasse, the fibrous residue from the milling process, to a nearby plant where it is used in the production of furfural. Furfural is a chemical product used in the foundry, petroleum refining, and plastic and rubber industries.

Through its affiliations and attention to efficient operations, SCGCF has helped growers continue in sugar production, even in the face of rising costs and price uncertainties.

Among smaller cooperative mills, principally those in Louisiana, need for efficient operations and effective marketing remains a major concern. Generally, small mills have been less efficient and are likely to cease operations in times of economic stress. Of the 33 Louisiana mills operating in 1977, only 24 remained in business in 1980. All nine dropouts were considered small and less efficient, including one cooperative.

In addition to cost and price fluctuations, markets have often been uncertain or unavailable to mills. Refiners have been accused of buying raw sugar only when they had orders for refined product, possibly as a

means of seeking protection against sudden price declines.

Louisiana cooperative mills were faced with further complications when they learned of the proposed closing of the Georgia Sugar Refinery at Mathews, La. Many cooperative mills had marketed raw sugar to the Georgia Sugar Refinery. It became apparent that the refinery could be purchased and transfer of ownership could be accomplished with little effect on the refinery's marketing operations. Acquisition of the plant would preserve an existing market and provide opportunities for market expansion.

Seven mills were able to put together the cooperative organization and work out the financing necessary to acquire the Georgia Sugar Refinery and rights to its brand names and logos. Operations were turned over to the new cooperative owners in May 1980.

The Georgia operation produces a full line of packaged refined sugars. Its products move into a **17-State** market area. Members are confident this integrated operation will provide new production and marketing opportunities.

California and Hawaiian Sugar Company (**C and H**), San Francisco, markets all the sugar and molasses produced by Hawaiian mills. C and H is one of the 50 largest U.S. cooperatives and the second largest U.S. refined sugar marketing organization. It operates one of only two cane sugar refineries in the Western United States.

C and H has 14 member sugar mills. It was **first** organized in 1906 as a conventional corporation but was reorganized in 1921 as a cooperative. It operates two refineries, a small one in Aiea, Oahu, Hawaii, and one credited with being the world's largest in Crockett, **Calif.** Together, these two operations refine about 1 million tons of raw sugar annually.

Refined sugars are marketed under the C and H label in a wide variety of packages. Sugar is also available for industrial use in bulk quantities, either granulated or as liquid sugar.

C and H markets its sugar in States west of the Mississippi River, including Hawaii and Alaska. Much of its sugar is sold directly to food **firms** and industrial users, but some use is made of brokers. C and H maintains inventories in a network of warehouses throughout its marketing territory.

Sugarbeet Cooperatives

Growers in 16 States produced 22 million short tons of sugarbeets in 1979. Six of these States, California, Colorado, Idaho, Michigan, Minnesota, and North Dakota, accounted for 80 percent of the crop.

In 1979, no beets were produced in Washington, and volume dropped in other States following the closing of processing plants. Eight plants were closed in California, Colorado, Idaho, Ohio, Utah, and Washington during the 2-year period.

Bargaining Associations

Growers are served by bargaining associations in nearly all areas producing sugarbeets. Exceptions include areas where growers are members of processing cooperatives.

The earlier sugarbeet bargaining associations were formed in the Western States in the early 1920's. The Mountain States Beet Growers Marketing Association, Greeley, Colo., was organized in 1923, and Mountain States Beet Growers Marketing Association of Montana, Billings, Mont., was organized in 1924. Both organizations continued to operate in 1980.

The primary service provided by these bargaining associations is to negotiate with processors for price and other contract terms for sugarbeets. They have no responsibility for assembling or processing, nor do they take title to beets.

Negotiations result in participation contracts that stipulate growers be paid for their crops on the basis of sugar content and tonnage of beets delivered. Also, the price growers receive will be determined by the net price of sugar sold by the processor during a 12-month sales period. In this manner, growers share in the proceeds of the marketing operation.

Associations negotiate to obtain contracts grower-members will accept. When negotiations are completed, processors present these approved contracts to growers who individually sign them.

Other functions of these associations usually involve most of the following: providing field staffs, inspecting processors' laboratory and receiving station procedures, monitoring growers' cultural practices, providing legislative liaison, and publishing newsletters.

Bargaining associations are usually organized around a sugarbeet factory. Some are independent local cooperatives. Others are member locals of large federated associations or divisions of large centralized associations organized on a State or regional basis. These State or regional associations may serve growers delivering beets to several different plants, and in some cases to different companies.

Local associations or units depend on federated or centralized associations for information and guidance necessary for the bargaining process. Most regionals help locals with negotiating sessions, and some take

full responsibility for the process.

About 17 local bargaining associations were active in 1980. State and regional associations, both federated and centralized, number 16.

Trade Association

Twelve of these 16 associations are members of the American Sugarbeet Growers Association (ASGA), Washington, D.C., a trade association providing legislative and international representation and public relations services. The other four act independently in most matters, but many cooperate with their sister associations in ASGA on issues fundamental to the industry's welfare.

California Beet Growers

Operations of California Beet Growers Association, Ltd. (CBGA), Stockton, Calif., show the broad scope of activity a bargaining association may undertake. CBGA, organized in 1931, now has about 1,800 active members who farm in 9 contiguous districts stretching from Tehama County in the north to Ventura County in the south and also in Imperial County on the Mexican border. With production spread over this wide area of the State, sugarbeets are nearly a year-round business.

CBGA negotiates with four processors who among them operate nine factories in California. Much time and many resources are devoted to preparation for, and conduct of, the negotiating process.

A field staff is employed to inspect processors' facilities and to work on a wide range of production problems. Information on production and marketing developments is provided by monthly bulletins and annual reports. Members are encouraged to maximize returns through efficient production of quality crops. The association actively supports sugarbeet research and disseminates results.

Sugar is a product greatly affected by world production and marketing, international policy, and national legislation. Like most organizations in the sugar industry, CBGA officers and management devote much time to informing their congressional delegations and others of growers' views on pending legislation and governmental actions.

Based on members' sugarbeet tonnage, CBGA is the largest negotiating bargaining association. The long season and large number of factories involved require an unusually active staff. Although other sugarbeet bargaining associations may not have the large territory and long production seasons, they deal with most of the same problems.

Sugarbeet Processing Cooperatives

Grower ownership of sugarbeet processing facilities is relatively new. It began in the early 1970's and now involves 3 cooperatives serving about 2,255 grower-members in Minnesota and North Dakota. Combined 1979 production of these cooperatives represented 27 percent of U.S. refined beet sugar.

Growers long involved in cooperative bargaining associations began in the early 1970's to consider cooperative processing as a possible alternative for marketing their sugarbeets. Much of this interest in cooperative processing took place in the Red River and Minnesota River valleys, and nearby areas of Minnesota and North Dakota.

In the Red River Valley, sugarbeets have been grown commercially since 1923 and have been one of the more profitable crops. Producers in the area were well acquainted with benefits of working together through a bargaining association to negotiate contracts for marketing sugarbeets.

Valley growers had organized Red River Valley Sugar Beet Growers Association, Fargo, N. Dak., as their bargaining association in 1943. Most members might have been content to continue such arrangements except for the potential they saw for increased sugarbeet production through expansion of processing capacity. American Crystal Sugar Company, Denver, Colo., operator of plants in Clarksburg, Calif., Rocky Ford, Colo., Moorhead, Minn., Crookston, Minn., East Grand Forks, Minn., and Drayton, N. Dak., did not see it that way. Instead, the company indicated it had no plans for expansion in the valley.

Association leaders feared the possibility that American Crystal would close one or more of its Minnesota or North Dakota plants. These fears were supported by observations that factory upkeep was not being maintained for most efficient operations. Although other groups were developing plans for building two factories in the area, American Crystal management felt potential return on investment for its shareholders was too low to merit expansion.

After watching this trend for several years, association leadership was convinced steps had to be taken to protect growers' long-term beet production patterns, which had meant so much to their livelihood. Also, if this source of livelihood were going to be further developed-as they believed it could-they recognized they would have to undertake the task themselves.

In 1971, the association decided to explore how growers might gain representation on American Crystal's board of directors. This was the first step in a process that was to end 2 years later with growers' purchase of American Crystal Sugar Company for \$66 million.

The process of acquiring American Crystal Sugar Company was long and involved. There were the **first** contacts to determine extent of company interest and grower commitment. Then came further explorations to determine value and condition of this sugar processing and marketing corporation and how such a purchase could be financed. In addition to financial hurdles, legal problems had to be settled. At each step over the 2 years, growers had to be kept informed and approvals obtained from banks, government agencies, and concerned growers. Each step was critical to the entire process.

Financing transfer of ownership from American Crystal Sugar Company's corporate stockholders to the new American Crystal Sugar Company's cooperative members was a complicated process, but as far as growers were concerned, a major job was raising \$20 million in equity capital. Growers invested \$100 for each acre of sugarbeets to be delivered in 1973. Their 200,000 acres of sugarbeet production netted \$20 million. The balance needed for acquiring the company was raised through a series of bank loans that in the end were held by the St. Paul Bank for Cooperatives, St. Paul, Minn.

Growers' purchase of American Crystal came at the best possible time. Sugar prices increased dramatically in 1974, enabling the cooperative to earn additional income and ease the financial burdens of acquisition. It also moved the timetable ahead for facility modernization and expansion.

In 1975, the Red River Valley Cooperative, Hillsboro, N.D., merged with American Crystal, making available additional new plant capacity and plant efficiencies not fully realized in the first year's operation at Hillsboro. American Crystal has continued to operate the Clarksburg, Calif., factory receiving beets from nonmember growers. This nonmember business is taxed to the cooperative at the normal corporate Federal and State income tax rates. The operation accounts for only a small part of total net sales.

The Rocky Ford, Colo., factory, now closed, was operated under a management agreement for Colo-Kan Sugar, Inc., a cooperative of Colorado and Kansas growers who supplied the plant.

Other Sugarbeet Processing Associations

Two other sugar processing cooperatives operate in the Red River Valley. Minn-Dak Farmers Cooperative, Wahpeton, N. Dak., operates a new sugarbeet factory completed in 1974. Its success is indicated by steadily increasing production that leveled off near plant capacity in the late 1970's.

The other cooperative is the Southern Minnesota Beet Sugar Cooperative (SMBSC), Renville, Minn. Its new factory came into production after the sugar price boom of 1974. Delays in construction and consequent problems with financing plagued the operation for several years. Also, drought hurt sugarbeet production severely in 1976.

Debt has been refinanced, and the outlook for better sugar prices lends encouragement that SMBSC will work out its major problems.

Sales of sugar and byproducts are handled for SMBSC and Minn-Dak by North Central Sugar Cooperative, St. Paul, Minn., marketers of sugar, and Agri-Commodities Cooperative, also of St. Paul, marketers of byproducts.

