Economics of Sugarbeet Marketing

Marketing Economics Division
Economic Research Service
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PREFACE

This publication presents the results of the second study of sugarbeet marketing made by the Department of Agriculture following the recommendation of the Sugar Research and Marketing Advisory Committee in February 1955. The first study, "Marketing Sugar Beets," AMS-137, was published in November 1956.

Information for the study was obtained from a variety of sources, including interviews with sugarbeet processors and growers, and with representatives of growers' associations. Sample grower-processor contracts and various secondary sources were studied.

This report describes and evaluates several ways in which the economic relationship that now exists between sugarbeet growers and processors might be changed in an effort to improve marketing efficiency. The alternatives were developed from discussions with industry representatives, both growers and processors, and from information in the Department concerning similar arrangements used in processing other agricultural products. Each of the alternatives was found to have some disadvantages.

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SUMMARY

Sugarbeet production in the United States is a contract-farming enterprise. Processors have complete control of the marketing of sugar; by contract provisions, control of seed supplies, and other means they have a major influence on production practices. The specialized nature of both the crop and its market has led to a high degree of interdependence between grower and processor. Growers have no other market for their beets and factories have no other sources of raw material. Nonprice provisions of the contracts have much influence on the growers' net returns for beets. Variations in farm management services and controls provided by the processor can be an important factor in determining a grower's profit or loss.

A major peculiarity of the sugarbeet industry is the technique by which growers' prices are determined. In contract production the beet grower typically receives around 58 percent of the net income from sugar received by the processor who purchased his beets, and carries about 75 percent of the risk of changes in sugar price and marketing costs. In recent years under the Sugar Act, prices have been unusually stable and the risk of changes in sugar prices relatively small.

Both growers and processors consider the industry attractive, as indicated by their efforts to obtain greater shares in the market. Nevertheless, the growers have misgivings about bearing the risk of changes in sugar prices and marketing costs while having no voice in marketing decisions that help determine these factors. Their feeling is intensified by the unwillingness of processors to make detailed records available. However, neither growers nor processors seem to want to abandon the present system of sharing net income from the sale of sugar.

There are several ways of increasing marketing efficiency and reducing the growers' risk. The net returns to all processors from the sale of sugar might be averaged to arrive at growers' payments, thus reducing the risk for individual growers and encouraging processors to keep their marketing costs low, because all costs above the average would be paid by the processor. Also, the grower-processor relationship might be modified. Suggestions have been made for (1) contracts providing fixed prices for sugarbeets; (2) division of processed products (sugar, molasses, and pulp), instead of income, between growers and processors; (3) beet production by the processors; (4) custom processing for the growers; and (5) operation of the factories by growers.

None of these suggestions may be acceptable to growers or processors, although each appears to offer certain advantages. All but the first and last (fixed prices for beets, and grower operation of factories), would seem to leave unchanged the existing economic relationships between growers and processors.

Three major economic distinctions need to be considered in evaluating the proposed changes. Which party markets the product? Which party bears the marketing risk, or how is it divided? To what degree is management coordinated between beet production, processing, and marketing? Efficiency might be improved in the industry (1) if the marketing function and price risk were lodged with the same party, and (2) if processing were better coordinated with the development and procurement of an economical beet supply. These criteria seem to be met best from among the examples given by (1) fixed prices for beets or (2) factory operation by growers. The former lodges marketing, market risk bearing, and coordination with the processor; the latter lodges them with the grower. Division of processed products is perhaps the poorest alternative, because of the additional marketing services that would be needed with two groups instead of one doing the marketing.

Differences between the alternatives involve variations in sugar marketing efficiency which might affect the price of beets. The extent and significance of these variations have been greatly reduced, however, by the stabilizing influence of the Sugar Act. Moreover, the decrease in price risk results in a relative increase in the importance of the nonprice factors in beet procurement. Although minor adjustments are continually made in this body of contract provisions, no alternatives offering significant advantages have been suggested.

ECONOMICS OF SUGARBEET MARKETING

By Donald Jackson, agricultural economist
Marketing Economics Division
Economic Research Service 1/

INTRODUCTION

Sugarbeet production in the United States has been a contract-farming industry ever since its successful commercial establishment in 1879. As introduced from Europe the industry required complex factories, a considerable business organization, and extensive financial backing. Beet growing could not be started successfully by one or a few farmers, and built up gradually. There was a potential market for beets, however, in any area adapted to their culture if a factory could be financed, technical supervision obtained, and processing costs kept on a competitive level.