Honey

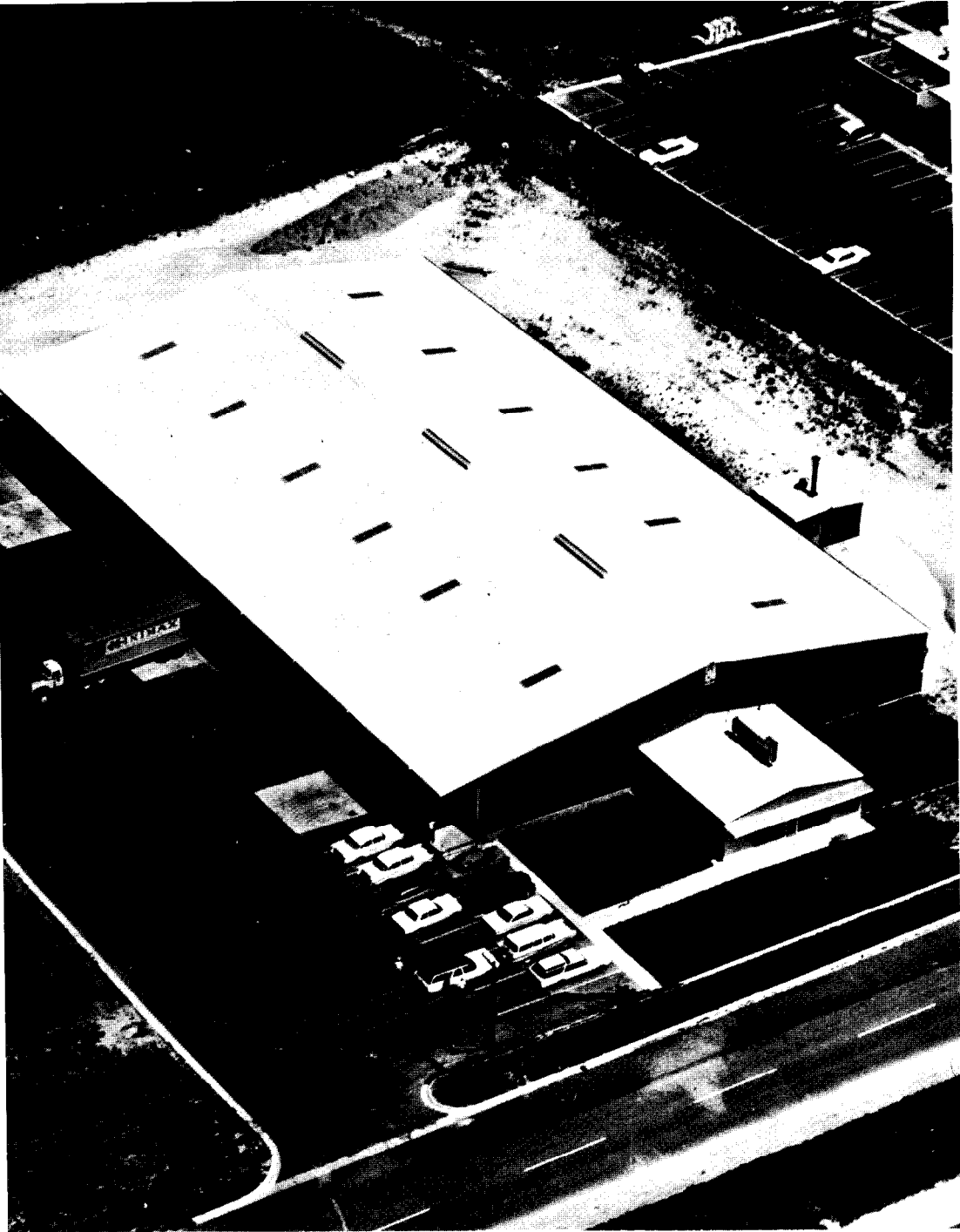
Some 237 million pounds of honey valued at \$140 million were produced in the United States during 1979. More than a fourth of that crop was marketed through three honey cooperatives, Sioux Honey Association, Sioux City, Iowa, Valley Honey Cooperative, Stockton, Calif., and Ohio Apiaries Cooperative Association, St. Paris, Ohio. The three associations served 1,070 producers marketing about 69 million pounds of honey valued at over \$48 million.

Beekeeping is a specialized farm enterprise important to the pollination of legume seeds and fruit and vegetable crops, as well as honey production. Bee colonies are dispersed among crops being pollinated or placed in yards for honey production or winter location. This may require full-time beekeepers to use most of the suitable apiary sites within a 25- to 50-mile radius of their home bases, and larger operators may move their bees from one State to another. A few thousand part or full-time beekeepers in the United States do most of the pollinating work and produce more than 80 percent of the honey. Although many of these specialists have developed local markets for their honey, others have successfully used the marketing services of honey cooperatives.

The Sioux Honey Association is the largest honey marketing association. It is considered the leader in the honey industry. Its 921 members in 32 States and Canada delivered nearly 63 million pounds of honey to its facilities at Sioux City, Iowa, Anaheim, Calif., Temple, Tex., Waycross, Ga., Umatilla, Fla., and Wendell, Idaho, during the 1979 season.

The association sells most of its honey under the Sue Bee brand. It has developed an extensive merchandising organization to sell and distribute honey nationwide.

Sioux Honey Association has developed new products and new uses for honey at its modern research laboratory in Sioux City, Iowa. Its stu-



Used as both a receiving station for producers' unprocessed honey, and a trade distribution center for packed finished product, this modern facility in Temple, Tex., is one of several strategically located units serving members of Sioux Honey Association, Sioux City, Iowa.

dies have effectively improved honey processing. The laboratory also tests producers' honey to improve production and handling practices and product quality.

Maple Products

Vermont and New York are the most important of the nine States producing maple products. The other seven include Maine, Massachusetts, Michigan, New Hampshire, Ohio, Pennsylvania, and Wisconsin. Vermont accounts for more than one-third of total United States production, while New York accounts for more than one-fourth. Cooperatives are involved in marketing maple products from both States.

The maple product industry continues to be small. In 1979, U.S. production was 1,220,000 gallons valued at \$17.2 million.

Furthermore, producers are small, with most tapping trees on fewer than 20 acres. Some, however, collect sap from trees covering larger areas. Producers usually tap their trees and boil down the sap producing syrup on their own premises, but some send their sap to central evaporators. Sap collection is usually confined to a period of 6 to 10 weeks.

At various times, producers have formed cooperatives in maple producing areas to market their syrup and purchase packing supplies. One association formed in the early 1930's operated for 20 years. Dwindling syrup production and rising sugar prices may have doomed this marketing effort.

The Franklin County Maple Syrup Cooperative (FCMSC), Fairfax, Vt., serves about 300 members in northern Vermont. FCMSC was formed to stabilize the price of syrup. Producers pack their syrup in 32-gallon drums furnished by the cooperative, deliver it to the FCMSC, and are paid. The syrup is then sold to buyers who repackage and market it in smaller containers. About 1,000 drums per year are handled by FCMSC, representing 8 to 10 percent of Vermont's volume.

The Vermont Maple Sugar Makers' Association, Inc., Montpelier, Vt., serves maple producers operating throughout the State. The purposes of the association are largely promotional, with specific objectives to publicize, advertise, and educate on a variety of matters related to maple products. Bylaws of the association authorize a wide variety of cooperative marketing, purchasing, and service activities.

Promotion of proper grading and standardization, efficient methods of production and marketing, and advertising and use of a registered label for Vermont maple products are but a few of the association's activities. In support of these activities, an arrangement has been worked out with a manufacturer to supply producer-members with a variety of

cans lithographed with the associations's label. In turn, the association sets aside a part of its budget to advertise its label and the product quality specifications required of growers who use it.

Massachusetts Maple Producers' Association, Inc., (MMPA), Shelburne Falls, Mass., is a supply cooperative. It annually provides about 130 producers with about \$20,000 worth of maple syrup containers and shipping cartons.

The New York Farm Bureau Marketing Cooperative (NYFBMC), Albion, N.Y., has had a maple syrup marketing program serving about 60 maple syrup producers in the western part of the State. Between 10,000 and 13,000 gallons of syrup have been marketed annually.

Sorghum Syrup

A 1975 estimate placed annual production of sorghum syrup at under 1 million gallons. Sorghum syrup might be of only minor significance as a sweetener but joins with honey and maple syrup as a "natural sweetener," an object of renewed consumer interest. It is produced primarily in Alabama, Arkansas, Georgia, Iowa, Kentucky, Mississippi, North Carolina, and Tennessee.

Typically sorghum syrup has been produced in small batches by open kettle methods from the juice of crushed sweet sorghum cane. The boiling down process is much like the one long used to produce maple syrup, but a modern continuous evaporative method can be used to produce either product.

Kentucky Sorghum Growers Cooperative Association, Inc., Hawesville, Ky., processes syrup for a small group of families engaged in sorghum production. In the late 1970's, the cooperative's sales were in the \$20,000 to \$30,000 range.

In much of the Southeast and Midwest, sorghum production provides important supplemental income and a favorite product for home consumption. Upgrading facilities for more efficient production and development of potential markets for syrup through cooperative organization could enhance incomes and possibly provide at least some part-time jobs.

A Look Ahead

Sugar Cooperatives

Grower-members of sugar cooperatives hope for a less troubled decade ahead than the seventies. Domestic production is down, but world supplies are abundantly available at less than U.S. producers' cost

of production. Near term expectations are for a continuation of low world prices. This domestic production cost/world price relationship could change quickly as exporting countries reduce production in response to low prices. In the longer term, larger, more efficient cooperative processing facilities in areas where cane and sugarbeets can effectively compete for cropland use will continue to afford growers a market for their crops. Other probable developments will include:

- Sugarcane and sugarbeet processing cooperatives can be expected to reduce debt loads and upgrade facilities during periods of improved prices.

- Acquisition and upgrading of existing plants to be organized and operated as cooperatives will be considered, and possibly attempted, by growers threatened with loss of market access and consequent termination of their cane or beet production enterprises. However, the cost of building new facilities and an uncertain long-term sugar outlook will discourage construction of new facilities. Growers' major concerns in acquiring facilities will be for continuing their sugar production enterprises. Members of some bargaining associations will likely face this problem.

- Coordination of cooperative processing and marketing operations through joint ownership of facilities or joint operation of marketing agencies will be further developed.

- Both processing and bargaining cooperatives will continue to represent their grower-members' interests in national and international sugar policy and government activity in energy, environment, transportation, labor, and related concerns.

- Much of what lies ahead for sugar cooperatives will depend on sugar prices as they relate to production costs and prices of competing products. In recent years, corn sweetener production has become more competitive with sugar. Long-term cooperative planning in the sugar industry will require full consideration of these changing production patterns.

Honey, Maple, and Sorghum Cooperatives

Cooperative marketing of honey, maple, and sorghum sweeteners will continue to be affected by prices of competing sugars and corn sweeteners. Prices of these natural sweeteners must cover costs of production, but increasing volumes will not move, if their prices are not competitive with available substitutes. Substantial imports, particularly of honey, can depress prices, but promotion of a quality product under a

cooperative label can command premium prices.

Opportunities exist for cooperatives to establish centrally located evaporators for boiling down producers' maple sap to syrup. Such facilities could make possible the use of efficient, continuous evaporators. Similar cooperative facilities could be operated for sorghum syrup production.

Centralized cooperative processing may help maple product, sorghum, and honey producers meet new sanitation standards for facilities. Such facilities could also make more efficient use of labor and energy resources.

TOBACCO

In 1979, U.S. tobacco growers produced 1.6 billion pounds of tobacco valued at \$2.3 billion. These growers farmed in a 20-State area extending from Massachusetts to Florida, and as far west as Minnesota and Missouri. Six States—North Carolina, Kentucky, South Carolina, Georgia, Virginia, and Tennessee—usually produce about 92 percent of the total U.S. crop.

In each major production area, cooperative associations perform a variety of marketing services for patrons, including receiving, displaying, and selling. Some organizations process and store tobacco, advise growers on cultural practices, and handle supplies and farm equipment. Generally referred to as marketing cooperatives, these associations account for only a small share of total tobacco marketings.

Other cooperatives assist the Federal Government in administering its tobacco price support program. These are often referred to as stabilization associations, and Federal regulations speak of them as producer associations. Services these associations provide include processing, storing, and selling tobacco received under the loan program.

The difference between these cooperatives relates mostly to their operating purposes. Marketing cooperatives were organized to provide marketing services, and most operate auction warehouses. Stabilization associations carry out the provisions of the tobacco loan program on the field level under contract with the Commodity Credit Corporation (CCC), making price support advances to eligible producers with funds borrowed from CCC. Both kinds of cooperatives meet the same legal requirements for organization in any given State.

The number of tobacco cooperatives has varied little from the mid-1950's to 1979, and in recent years, memberships have leveled off at about 300,000 (table 2). Dollar volume of sales has varied substantially but has generally increased. Much of the variation reflects sales by stabil-

Table 2—Tobacco cooperatives by number, memberships and value of sales, selected years, 1950-51 to 1979

Fiscal year ending ¹	Cooperatives handling ²	Memberships ³	Value of sales
	Number	<i>Thousands</i>	<i>Million dollars</i>
1950-51	24	604	<i>126</i>
1955-56	34	585	<i>190</i>
1960-61	30	216	<i>140</i>
1965-66	33	548	<i>262</i>
1970-71	28	309	<i>328</i>
1975-76	33	305	<i>291</i>
1976-77	34	305	<i>203</i>
1978	33	316	<i>434</i>
1979	36	304	<i>239</i>

¹Ending between July 1 and June 30 for all years except 1978 and 1979, which ended Dec. 31.

²Does not include two Puerto Rican stabilization associations.

³Memberships for cooperatives specializing in tobacco only.

ization associations. Heavy inventory movement by one association in 1978 brought total sales to a record high of \$434 million for 33 tobacco cooperatives serving an estimated 316,000 grower-patrons. In 1979, 36 associations serving an estimated 304,000 members had sales of \$239 million.

Early Associations

Tobacco growers were among the first agricultural producers to cooperatively market their crop on a large scale. Connecticut recorded the first cooperative sales in 1862. In 1873, growers in Kentucky and Massachusetts built cooperative warehouses to store their tobacco while awaiting better prices. Later came packing associations, sales agencies, and local pools.

Local farmer-owned warehouses and packing plants for tobacco began operating in Wisconsin about 1902. Between 1902 and 1920, more than 20 associations were organized in Kentucky, Tennessee, Maryland, Virginia, North Carolina, Ohio, Pennsylvania, and Connecticut. The goal of all these grower efforts was to obtain higher prices for their tobacco.

Rising tobacco prices during World War I encouraged growers to increase production, but for the 1920 crop, prices declined a drastic 45 percent. These conditions led to the formation of several large tobacco marketing cooperatives during the early 1920's. A few associations were

organized during the 1930's, and several have been formed since World War II, including some to administer the price support program. The grower designation program for flue-cured markets spurred formation of several cooperatives in 1974 and 1975.

Marketing Cooperatives

Twenty-five marketing cooperatives with 31,000 members had \$121 million in estimated annual sales of 6 major kinds of tobacco in 1978. Both memberships and sales increased over the 1976-79 period as follows:

Fiscal year ¹	Cooperatives handling	Cooperative memberships ²	Value of sales ³
	<i>Number</i>	<i>Thousands</i>	Million dollars
1975-76	22	35	97
1976-77	23	35	132
1978	22	41	136
1979	25	31	121

¹Ending between July 1 and June 30 for all years except 1978 and 1979, which ended Dec. 31

²Memberships for cooperatives specializing in tobacco only.

³Includes marketing sales of \$4 million to \$5 million by one stabilization association.

Although more than 31,000 growers were members of these marketing associations in 1979, substantially fewer patrons used their services, in any given year.

Ten associations serving flue-cured growers had estimated annual sales of \$63 million, and nine associations serving burley growers had estimated sales of \$45 million in 1979. Another six cooperatives serving growers of dark-fired, dark air-cured, Maryland, and cigar filler tobaccos had an estimated \$13 million in sales. Of the 25 associations, 24 are auction warehouses, and one has a pooling operation.

Cooperative tobacco auction warehouses are operated in the same way as all other auction warehouses. After delivery, tobacco is weighed, identified, and graded. The auction sale is opened by a representative of the warehouse who makes the first bid on each lot. The auctioneer calls out this bid, receives other bids from the six or eight buyer's representatives, and announces the selling price and buyer when bidding is completed. All this is accomplished rapidly at about 350 to 500 lots per hour, depending on the kind of tobacco.

Growers receive warehouse checks for their tobacco, less marketing charges, as soon as the sale is completed. Buyers usually settle with

Auctions are the primary method of marketing growers' tobacco. Twenty of 21 cooperatives operate auction warehouses such as this flue-cured facility.



warehouses within a few days.

The primary difference between cooperatives and other warehouses lies in members' opportunities to influence the kind, quality, and cost of marketing services. Cooperatives have been responsive in keeping their services to growers adequate, convenient, and efficient enough to be low cost.

Growers' costs for auction warehouse services and particularly marketing charges are competitive and, in some cases, standardized. Usually cooperatives charge growers the going fees, which may range from 3 to 6 percent of gross sales. Any savings developed from the operation in excess of actual expenses are returned to growers at the end of the marketing year. Following this procedure, some cooperative auction warehouses have returned substantial savings to growers.

Flue-Cured Associations

In the flue-cured areas of North and South Carolina eight of the nine operating cooperatives were organized after the USDA producer designation plan became effective in 1974. This plan allows producers to designate a warehouse in which their tobacco will be sold. The warehouse of the grower's choice must be within a **100-mile** radius of the county seat of the county in which the producer's farm is located. Selling time for markets is allocated according to the volume of tobacco designated. Competition among warehouses for growers to designate them has assured more equitable treatment in the assignment of selling time.

Cooperative organization was facilitated by the producer designation plan and lifting of restrictions imposed on new entrants by the local tobacco boards of trade. Growers joined in organizing and patronizing these new associations. Other growers, given the opportunity, designated their leaf to existing cooperatives, increasing business volume substantially. One of the larger flue-cured marketing associations, Growers Cooperative Warehouse, Inc. (**GCW**), Wilson, N.C., substantially increased its sales volume in the **first** season the producer-designation plan operated.

Cooperatives marketing flue-cured tobacco had estimated annual sales of up to \$14 million in 1979. Five of the 10 flue-cured cooperatives had sales exceeding \$6.5 million.

Burley Associations

Estimated 1979 sales by the Western District Warehouse Corporation (**WDWC**), Shelbyville, Ky., exceeded combined sales of

the other eight burley marketing associations. Annual sales of the other burley cooperatives ranged from \$2 million to \$5 million.

WDWC operates warehouses in six central Kentucky markets. It provides redrying, packing, and storage service through a separate corporation that leases facilities from the cooperative. Of the other eight burley associations, two operate warehouses in central Kentucky; and six in eastern Tennessee.

Maryland

Maryland Tobacco Growers Association, Cheltenham, Md., is the oldest tobacco cooperative. Organized in 1906, the association has functioned as a marketing organization since 1920 and for many years operated the Maryland hogshead market, a closed-bid market for packed tobacco. Its use declined until only a few hogsheads are offered for sale each year. No price support is available for Maryland tobacco, because growers have failed to vote for supply controls since 1965.

In 1970, the declining hogshead market led to establishment of an auction warehouse subsidiary for loose-leaf sales near Upper Marlboro. Sales for the operation exceeded \$4 million annually in the late 1970's.

The association also purchases farm supplies for its members, including specialized material for tobacco production, farm machinery and equipment, and hardware. It also services farm equipment.

Cigar-Filler

Agway Inc., Syracuse, N.Y., a farm supply and marketing cooperative, markets Pennsylvania seedleaf tobacco in the Lancaster, Pa., area. Long known as cigar tiller tobacco, seedleaf is used extensively in looseleaf chewing tobacco. The annual volume of this leaf marketed by Agway varies, but exceeded \$2 million in 1979.

Supply controls and price supports never have been favored by growers of Pennsylvania seedleaf.

Agway uses the pooling method of grower payment. Growers sign a marketing agreement and make a performance deposit based on expected pounds or acreage to be delivered. When members deliver their tobacco to the warehouse, they receive an advance payment and return of performance deposit. Tobacco is weighed, graded, and pooled by grades. Sales are made by private negotiation. When sales are completed, final settlements are made with growers for the balance owed on their tobacco less sales expenses.

Stabilization Cooperatives

Except for Maryland, Pennsylvania seedleaf, cigar wrapper, and Perique, all tobaccos grown in the United States are eligible for the Federal Government's price support program. Marketing quotas must be approved by growers before they are eligible for the benefits of this program. About 95 percent of all tobacco produced is covered by the program.

Cooperatives administer the program under contract to the U.S. Department of Agriculture's Commodity Credit Corporation (CCC), an agency created to stabilize, support, and protect farm income and prices. Thus, these grower organizations are called producers' associations, or stabilization cooperatives. They operate with funds borrowed from CCC, and tobacco received under the program is pledged as security for borrowed funds.

USDA sets a price support loan rate for each class and grade of tobacco. If a buyer's bid price on any lot of tobacco is not more than the government loan rate for that grade, the grower can accept the loan rate and turn the tobacco over to the stabilization cooperative if the grower is, or is willing to become, a member. When a grower elects to accept the loan rate, payment is made in the usual way by the warehouse, which is reimbursed by the stabilization cooperative responsible for administering the price support program for the particular type of tobacco. When a cooperative functions in both marketing and stabilization capacities, payment is made directly to the grower by the cooperative acting in a stabilization capacity.

Tobacco received from growers under the loan program is pooled and eventually sold through regular trade channels. If any profits are realized, they go to the growers. Any losses are assumed by CCC.

USDA regulations state the Tobacco Loan Program "will be carried out in the field by producer associations...acting for groups of producers." Thus, all tobacco placed under loan is handled by the 11 stabilization associations. One serves flue-cured; two, burley; three, both fire-cured and air-cured; one, dark air-cured only; three, cigar binder; and one, cigar filler producers. Where more than one association is involved, there is usually a division of the territory producing that particular class of leaf. A few of these cooperatives provide growers both stabilization and marketing services.

Stabilization associations have contracts with (CCC) and must follow Department regulations but remain cooperative marketing associations of tobacco growers incorporated in the States in which they operate. Their affairs are guided by boards of directors elected by the member-

ship. Also, one or more public directors may be appointed as prescribed by the cooperative statutes of the incorporating State.

Business Volume

Receipts of tobacco by stabilization cooperatives vary considerably from year to year depending on leaf production, crop quality, market demand, support prices, and other factors. During each of the 16 marketing seasons, 1964-79, flue-cured tobacco placed under loan varied from 23.1 million to 285.6 million pounds. During the same period, burley tobacco placed under loan varied from 200,000 to 158.2 million pounds. Sales of these loan tobaccos are subject to the same variables, with volume increasing or decreasing as much as tenfold from one year to another.

In 1976-79, annual sales and memberships of the 11 cooperatives were as follows:

Fiscal year ¹	Cooperatives handling ²	Cooperative memberships	Value of sales
	<i>Number</i>	<i>Thousands</i>	<i>Million dollars</i>
1975-76	11	270	194
1976-77	11	270	71
1978	11	275	298
1979	11	273	118

¹Ending between July 1 and June 30 for all years except 1978 and 1979, which ended Dec. 31

²Includes one association with marketing sales only that was not included in value of sales.