During the early stages of development of the beet sugar industry in the United States some processors grew part of the supply of beets on their own land. However, most processors have always contracted with local farmers for their beets. The quantity now grown by processors on their own land is insignificant. In the early years much of the extensive hand labor required was performed by farm families, a system that rapidly became inadequate as the size of farmers' sugarbeet operations increased.

Early contracts specified a fixed price per ton of beets. They were intended to assure the factory a supply of beets and the farmer a market. Following the period of price controls during World War I, the price of refined sugar in New York rose about 75 percent from November 1919 to January 1920. 2/ Anxious to share in such price rises, the beet growers urged that beet pricing methods be changed. As a result, in 1920 several companies offered each grower a choice of a fixed-price contract, or a participating contract whereby he would receive a percentage of the price of the sugar. 3/ Most growers chose the latter, and some form of price participation has remained in all beet contracts.

During the calendar year 1960 the sugarbeet crop supplied more than 2 million tons of sugar to consumers, a little less than a fourth of our total sugar consumption. About 25,000 farmers in 22 States planted nearly 900,000 acres of beets for harvest in 1960. The four production areas lie roughly (1) in Michigan, Ohio, and Wisconsin, (2) in the northern Great Plains, (3) along the Pacific Coast, and (4) in the Rocky Mountain States.

Practically all growers belong to local producer associations. These associations represent their members in one of four regional growers' associations that negotiate

1/ D. B. DeLoach of the University of California, Davis, Calif., gave valuable counsel in the planning and conduct of this study.
2/ U. S. Dept. Agr. Yearbook of Agriculture, 1926, p. 1014.
3/ Discussion of various types of price participating contracts began at least as early as 1914. Willett and Gray, Weekly Statis. Sugar Trade Jour., 1915, p. 321.

annual contracts with the processors. The four regional associations and their locals were recently tabulated as follows:

Eastern Beet Growers' Association	Locals
Ohio	4
Michigan	7
Wisconsin	1

Western Beet Growers' Association	
Minnesota	3
Montana	2

California Beet Growers' Association	
California	10

National Beet Growers' Association	Locals
Colorado	3
Idaho	2
Kansas	2
Montana	2
Nebraska	3
Oregon	1
South Dakota	1
Utah	1
Washington	1
Wyoming	3

Sixty-two beet sugar factories operated in 1960. In the early years of the industry nearly every factory was separately owned. Because of combination and absorption, today only 12 beet sugar companies remain. The number of factories each owns is:

Companies	Factories
1	18
1	10
1	9
1	8
1	5
1	4
1	3
5	1

Of the seven multiplant companies, two operate in one State each, one is regional, two are largely confined to one region each, and two operate in two or more regions. The location of factories operating in 1960 is shown by the following tabulation.

State	Factories
Michigan	5
Ohio	3
Wisconsin	1
Iowa	1
Minnesota	4
South Dakota	1
Nebraska	5
Montana	4
Wyoming	3

Colorado 1/	12
Idaho	5
Utah	5
Washington	2
Oregon	1
California 2/	10
Total	62

1/ A plant extracting sugar from molasses produced in other factories is also located in Colorado.
2/ An additional factory is under construction in 1961.

Although the economic attractiveness of sugarbeet production varies among the regions, most growers and processors have found the industry profitable enough in recent years to want to increase their output. Nevertheless, growers believe marketing efficiency could be increased if the equity and effectiveness of the grower-processor relationship were improved.

BARGAINING STRENGTH OF GROWERS AND PROCESSORS

Bargaining strength of the parties to a sugarbeet contract varies widely, and depends primarily on the alternatives available to either party. Negotiation is carried on principally between a regional growers' association and a processor. Nevertheless, even when negotiated by the same parties, beet prices and some other terms frequently vary by factory districts. Local growers' associations play a role that varies from district to district.

Growers in this industry need to be constantly aware of market conditions. Whereas growers normally receive only public information, processors are in daily contract with price-making aspects of the sugar industry. The growers sometimes think that the processing companies unfairly withhold from them market information that develops within the companies. The companies look on this information as consisting largely of trade secrets.