Membership

Number of members in stabilization cooperatives is difficult to estimate. Patrons using stabilization cooperative facilities in any one year represent only a small fraction of the 270,000 to 275,000 memberships shown above. Mandatory membership requirements, relatively low membership fees, easily attained membership, and the nearly impossible task of clearing rolls of inactive and deceased members make estimated membership numbers misleading.

Operations

Stabilization cooperatives act as CCC's agent in carrying out the price support program. These cooperatives receive all tobacco for price support that fails to receive a bid on the auction floor at least equal to the

loan rate. The tobacco is delivered to the association, and under contractual arrangements, is processed, packed, and stored until sold. This tobacco is pledged as collateral to CCC for funds borrowed.

When stabilization cooperatives sell tobacco from their inventories, proceeds are used to repay CCC crop loans plus interest. Anything in excess of the amount owed to CCC, other handling costs, and necessary reserves is returned to growers who placed tobacco under loan in that crop year. Economic studies show prices received by growers would vary more, and not average as high, in the absence of government price support and stabilization operations.

Individual Associations

To fulfill their CCC contract obligations, stabilization cooperatives perform similar functions. Differences become apparent as these associations establish policies, handle tobaccos with varying production and market characteristics, and conduct activities not directly related to the price support program.

Flue-Cured Tobacco Cooperative Stabilization Corporation (FCTCSC), Raleigh, N.C., was organized in **1946**, and began operations with that year's crop. It serves all growers in the five producing flue-cured tobacco States. FCTCSC is the largest stabilization cooperative, mostly because flue-cured tobacco annually accounts for about 65 percent of the total U.S. tobacco crop. Annual sales volume averaged 125 million pounds over its 34-year history.

In addition to functions normally performed by stabilization cooperatives, FCTCSC expanded services to members by acquiring leaf processing and storage facilities in Fuquay-Varina, N.C., in 1967, and organizing Tobacco Growers Services, Inc., as a subsidiary service corporation. This acquisition came as changes in the organizational structure of privately owned leaf processing facilities throughout the industry reduced their availability to FCTCSC. These facilities have provided FCTCSC an opportunity to gain additional experience of benefit to its total operation.

This operation was modernized and additional storage added in 1969. However, other industry facilities must still be depended upon for 85 to 90 percent of FCTCSC's processing and storage requirements.

Burley Tobacco Growers Cooperative Association (BTGCA), Lexington, Ky., and Burley Stabilization Corporation (BSC), Knoxville, Tenn., serve all burley producers in the eight-State burley area. Burley ranks second in volume, with about 29 percent of annual U.S. tobacco production.



Flue-cured tobacco received by Flue-Cured Tobacco Cooperative Stabilization Corporation, Raleigh, N.C., when growers agree to accept the USDA loan rate, is redried and packed in hogsheads. Here it is being coded for identification purposes in preparation for storage until sold.

BTGCA was organized in 1920. It handled about 1 billion pounds of tobacco under a 5-year grower contract (1921-25 crops). Due to delays in selling those crops, an insufficient number of growers signed new contracts, and the association ceased active operation with the 1925 crop. The corporate structure was maintained, however, and reactivated to handle burley tobacco under the Federal Government's price support program, during the 1940 and 1941 seasons. It has operated continuously since the 1945-46 season, serving growers in Kentucky, Ohio, Indiana, Missouri, and West Virginia.

BSC was organized in 1953 to handle tobacco under the price-support program. It serves growers in North Carolina, Tennessee, and Virginia.

Of three stabilization associations handling fire-cured tobaccos, Dark Tobacco Sales Cooperative, Farmville, Va., serves growers in central Virginia. Two other associations each serve producers in both Kentucky and Tennessee: Western Dark-Fired Tobacco Growers Association, Inc., Murray, Ky., serves growers in the area west of the Tennessee River, and Eastern Dark-Fired Tobacco Growers Association, Inc., Springfield, Tenn., serves growers east of the Tennessee River.

Five other associations are responsible for administering the price support program for dark air-cured and cigar tobaccos in the U.S. In addition, two cooperatives (not tabulated with U.S. cooperative data) administer the price support program in Puerto Rico.

Associations Combining Marketing and Stabilization

At least 5 of the 11 stabilization associations have been, or are now, engaged in marketing either in their own name or through subsidiary operations. In some years, price support activities may not be needed, but these cooperatives are ready to perform this function if necessary.

An example of this kind of operation is found in the Northern Wisconsin Cooperative Tobacco Pool, (NWCTP), Viroqua, Wisc. Organized in 1922, NWCTP has marketed its members' cigar binder type tobacco ever since. Stabilization activities, which came much later, are separate and distinct operations.

Growers using the marketing program sign a 5-year self-renewing contract to deliver all their tobacco to the cooperative. A once-a-year opportunity is provided growers to withdraw from the contractual commitment. Tobacco is marketed for members only.

Delivered tobacco is given the grower's identification, insured against loss, put in condition if necessary, sold, and shipped usually in a



Burley tobacco, grown in eight States, is marketed by 14 cooperative warehouses operating in Kentucky and Tennessee.

A Michigan grower's modern equipment is harvesting dry beans for delivery to Band W Cooperative whose modern facilities in Breckenridge and Wheeler clean, sort, and store large volumes of this high protein product. Valley Marketing Cooperative, St. Johns, handles marketing for B and W and five other member cooperatives.



few days. The cooperative does not take title to the leaf in its possession. Tobacco is sold for the individual grower's account and is not pooled as the organization's name might suggest. Growers are not paid for their tobacco until it is sold, avoiding financing costs involved when making advance payments as is the custom in many other tobacco areas.

The cooperative negotiates sales to about five buyers. Product quality is guaranteed as represented, with leaf identified to the individual grower through the entire marketing process. Marketing operation costs are covered by handling fees and charges for any special services performed.

When there is a tobacco surplus, the cooperative administers the price support program as a separate operation from marketing. In this stabilization operation, NWCTP serves all producers, including some who are not participating members in the cooperative's marketing operations, but who become members of the price support pool. Although the cooperative has administered this program since its initiation, market prices have been sufficiently high to have not required support purchases since 1972.

NWCTP members are proud of their cooperative's accomplishments and its leadership role in the tobacco industry. The cooperative strives to take an active part in all matters pertaining to tobacco in Wisconsin.

A Look Ahead

The future of tobacco cooperatives has several uncertainties, mostly because cooperatives are only a small part of a major industry with a slow or negligible growth rate that has come under increasing criticism. The future will be affected by: (1) changing patterns of tobacco consumption, (2) antismoking publicity and legislation, (3) reduced exports of unmanufactured leaf in response to increasing costs and prices, (4) increasing foreign production of cigarette-type tobaccos as manufacturers adapt their blends to less expensive leaf, (5) buildup of inventories of low-quality grades (particularly flue-cured) in stabilization inventories, and (6) proposals to abolish the price support program. Many of these problems are beyond the control, if not influence, of any single organization, and some problems will persist even with a broad industry attack.

Given these limitations, several developments could be possible for tobacco cooperatives over the next decade, such as:

- The volume of tobacco handled will increase for marketing cooperatives with efficient operations and favorable grower returns, ena-

bling them to compete effectively with other tobacco marketing organizations.

- Tobacco marketing cooperatives will attempt to diversify their operations by providing additional services, production supplies, and equipment to improve returns and better serve their members.

- Coordination and integration between cooperatives and other marketing organizations will be attempted for leaf processing, transportation, and export sales to further extend services and enhance returns to growers.

- Despite long established and accepted marketing methods such as loose-leaf auctions, new marketing methods will be considered and possibly tested by cooperatives seeking to improve marketing efficiency. These include forward contracting and electronic auctions.

- Efforts will be made to adjust or modify rules and regulations governing tobacco marketing from price support loan stocks, particularly flue-cured, to help reduce the cost of holding long-term inventories.

- Any erosion of the price support program could adversely affect operations of stabilization cooperatives. Associations with diversified operations or dual stabilization-marketing operations will be best able to withstand the effects of major changes in the tobacco program.

Effectiveness of cooperative actions taken to improve and develop marketing opportunities and grower returns or to meet other marketing problems will depend on how well such actions fill needs of grower-members and requirements of the tobacco industry. Also, success of program changes will depend on members demonstrating a high degree of commitment to their cooperative.

DRY BEANS, PEAS, AND LENTILS

Cooperatives handling dry edible beans, peas, and lentils, sometimes referred to as pulses, marketed an estimated 18 percent of all U.S. 1979 production. Cooperative share of marketing activity at the first handler level varies from near zero to more than half, depending on the commodity and production area.

Dry edible beans are produced in varying quantities in as many as 37 States, but commercial production is found primarily in 13. The six top States in order of volume produced, Michigan, California, Idaho, Nebraska, Colorado, and North Dakota accounted for 87 percent of 1979 U.S. commercial dry edible beans. U.S. dry edible peas and lentils were produced primarily in Washington and Idaho.

There are 14 classes of dry edible beans. The six top classes, in order of importance, are navies, pintos, great northern, red kidneys, black-

eyes, and pinks. These accounted for 86 percent of U.S. commercial production in 1979.

Cooperatives serve growers of all commercial classes of dry beans, peas, and lentils and operate in all major producing areas. In 1979, 59 cooperatives had \$103.4 million in sales (table 3). Forty of these associations were engaged primarily in marketing other products, such as grains or vegetables. Twelve specializing primarily in marketing dry beans, peas, or lentils had 4,500 members in 1979. The number of associations handling and specializing has generally declined since 1960-61, while value of sales has increased.

Cooperatives handle about a third of Michigan's beans and three-fifths of the southwestern Colorado crop. Of the California beans, half of both the large and baby limas, two-fifths of the garbanzos, and a fourth of the blackeyes are handled by cooperatives. About two-fifths of New York's beans are cooperatively marketed. In contrast, Nebraska cooperatives do little, if any, bean marketing. Cooperatives in northeastern Colorado handle less than 15 percent of the pintos. In Idaho, they account for 18 percent of the great northern, 12 percent of the pintos and pinks, 9 percent of the small reds, and few, if any, kidneys.

Table J-Cooperatives marketing dry beans, peas, and lentils, by number, memberships, and value of sales, specified years, 1951-52 to 1979

Fiscal Year ¹	Cooperatives			Dollar value of all bean, pea, and lentil sales ³
	All	Specializing ²		
	handling	Cooperatives	Memberships	
	<i>Number</i>	<i>Number</i>	<i>Thousands</i>	<i>Millions</i>
1951-52 ⁴	80	16	6.4	25.0
1955-56	74	15	6.2	29.5
1960-61	65	15	9.6	33.9
1965-66	59	13	7.5	29.2
1970-71	50	10	6.4	45.0
1975-76	53	10	5.4	116.0
1976-77	51	11	4.5	98.5
1979	59	12	4.5	103.4

¹Ending between July 1 and June 30 for all years except 1979, which ended Dec. 31.

²Cooperatives specializing may have other business, but beans, peas or or lentils are the major item of sales. These associations accounted for 37 percent of all bean, pea, and lentil sales by cooperatives in 1979.

³Net value of sales excludes intercooperative business.

⁴First year for which data were shown separately.

Marketing System

In the usual course of marketing, producers deliver their dry beans, peas, or lentils to warehouses or elevators to be cleaned, dried if necessary, picked, otherwise processed, and stored. This point in the marketing system is sometimes called the first-handler or dealer level. Except in cooperatives that operate market pools, or where dealers contract for supplies, producers retain title to their products until time to sell. Warehouse firms, including those cooperatively operated, usually perform a marketing function by purchasing products for their own accounts, which makes them dealers, or by acting as sales agents for producers.

Dealers

As a means of assuring their bean supplies, dealers may provide field services and seed. Although the purchase of seed from a dealer does not usually carry with it any agreement to deliver the production from that seed to the dealer at harvest, it is a matter of custom to do so. In the case of peas and lentils, seed is supplied under formal contract, with allowance for payment when producers sell their crops.

When dealers purchase beans stored in their elevators, prices paid to growers are essentially dealer prices less cost of services provided, including receiving, processing, drying, storing, loading out, and selling. Under some market conditions, dealers may overlook or shade these costs to obtain needed supplies. If growers remove beans from a warehouse to make a sale to another dealer, these charges most likely will be fully assessed. Thus, dealers tend to lock in their source of supply.

Dealers who buy growers' beans normally carry inventories. If market conditions slow the movement of these inventories, or prices do not adequately cover inventory costs and expected profits, dealers will "go off the market" until they can operate more profitably. Many of these dealer practices are restrictive and limit growers' access to markets.

Packagers, Cannerys, Exporters

From the dealer or first-handler level in the marketing system, beans, peas, and lentils may be sold to packagers, cannerys, exporters, or traders. Packagers and cannerys supply the domestic consumer market. Exporters supply foreign markets. Traders sell in any market that is to their advantage. Brokers often take title to the product and thus act as traders, although the bulk of their business is devoted to getting sellers and buyers together on a brokerage basis.

Many dealers package dry beans, peas, and lentils, but relatively few are able to supply the various kinds and classes of product necessary to fill the volume requirements of retail food chains. Some larger packagers own warehouses in different production areas, which enables them to purchase at least some of their requirements directly from producers. However, other large packagers purchase all their requirements from dealers and traders.

Exports accounted for well over 30 percent of total U.S. production of dry beans, peas, and lentils in the late 1970's compared with 10 percent in 1949. The growing export market has encouraged entry of dealers, some of which have developed successful operations.

Integrated Operations

Integration of marketing functions places some firms in the position of operating in the combined capacities of dealer, trader, exporter, and packager. Some integrated firms may operate in one capacity to a greater extent than others, such as being strong at the first-handler level but not at the packaging level, or vice versa. Other firms, such as dealer-exporters, may limit integrated operations to no more than two levels.

Integrated firms have a competitive edge in bean, pea, and lentil markets. They are usually larger firms, better able to meet the requirements of the market than are their smaller competitors, particularly in consumer packaging. They are less dependent on intermediate markets for supplies. Since integrated operations direct product flow through several levels of the marketing system, pricing can be managed to give the integrated firm a competitive advantage.

Market information, particularly price information, becomes less reliable as firms continue to integrate, and spot markets have fewer transactions. There is no commodity market that reports prices for beans, peas, and lentils as there is for grains, soybeans, and other major farm products. The best market information comes from continual contact with the market. Further integration within the relatively small dry bean, pea, and lentil industry further restricts the flow of market information from this admittedly best and most up-to-date source.

Early Associations

Among the oldest of the dry bean cooperatives, California Bean Growers Association, Oxnard, Calif., as it is known today, was organized in 1916 as the California Lima Bean Growers Association. It operated as a federated cooperative, and at one time had at least 17 local cooperatives

as members. About 1964, the organization changed from a federated to a centralized structure with direct grower membership, and its name was changed to reflect the handling of a broader mix of bean classes.

The Michigan Elevator Exchange, now a division of Farm Bureau Services, Inc., Lansing, Mich., was organized in 1921 to provide 45 local cooperative elevators a central grain, hay, and bean marketing agency. Over the past 60 years, it has handled large quantities of dry edible beans, shipping mostly to the canning trade in both domestic and export markets.

Some local cooperative elevators handling beans have long records of service to growers. For example, the Elkton Cooperative Farm Produce Company (ECFPC), Elkton, Mich., long associated with the Michigan Elevator Exchange, was first organized in 1913 as the Elkton Farmers and Gleaners Elevator Company to handle grain. With a multimillion dollar sales volume, it now markets grain crops and dry beans and provides farm supplies to its members.

Cooperative Marketing

Cooperatives are active on all levels of bean, pea, and lentil marketing, from first handler to packager or exporter, but most operate in only one capacity. However, some associations with integrated operations function in two or more capacities.

Cooperatives as First Handler

Of the 59 cooperatives handling dry beans, peas, or lentils in 1979, 40 or more functioned on the dealer-warehouse or first-handler level. Most handled other products, notably grain, and a few marketed vegetables such as potatoes.

Although some first-handler cooperatives may package beans as orders develop, none could be considered packagers in the sense they could supply a complete line of bean classes, along with peas and lentils, in sufficient quantities to meet requirements of high volume retail marketers. Some first handlers have gained the necessary volume and expertise to enter the export market.

Most of these cooperatives operate very much like other first handlers of beans. They provide storage and other marketing services to their members. When a member wants to sell stored beans, some cooperatives acting as brokers will find a buyer. Others will purchase beans for the association's account in a typical buy-sell arrangement, and a few have found pooling a more effective marketing alternative.

Pooling is used by California associations marketing beans, most cooperatives marketing peas and lentils, and one or two organizations in other dry bean areas. Perhaps typical of California pooling is the experience of the **500-member** California Bean Growers Association (**CBG A**). All beans marketed by CBGA are pooled. Participation in a market pool begins when a member-grower delivers beans to a public warehouse, receives a warehouse receipt for the then uncleaned beans, and turns the warehouse receipt over to CBGA. The association has no receiving warehouses of its own. Partial advance payments are made when the cooperative receives the warehouse receipt and when beans are cleaned and the clean weight determined. Further payments are made as beans are sold, and finally, when the pool is closed at the end of the marketing season.

Inland Empire Pea Growers Association, Inc. (**IEPGA**), Spokane, Wash., a grain, dry pea, and lentil operation, also makes use of pooling and purchases some product outright. In some seasons, about half of all peas and lentils are pooled.

Pooling provides the flexibility to direct the flow of product to the best marketing opportunities and to gain the highest returns. Along with control of inventories, pooling gives management control of brand reputation, product quality, and product availability. Pooling encourages daily market contacts that provide up-to-the-minute market intelligence essential to an effective marketing program.

In 1979, National Bean Marketing Cooperative Association (**NBMCA**), Denver, Colo., was incorporated by Rocky Mountain Farmers Union members. NBMCA does not own receiving facilities, but has agreements with 13 receivers and processors at 16 locations in Colorado, Idaho, Kansas, Nebraska, and Wyoming. **Member-growers** sign marketing agreements to deliver their beans to these designated receiving points. Provision also is made for producers to turn over to the association warehouse receipts for beans delivered in the name of the association to association-approved commercial storage facilities. Under some circumstances, the association may allow on-farm storage of beans.

In signing the marketing agreement, growers joining NBMCA agree to assign the association a minimum of 25 percent of all beans they produce. In its short operating experience, some members have substantially exceeded the **25-percent** minimum. The association takes control of the beans upon delivery and has absolute discretion for their handling and sale. All beans are pooled.

NBMCA closed its first pool in late summer 1980, having sold most of its members' beans in export markets, including a large volume to

Poland. The outlook for the 1980-81 marketing season is for continued export activity, with Mexico a prime purchaser.

Some cooperatives operating at the first handler level are not primarily bean, pea, or lentil marketers, but grain or farm supply operations. Agway Inc., Syracuse, N.Y., for example, provides farmers in 12 Northeastern States with supply, manufacturing, purchasing and distribution, and product processing and marketing services, yet it has 40 years of bean marketing experience, which have made it New York's largest bean dealer.

Agway has an integrated bean marketing operation. Members, mostly from New York, deliver their beans to four processing plants in the Finger Lakes area. Agway also is a heavy exporter. About three-quarters of its volume is light red kidneys of which 25 percent is exported, and the remaining one-quarter is mostly black turtle soup beans of which about 80 percent is exported.

Cooperatives as Cannery and Packagers

No single cooperative or cooperative sales agency markets a complete line of dry bean classes, and none markets a combination of dry beans, peas, and lentils. Few cooperatives package more than half a dozen classes of beans, and many that package in consumer sizes do little to promote the product. Only one or two cooperatives market canned (wet pack) beans.

The oldest bean cooperative, the California Bean Growers Association (CBGA), is, in industry structure terms, a first handler of beans, but also markets beans in consumer-size packages and cans. Its product mix has included as many as seven classes of beans of which large limas, baby limas, blackeye, and pinks are the most important.

Both packaged and canned beans are marketed under CBGA's Seaside label. The Seaside brand is marketed widely east of the Mississippi River. Economies are realized by shipping bulk beans to Tennessee for specification packaging and distribution.

CBGA contracts to have beans canned in different parts of the United States and Canada. Adhering to its policy of rigid quality control, the cooperative carefully selects its canneries and requires specifications to be strictly followed in processing operations.

The cooperative makes extensive use of food brokers in 125 major distribution centers in the United States and Canada. Its product mix has become more diversified over recent years which has helped to spread marketing costs over a larger volume of beans and has made the coopera-

tive a more attractive source of supply to buyers interested in purchasing a variety of beans from a single supplier.

CBGA is also an exporter of beans, mostly blackeyes and baby limas. Much of the volume exported goes to Japan. All exported beans move in bulk or 1 00-pound bags.

A number of other cooperatives operating on the first-handler level, particularly those in Colorado, Idaho, Michigan, and Wyoming, ship some beans in consumer-sized packages. Many of these associations market through sales agencies. The larger associations generally have consumer packs available. Some sales agencies need only to turn to member cooperatives for supplies of packaged beans.

Cooperatives appear to put less emphasis on consumer-pack sales than on bagged and bulk marketing. This may be due to the full product line requirement for successful consumer pack marketing and limitations most cooperatives have in assembling inventories of more than three or four bean classes. Other factors discouraging consumer packaging include the need for sufficient volume to justify the cost of modern packaging machinery and the tendency of cooperatives in areas growing canning beans to concentrate their marketing efforts on supply requirements of the processing trade.

Cooperatives as Exporters

A 1976 study of agricultural exports by cooperatives showed five associations involved in the export of \$12.6 million worth of beans, peas, and lentils. Three were direct exporters of products valued at \$10.3 million, which represented 9.6 percent of all 1976 U.S. exports of beans, peas, and lentils. The following is a definition of direct exporting:

“The degree to which a cooperative makes an export sale through its own personnel and facilities determines whether the sale is classified as direct or indirect exporting. In direct exporting, the cooperative deals directly, through its employees or foreign representatives, with a foreign buyer or its foreign-based agent; the commodity is delivered to a point designated by the buyer - a U.S. loading port or a foreign port of destination.”

Direct exports accounted for 82 percent of all dry beans, peas, and lentils marketed to foreign buyers by cooperatives in 1976. Of the quantity moving into direct export, 70 percent was delivered to foreign designations by cooperatives.

¹Donald E. Hirsch, *Agricultural Exports by Cooperatives*, Economics, Statistics and Cooperatives Service, U.S. Department of Agriculture, FCRR No. 5 August 1979, pp. 3, 69-71.

Exports generally expand market opportunities for cooperatives, but direct export and delivered export sales also increase cooperatives' share of marketing margins. Although such operations offer greater sales opportunities for organizations that can handle them, both require more expertise among cooperative personnel and entail more risks than indirect exports or domestic sales.

Since 1976, other cooperatives have become exporters of dry beans, peas, and lentils. In addition to Agway Inc., these include California Beans Growers Association, Michigan Elevator Exchange, and National Bean Marketing Cooperative Association, Inc. Inland Empire Pea Growers Association is a heavy indirect exporter of dry peas, and Valley Marketing Cooperative, St. Johns, Mich., is an exporter of navy beans.

Cooperative Sales Agencies

Cooperative sales agencies market the products of an estimated 36 member associations. They are independent cooperatives or divisions of diversified cooperatives that provide marketing services to their member associations. In marketing dry beans, sales agency operations are usually financed by per unit charges similar to brokerage fees. Sales agencies seldom own or lease facilities other than space for a sales office.

Advantages of a sales agency rest primarily in its day-to-day market contacts, which put its sales staff in a position to know market conditions and when to sell. This staff, even if it is only one or two persons, is better informed about crop conditions, storage holdings, changing domestic demand, and export activity than any of the agency's cooperative members, and certainly much better informed than any individual bean producer. Published market news on dry beans, peas, and lentils is, at best, available on a weekly basis. The bean market specialist is virtually indispensable, if sales are to bring the best possible returns.

Four sales agencies serve cooperatives handling beans. Two of these, Outwest Bean, Inc., Denver, Colo., and Valley Marketing Cooperative market only beans. Their members, however, market other crops and may provide producers with farm supplies and other services.

The other two sales agencies, Colorado Potato Growers Exchange (CPGE), Denver, Colo., and Michigan Elevator Exchange (MEE), market other crops. CPGE is a federation of nine cooperatives. It markets potatoes, onions, wheat, and beans. Three member associations have bean and seed handling facilities but these are not extensive. Member associations also handle farm supplies.

MEE, a division of Farm Bureau Services, Inc. (FBS), markets principally grain crops and dry beans for nearly 100 member associations.

Most of these associations handle beans. MEE has extensive terminal facilities for receiving and shipping beans, which enhance its position as an exporter. In addition, FBS, the parent organization, provides members farm supplies.

Integrated Cooperative Operations

When bean, pea, or lentil cooperatives operate as any combination of first handler, packager, canner, or exporter or market their products through a cooperative sales agency, they become integrated marketing organizations. Many examples are described here, along with suggestions on how market efficiency and information systems have benefited from integrated operations.

Few of these cooperatives have integrated beyond the sales agency level, but some export, a few package, only one or two can, and none have a complete line of bean classes in their inventories.

The benefits of integrated marketing could increase for these cooperatives through a marketing program for a complete line of products distributed under a nationally promoted brand name. During the 1950's, four leading cooperatives formed American Bean and Pea Growers, Inc., Denver, Colo., as a federated association to distribute and market a full line of beans and peas under the "Casserole" brand name. Despite its potential as single supplier for meeting food retailers' requirements for a full product line, the organization ceased to operate after several years. The reasons are not clear, but failure to emphasize merchandising may have been a factor.

Considering the success of some corporate firms in marketing a full line of packaged beans, peas, and lentils from integrated supply sources, this concept may bear reexamination by cooperatives.

A Look Ahead

Cooperatives marketing dry beans, peas, and lentils are part of a changing industry. Many changes have come through integration of marketing functions particularly involving the larger firms. Another force for change is expanding export markets. Interest in the changing marketing system is evident among producers, some of whom have formed cooperatives to handle, process, and market their products.

Growers' dissatisfactions with some features of the marketing system strongly suggest cooperatives will be involved in further developments, such as:

- Continuing to be important factors in the export market for beans,

peas, and lentils. The volume of export business will increase and involve a larger number of cooperatives.

- Seeking methods of becoming more effective marketers in the domestic sales area. Some efficiencies may be realized internally, but more can be gained by closer coordination of sales operations on the first handler and sales agency levels.

- Giving consideration to methods of improving the scope, quality, and timeliness of market information.

- Attempting to develop methods of packaging, distributing, and merchandising a full line of dry beans, peas, and lentils, using a well chosen and widely promoted packager's brand. Conditions surrounding the failure of an earlier organization with similar objectives may provide a valuable object lesson for those who seek to make such a plan workable.

As cooperatives seek to improve their operating methods, they will consider the advantages of pooling, including:

- Availability and control over a large supply of product,
- Access to more complete market information,
- Ability to develop meaningful measures of quality, and
- A possible increase in market power.

First-handler cooperatives, threatened with possible loss of markets as integration increases, may contract to supply a part of their member-growers' production to larger corporate packagers and exporters. Cooperatives will do this to stabilize and protect at least a part of their potential market. Member acceptance of a plan for pooling contracted inventories will be a necessary part of such an arrangement.

Becoming involved in these developments will strengthen cooperatives, coordinate their marketing operations, and make the fullest use of market potentials. Member-growers will have better access to markets, more efficient and dependable marketing services, and better opportunity to increase their incomes from these products.

SEED

Farmers in the United States produce a wide variety of seeds for planting, including those for field crops, forages (legumes and grasses), and vegetables. The value of all seeds farmers marketed in 1979 is not available, because many farmers produced their own seed for certain field crops and some sold seed directly to their neighbors. In 1979, however, farmers produced 184.2 million pounds of legume seed with a value of \$168 million and 397.2 million pounds of grass seed with a value of \$93.3 million.

Information on farmers expenditures for seed is in another report in this series on farm supply cooperatives.¹

Specialized Marketing Cooperatives

Only about 20 cooperatives now market seed as their main business and their sales totaled about \$75 million in 1979.²

A number of grain marketing cooperatives market relatively small amounts of field crop seeds. Cooperatives, however, are important in certain types of seed such as alfalfa, ladino clover, and orchard grass.

Several years ago, a number of small cooperatives in Idaho marketed alfalfa seed, a cooperative in Oregon marketed grass seed, and one in Missouri specialized in Kentucky bluegrass, but these are no longer operating, because other crops became more profitable to produce.

Specialized seed marketing cooperatives usually operate in regions most favorable to the production of high-quality seed. They process and distribute seed directly to wholesale buyers, retail seed firms, and farmer dealers. Where volume is small, cooperatives may buy seed on an estimated clean-seed basis or make returns on the actual outturn from the cleaners.

Most use the pool method of marketing. Some use it exclusively, others give the producer a choice of pooling or accepting the current cash market price. Experience indicates, however, that the price per pound on final pool settlements averages higher, as a rule, with less speculative risks to growers and associations. Pooling permits blending of seed for uniform quality. Customers buy on the basis of established standards of quality and usually do not pay a premium for qualities exceeding these standards. Therefore, there are times when it is of benefit to the association and to the member to pool seed falling below quality standards with seed of above-standard quality to produce a uniform blend that meets customers' quality requirements. This does not encourage producers of poor quality seed, because extra cleaning costs and charges for blending

¹Farmers spent about \$3.4 billion for planting seeds, bulbs, plants, and trees in 1979 and \$3.9 billion in 1980. This was at retail, which included transportation costs and retail markups. Seed expenditures for field crops and small grains in 1980 totaled about \$2.7 billion; legumes, grass, and forage crops, \$307 million; other crops, about \$327 million; seed and plants purchased for resale, \$293 million; landlord seeds and plants, \$255 million; and other seed expenses, \$37 million.

²In contrast, about 3,805 cooperatives sold seed to farmers for planting purposes. Their net seed sales totaled \$456 million in 1979, equal to about 13.4 percent of the \$3.4 billion purchased by all farmers. These are discussed in another report in this series dealing with the cooperative purchasing of crop supplies.

fall upon this producer. And, if pooling or blending is not always possible, the lower quality seed will bring a smaller return and sometimes cannot be marketed.

Four seed marketing cooperatives have developed research or breeding and production programs to help develop superior yields of quality seeds. One develops its own varieties of legumes, one works on hybrid seed corn, and one does research on hybrid corn and sunflowers (see descriptions at end of this article). The fourth, Crites-Moscow Growers, Inc., Moscow, Idaho, has a program of research, plant breeding, and supervised production to provide seed for producing quality products wanted by the canning or freezing trades.

Cooperatives handling seed potatoes make a special effort to get foundation seed of the highest quality to their growers. Two associations produce their own stocks, growing seed under the best conditions of isolation and disease control.

Two seed marketing cooperatives, Cal/West Seeds, Woodland, Calif., and NC+ Hybrids, Lincoln, Nebr., are members of a plant breeding cooperative-FFR Cooperative, W. Lafayette, Ind. Its other 10 members are regional wholesaling or distribution cooperatives.

A brief description of three seed marketing cooperatives follows.

Examples of Marketing Associations

Cal/West Seeds, Woodland, Calif.

Cal/West was formed in 1969 through merger of Caladino Farm Seeds, Inc., Willows, Calif., founded in 1938, and Cal-Approved Seed Growers Association, Modesto, Calif., formed in 1947. It now has 665 seed-growing members in California, Washington, Oregon, Nevada, and Montana.

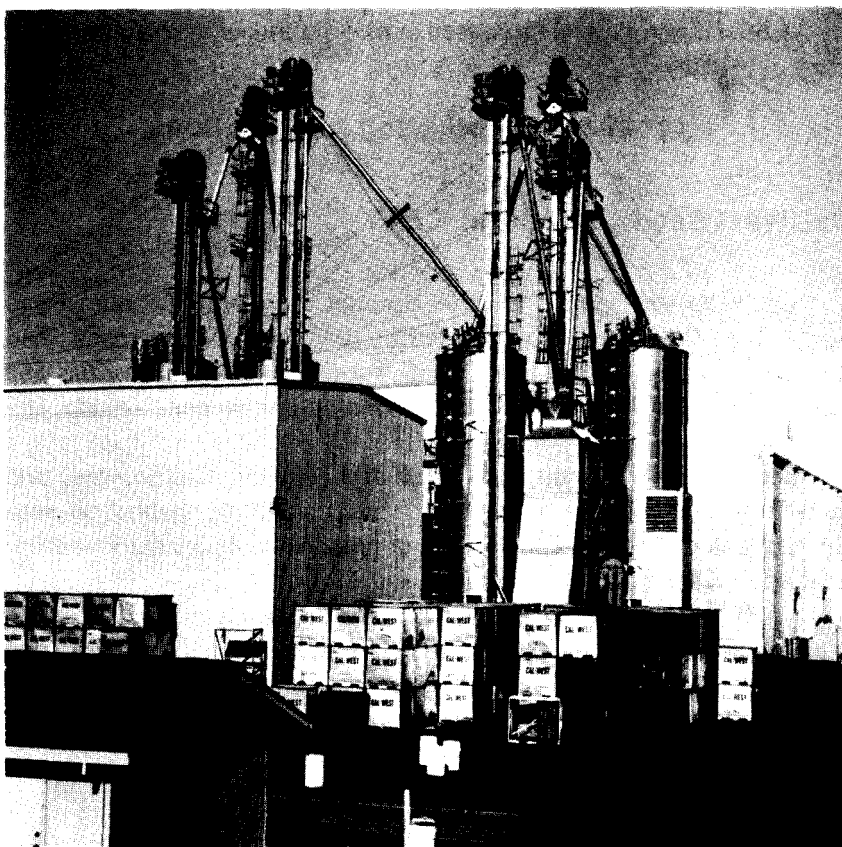
Seed crops marketed include alfalfas, clovers (ladino, red, and strawberry), sudan grasses, trefoils, vetch, safflower, hybrid oil sunflowers, and dichondra. The number of principal varieties marketed are: alfalfa, 67; clovers, 10; and sudan grasses, 11.

Cal/West developed varieties to meet the needs of various customers: proprietary varieties to be sold through exclusive franchise distributors; private varieties for sale to domestic customers on a contract basis; FFR Cooperative varieties for its member regional cooperatives; and other varieties for foreign customers under the Organization of Economic Cooperation and Development (OECD) program.



From its home office in Lincoln, Nebr., NC+ Hybrids directs the distribution of seed to many cooperatives supplying farmers' planting requirements.

This new safflower elevator complex at Cal/West's headquarters, Woodland, Calif., has a 40-million-pound holding capacity, a 15-ton-per-hour continuous flow drier, and a 50-ton-per-hour scalper. This modern facility also provides for the rapid loading of trucks at up to 300 tons per hour.



Sales are made in 40 States and 29 foreign countries. Exports constitute 30 percent of total sales. Volume recently has been in the \$23 million to \$31 million range until 1981, when net pool proceeds reached \$34 million from 29.8 million pounds of seed, exclusive of safflower. Net margins to members have ranged between \$2 million and \$5.3 million, or about 15 percent of sales during the past 5 years.

Cal/West's facilities consist of seed plants at Woodland, Artois, and Galt, Calif., and Bruce, Wash. They have a total of 23,700 square feet of seed milling area, 1,525,000 square feet of warehouse space, 1,152,000 cubic feet of elevator storage, and 15,000 square feet of sunflower storage. There are 11 complete milling lines at all locations. The sunflower cleaning plant was completed early in 1980.

Cal/West also has a 45-acre research farm at Woodland and a satellite 15-acre midwest research center at West Salem, Wis., testing nurseries at Sycamore, Ill., and Kenyon, Minn., and cooperative testing plots at many other locations.

Cal/West, among the earlier U.S. seed companies to invest in private research, has developed many superior varieties, especially of alfalfa, sudan grass, and Ladino clover. Recently, it began extensive research on safflower to improve yield, oil content, and disease resistance. The cooperative now has two full-time plant breeders and seven technicians.

On May 31, 1981, member equity in the cooperative totaled \$6.2 million, and assets were \$16.2 million. Member equity consists mainly of a revolving fund derived from retains based on a percentage of the members' total pool returns. The rate varies each year, but in recent years, has averaged slightly over 5 percent. The length of the revolving cycle is now 4 years, subject to board authorization.

Cal/West markets seed through a single pool. Members with signed marketing agreements are paid advances on each individual lot of seed as soon as harvest on a seed lot is completed and delivered to a conditioning plant for cleaning. At delivery, a sample is drawn to estimate clean seed weight. The harvest advance payment in August/September is about 60 percent of estimated grower value (less estimated reserve for revolving fund retain and cleaning costs), based on estimated clean seed weight. The first progress payment is made early in December on 10-15 percent of the crop's estimated value. A second progress payment of another 10-15 percent usually is made in March. Final payment in late July is made after fiscal year results have been audited. It includes allocated net margins for the year and milling dividends, a form of patronage refund for growers who clean their seed at Cal/West conditioning plants, and handling allowance credits. Members' payments usually equal the

average of the field price paid to nonmembers, and net margins usually have amounted to an additional 10 to 15 percent.

Cal/West has been successful in attaining its basic objective:

“To provide orderly and profitable marketing of seed products produced by its grower-members, in a volume sufficient to satisfy the production capabilities of its grower-members, and to spread operating cost to a realistic per unit level.”

Its leaders attribute its success to many factors, three of which are:

(1) a dedicated member commitment to grow and deliver a volume of seed to the association, (2) a well-planned production and sales program directed to fulfilling customer demands and anticipated needs, and (3) policies of the board of directors to provide adequate capital for maintaining necessary inventories, so management can perform marketing functions on a timely and orderly basis.

NC+ Hybrids Nonstock Cooperative, Lincoln, Nebr.

NC+ Hybrids, organized in 1958, is now owned by 21 member-producers, 19 in Nebraska and 2 in Kansas, to provide research, conditioning, and marketing services for hybrids of corn, grain sorghum, sorghum sudan grass and forage sorghum seed, as well as varieties of alfalfa, soybean, and kidney bean seed.

Members produce for sale annually about \$15 million worth of corn seed, and the cooperative sells about \$3 million of sorghum, alfalfa, soybean, pinto, and kidney bean seed. Most sorghum seed and all soybean, pinto, kidney bean, and alfalfa seed are produced under contract.

NC+'s facilities in Lincoln consist of more than 20,000 square feet of warehouse and office space and a seed conditioning plant. The NC+ Hybrids Research and Distribution Center in Hastings, Nebr., consists of modern seed conditioning facilities and over 8 acres of warehousing space. The company also has a regional office at Winterset, Iowa, a corn breeding winter nursery in Hawaii, and a sorghum breeding winter nursery in Puerto Rico.

NC+ research program is staffed with a director, a plant breeder, a breeder's assistant, and several technicians for corn, and a plant breeder, a pathologist-breeder, and two technicians for sorghum. NC+ looks at every available source of inbred lines and also develops its own.

NC+ sells its seed corn in the Corn Belt through about 800 dealers-about 90 percent farmers and 10 percent local cooperative and independent firms. It markets 32 varieties of corn, 10 varieties of grain sorghum, and 9 varieties of sorghum sudan grass and forage sorghum.

NC+ operates on a pooling basis, with payments usually made to

growers every month. A portion of the year's payments may be held back for operating capital but is not placed in a revolving fund.

Members buy a specified amount of common stock each year computed on the basis of their participation in the prior year's pool only.

Each hybrid corn is assigned a specified number of units per **sack**—from 1 to 3.1—based on its degree of difficulty in producing. Growers receive payments of net proceeds after deducting operating and selling expenses which are computed on the basis of units.

The success of NC+ has been due to several factors—good management, a progressive board of directors, expanding research and testing programs, an aggressive sales force, and progressive members willing to finance and support the cooperative.

Sokota Hybrid Producers, Brookings, S. Dak.

Sokota Hybrid Producers was organized in 1947 by a group of farmers who met under a grandstand at a local county fair. Today, it is a dominant seed corn conditioning and marketing cooperative serving the northern part of the Corn Belt. Its 48 producer-members in South Dakota, including several sons and sons-in-law, produce for sale about \$4.5 million worth of hybrid seed corn a year, and the cooperative sells another \$0.5 million of soybean, alfalfa, and sunflower seed acquired from other sources.

Facilities in Brookings, S. Dak., include a modern seed corn conditioning plant, drying facilities, a warehouse, an office and research building, and a new sunflower-seed processing plant. Also, Sokota has **corn**-breeding nurseries at Brookings and Canton, S. Dak. The depreciated value of fixed assets in 1980 was about \$2 million. Members have an equity of \$2.6 million in total assets of \$3 million.

Sokota markets 30 to 35 varieties of corn hybrids. Most superior new hybrids are the result of years of corn breeding conducted by Sokota in developing the most adaptable drought-tolerant germ plasms. Sokota now has two full-time plant breeders, one for corn and one for sunflowers. A computer is used in evaluating thousands of possible combinations of inbreds.

Sokota employs about 1,100 dealers to sell its seed corn in the Northern part of the Corn Belt. About three-fourths are active or retired farmers and the remainder are local cooperatives and independent firms.

Sokota operates on a pooling basis. In July, it makes a payment to its growers of about \$1 a bushel above local market prices. This covers the additional cost of seed and detasseling. After the fiscal year ends in August, net savings are computed. In recent years they have ranged from

\$500,000 to \$800,000 after deducting advances and operating expenses. Patronage refunds are then declared, with 30 percent paid in cash and 70 percent retained in a **5-year** revolving fund.

Sokota attributes much of its success to growing hybrids adapted to its specific trade area and to prompt, helpful service to both **member**-owners and dealers. These have been important factors over the years in helping grower-members produce seed corn profitably. Sokota states it lives by the adage, "Small enough to know you, big enough to serve you."

A Look Ahead

The future of specialized seed marketing cooperatives naturally depends upon their farmer-members' profitability in seed production; but this, in turn, depends in part on the effectiveness of their marketing agencies. Although most cooperatives are small, they provide helpful services; and a few have shown they can successfully engage in plant breeding.

The seed industry continues to change with the trend to more private varieties and acquisition of seed companies by large chemical, pharmaceutical, and conglomerate firms, both domestic and foreign. Their success and impact on cooperatives that either market seed for producers or sell planting seed is unknown. Apparently, however, most seed marketing cooperatives will need to work together in plant breeding and testing new varieties. Also, they will find it helpful to continue working closely with regional wholesaling and distributing cooperatives in plant breeding and producing seed needed by their local cooperatives and farmers.

FOREST PRODUCTS

Over 2,500 woodlot-owners cooperate in forest management or in harvesting, marketing, or processing products from their forest land. These products include sawtimber, pulpwood, lumber, Christmas trees, fence posts, and crude pine gum for turpentine and rosin. Forest management activities include site preparation, timberstand improvement and planting, management plans and appraisals, and provision of technical and economic information.

Market value of forest products and forest supplies handled by woodlot-owner organizations in 1979 was nearly \$5 million. Agricultural Cooperative Service (**ACS**) records show 14 associations headquartered

in 10 States across the country, from Maine to Washington. Some of these associations also serve adjoining States.

Cooperative Organization and Activity

These forestry cooperatives are generally small businesses serving from 20 to 550 members, with no organization having gross receipts from service charges and sales commissions exceeding \$700,000. They offer a variety of services ranging from forest management to timber marketing to lumber manufacture, all important to their members and the communities they serve. Some organizations employ foresters to develop management plans, cruise and mark timber, advertise bids, negotiate contracts, and supervise harvests, among other activities. These associations are generally referred to as forest management and marketing cooperatives.

Other producer-oriented associations serving forest landowners include farm forestry, Christmas tree, and those for the prevention of fire and removal of damaged timber. Many are single-purpose organizations and may function primarily as information or educational forums. Also important are a number of worker-owned plywood cooperatives in the Southeastern and Pacific Coast States.

These associations face problems and challenges of an industry where the projected supply outlook is one of scarcity. Potential for an adequate timber supply is highly dependent upon forest management performance of over 4 million private, nonindustrial owners holding nearly 300 million acres of woodland. Much of this land produces a timber crop no more often than every 25 years. The challenge to forestry cooperatives comes in persuading these small, often absentee forest-owners to make necessary expenditures to upgrade their woodlots and harvest and market their timber wisely.

The very nature of the timber-cutting cycle, in conjunction with small holdings, has contributed to the short lifespan of some forestry marketing cooperatives. However, at the same time, there is increased interest among woodlot-owners in obtaining more immediate and diverse sources of income streams from cooperative management, marketing, and processing services. Thus, ACS continues to receive and respond to requests to assist both established and new forestry cooperative ventures.

Examples of Individual Associations

Forest Owners, Inc., Yazoo City, Miss., is the longest standing, ongoing forestry cooperative in the Nation. This woodland-owner organiza-

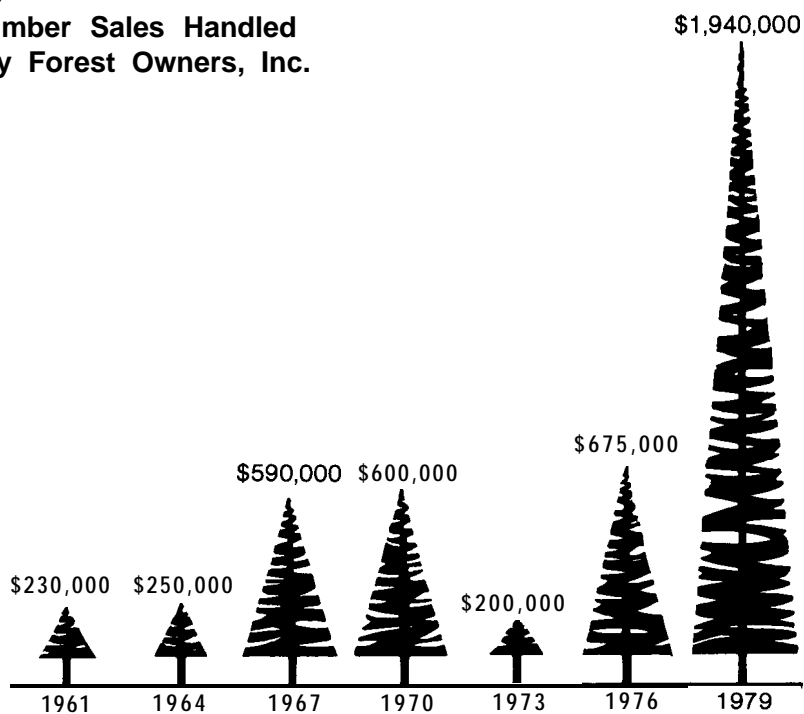
tion, incorporated in 1961, provides its membership with professional forest management and marketing services. There appears to be a relatively high incidence of woodlot-owner organizations in Mississippi. Contributing to this greater interest in cooperative organization is the fact that forestry production is the greatest source of agricultural income in more than 32 of Mississippi's 82 counties.

Forest Owners, Inc., aids its owner-members through improving stands of marketable timber and securing maximum returns for timber products sold. Although the organization has wide authorization, such as to manufacture and process forest products, emphasis is on providing forest management services and insuring top dollar for marked timber. This cooperative serves both large and small owners-with tracts ranging from as few as 20 acres to as many as 3,500 acres, but averaging about 600 acres. About 340 members represent about 200,000 woodland acres under management or marketing agreements.

Growth of Forest Owners, Inc., has been progressively upward, except for a brief decline in 1971-73 (fig. 1). Latest data show the organization handling timber sales of over \$1.5 million for its members. The cooperative employs three full-time graduate foresters who mark trees for selective cutting, advertise marked timber and accept sealed bids, and

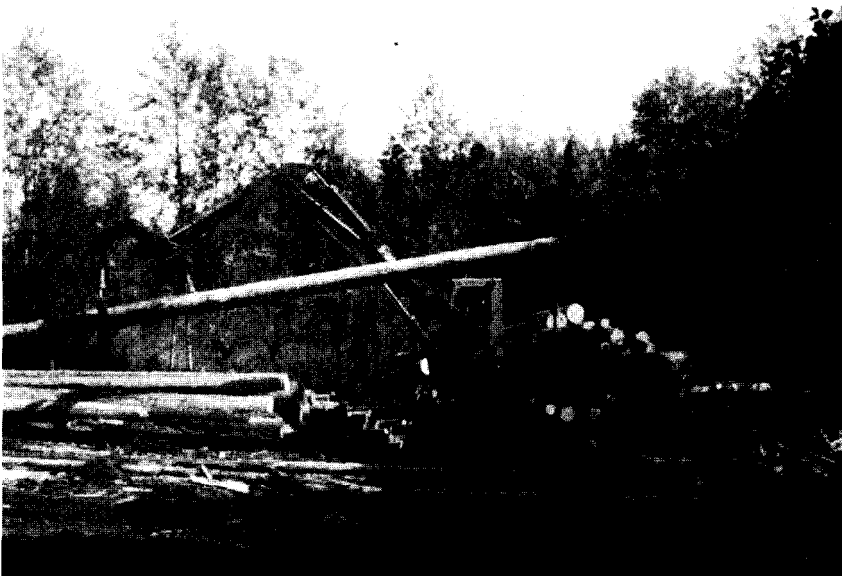
Figure 1

**Timber Sales Handled
by Forest Owners, Inc.**





Cooperative managers supervise logging operations to guarantee proper harvesting methods. One forestry cooperative has a sawmill operation to provide members improved returns on stumpage and a share in the margins from lumber sales.



supervise logging operations. Forest Owners deducts a standard commission charge for management and marketing services. One factor contributing to the cooperative's success has been the support of Mississippi Chemical Corp., Yazoo City, a fertilizer cooperative.

Forest Management and Sales Association, Inc., of Shelton, Wash., also provides management and marketing services. The cooperative provides long-range forest management planning for its membership and facilitates marketing of saw logs, mostly for export. The organization, incorporated in 1965, has had a 105 percent average annual growth rate in timber sales during the past 10 years. This cooperative also employs professional foresters and utilizes management and marketing agreements to ensure members of quality management and reasonable stumpage prices.

Minnesota Forest Products, Menahga, Minn., a cooperative sawmill operation, organized in 1967, processes and markets the timber of its member/owners. It has created a market for sawtimber where none existed. It also provides forest management and harvesting and handles logging equipment for its patrons. The cooperative has recently been confronted by a down market for lumber, primarily due to the recent and extraordinarily low level of housing starts in the construction industry.

Early Forestry Association, Blakely, Ga., is one of a number of highly specialized forestry cooperatives primarily concerned with reforestation. An association of private individual woodland owners, Early Forestry Association was organized in 1972 to engage in onsite preparation, a practice requiring use of heavy equipment. Like other reforestation cooperatives, it was established in response to a shortage of vendors of tree seedlings. Major activities are culling nonmerchantable timber, site preparation, and tree planting. Success in making this service available to forest owners has encouraged consideration of similar associations in other areas of the country.

The **American Turpentine Farmers Association (ATFA)**, Valdosta, Ga., unlike other forestry cooperatives, produces gum rosin to be used as paint thinner and solvent, among other uses. Members in Alabama, Florida, Georgia, and Mississippi supply ATFA with nearly all the Nation's pure pine gum, a multimillion dollar crop.

ATFA is continually confronted by technological advances and market inconsistencies. Other methods of producing rosin have developed that now account for 95 percent of the total U.S. supply. Woodland-owner/members now find labor for gathering crude pine gum scarce, and trees once used for pine gum production have been harvested for other purposes. In addition, annual loan agreements between ATFA and the Commodity Credit Corporation (CCC) enabling advances to be

made to eligible producer-members are not in effect for the 1982 crop. However, evidence shows that ATFA is moving to meet these problems and challenges.

A number of woodland-owner organizations also are studying the potential of alternative markets for their forest products. Possibilities for firewood, whole-tree chipping, wood alcohol, and gasification are now under consideration by some forest owner groups. Production from U.S. forests could help alleviate the Nation's annual energy burden. However, capitalization of necessary wood-processing equipment continues to be a major concern of forestry cooperative members.

A Look Ahead

Estimated value of **stumpage** cut in the United States in 1972 was nearly \$3 billion (the latest year published data were available). Depending on geographic region, increases in **stumpage** prices between 1970 and 1976 have ranged from 5 to 46 percent for hardwood, and from 0 to 39 percent for softwood. There has been little increase during this period in the percentage of harvestable timber cut from private nonindustrial woodlands. This may be attributed to the lack of professional forest management information received by these owners. However, increased involvement of woodlot-owners in forestry cooperatives or associations may provide more direct access and receptivity to such information and services, and thus increased earnings to owner/members.

Forestry management and marketing cooperatives are now providing their patrons with an improved market for timber, as well as discounted marketing charges, custom management services, and information programs. In a sense, forestry cooperatives play a dual role for member-owners-acting as both consultant and broker. And with the assistance of national associations, State Forestry and Extension personnel, and USDA cooperative specialists, effectiveness of local **woodland**-owner associations or cooperatives appears to have even greater potential for the years ahead.

HAY

Marketing cooperatives serve alfalfa growers in California and Nebraska and producers of alfalfa and mixed hay in Indiana. Six of these cooperatives generated an estimated \$24 million in sales in 1980. The services provided include sales, dehydrating, grinding, pelleting, cubing, and trucking. Also, a few cooperatives have plants to supply feed

ingredients. For example, Lake O'Lakes, Inc., Minneapolis, Minn., operates three alfalfa dehydrating plants in Nebraska to provide ingredients for its feed mills and those of member cooperatives and local farmers. These have a combined annual meal output in the range of 20,000 to 25,000 tons.

Two California cooperatives handle hay as their major activity. San Joaquin Valley Hay Growers Association, Tracy, Calif., markets a large volume of alfalfa as hay, meal, pellets, and cubes. Organized in 1940, it now operates the largest cooperative hay business serving 300 members.

Kern County Hay Growers Association, Bakersfield, Calif., handles supplies, including seed, and provides trucking and grinding services in addition to its major alfalfa marketing operation. Organized in 1954, it now has 85 producer-members.

Much of the hay sold by these cooperatives goes to dairy farmers or feed suppliers in southern California milksheds. Until a few years ago, a few cooperative alfalfa dehydration plants operated in California, but ceased operation with the decline in export markets and other factors.

Indiana Farm Bureau Cooperative Association, Inc., Indianapolis, Ind., has been involved in helping its 70 member cooperatives and their farmer-patrons develop hay marketing outlets since 1977. A major part of that effort has been the operation of hay auctions by 12 member cooperatives. Sales are conducted in the territory served by each on a biweekly or monthly basis over the hay marketing season. Volume has reached an annual rate of 3,500 tons and continues to grow.

The emphasis in hay marketing has been to provide individual farmer-members of local cooperatives these sales opportunities to encourage hay production on eroded land in some parts of Indiana where row crops cannot be grown successfully. Under another part of the association's program, hay is listed for sale and out-of-State shipment.

Alfalfa drying and hay marketing services have relatively large energy requirements. Drying consumes scarce natural gas, and other marketing services use petroleum fuels in transportation and other energy forms in grinding, pelleting, cubing, and compacting hay to more manageable density. Demands for scarce, high-cost energy may have been a factor in termination of some cooperative operations over the past decade and may discourage serious consideration of new enterprises. Cooperative dehydrators' experience in this respect has been, and will likely continue to be, no better-and no worse-than that of other businesses.

Cooperative hay marketing in Indiana is expanding and may suggest a pattern to be followed in other areas. However, increasing transportation costs will likely be a limiting factor in developing distant market opportunities.

OTHER SPECIAL CROPS

In addition to the special crops already mentioned, cooperatives market other minor or locally produced products, including flax, sunflowers, safflower, hops, cut flowers, bulbs, nursery stock, and coffee. Some of these products are handled by cooperatives whose primary business overshadows the special crop marketed in much smaller volume. In the past, cooperatives have been formed to market mink fur pelts, but none were in operation at the close of 1980. The number of cooperatives specializing in various minor products in 1980 were: flowers, roses, bulbs, and nursery stock, 6; coffee, 2; wild rice, 1; hops, 1; and other (not identified), 2. Some cooperatives have developed a substantial business in these relatively minor products in some cases, with an average annual business over \$1 million.

Sugar and Sweeteners authors / Fred E. Hulse and Gilbert W. Biggs, agricultural economists /Special credit to Luigi Angelo, accountant, Economic Research Service, for technical assistance.

Tobacco authors / Fred E. Hulse, agricultural economist /special credit to Robert H. Miller, agricultural economist, Economic Research Service, for technical assistance.

Dry beans, peas, and lentils author / Fred E. Hulse, agricultural economist.

Seed author/J. Warren Mather, agricultural economist now retired.

Forest products author /Donald Simon, agricultural economist.

Hay and other crops author/Fred E. Hulse, agricultural economist.

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Agricultural Cooperative Service
Washington, D.C. 20250**

Agricultural Cooperative Service (ACS) provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The agency (1) helps farmers and other rural residents develop cooperatives to obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs.

ACS publishes research and educational materials and issues Farmer Cooperatives magazine. All programs and activities are conducted on a nondiscriminatory basis, without regard to race, creed, color, sex, age, handicap, or national origin.