Furthermore, a growers' association is a voluntary organization, the officials of which must consult the members, and to a considerable extent follow the majority will. A sugar company can make plans, without public discussion, that will affect all its plants.

Sugarbeet growers' bargaining strength has to be considered from the standpoints of the regional association, the local (factory district) association, and the individual grower.

Growers' regional organizations, and leading officials or members of their constituent locals, appear to be in free communication with each other. They do not maintain a formal overall association.

A regional association probably is in its strongest bargaining role when negotiating with a single-plant company which competes with other single-plant companies in its territory. It is weakest when negotiating with a multiplant company having factories located in an area where there is no competition with other companies, or with a multiplant company with factories both inside and outside the association's territory, so that the processor can substitute acreage in one area for that in another.

On the whole a growers' association is in a stronger bargaining position regarding prices than it is regarding nonprice provisions. This is partly because sugar is such a standard commodity that significant changes, or geographical variations, in prices are clear for everyone to see. Also, the U. S. Department of Agriculture publishes annually the average prices paid farmers for sugarbeets in each State.

Recently a company closed a factory with the stated intention of adding equivalent production at other locations. Although the closing of an old plant in a poor location may have been justified, it was disadvantageous to certain growers in the area and illustrates the weak bargaining position of growers' associations.

Strength of the regional growers' associations rests largely in the number of members, the compactness of the area where members grow beets, the degree of unanimity of the members, and the quality of the leadership. The Eastern Beet Growers' Association represents all growers in the Michigan-Ohio-Wisconsin area, with its five processors. The Western Sugar Beet Growers' Association is practically limited to one company, but includes all growers in the Minnesota-North Dakota-Iowa area. The California Sugar Beet Growers' Association with its four processors covers the State of California.

Growers in the Great Plains and Rocky Mountain beet areas are allied in the National Sugar Beet Growers' Association. This region is farflung, with widely varying conditions. In some places competition between companies for sugarbeets is quite active, in some areas it may develop, and in others no competition may be expected. The Association is in position to make excellent comparisons of contract terms and results between processors and factory districts.

Most local associations are members of a regional association. In addition to a local's influence over the position taken by the regional organization, it frequently is concerned with a variety of problems peculiar to its own area. Many of these matters are not covered by a written contract. Most contract provisions are uniform over a larger area than that of a single local growers' association. An example of an item sometimes locally determined and not usually included in the written contract is the selection of a crop rotation acceptable to the processor.

The bargaining power of a local association is likely to be weak because of the limited information available to growers and because of lack of an alternative beet processor or an equally profitable alternative crop.

Each individual grower has interests that concern his position within the local association. In addition to the nonprice provisions negotiated by his association, his interests include such items as the amount and use of credit, number of acres of beets grown, location of the beet fields, variations or concessions in cultural practices, and harvest and delivery schedules. Standards in such matters are of general concern to the associations, but the individual grower must negotiate their application to his situation. Results may depend partly on the information he gets, and here he will often be at a disadvantage. They may depend even more on the company's opinion of his ability to produce sugarbeets, in relation to other growers.

Even with pertinent information available to both parties, some growers obviously will be in a more favorable position than others. A grower who is new, in a new beet area, on poor or disease-infected land, or who fails to follow what the processor considers good practices, may, sometimes justifiably, be refused credit or even a contract by the company.

The position of the sugarbeet grower is affected by two factors. First, the bargaining strength of his regional association applies principally to items that are uniform over the region, perhaps with differentials between factory districts. One such item is the formula for determining sugarbeet prices. Second, the grower is in a poor position to bargain with the processor on many matters peculiar to his locality or farm which often are of major importance to him.

Compared with the limited information obtained by the growers' associations, the processor's information about the sugar market covers the whole range of market conditions. Also the processor's unified control in one or more factory districts gives him a bargaining advantage not available to growers.

Sugarbeet processors' bargaining strength rests on a very different organizational structure from that of the growers.

Twelve independent firms and three subsidiary companies are currently engaged in processing sugarbeets. The largest firm represents about one-quarter of the industry's capacity; the two largest, 40 percent; and the five largest, 80 percent. Most of the capacity of the largest company is concentrated in a compact area where most farmers grow, or can grow, beets, and no processing competitor is represented. Over much of the sugarbeet territory, however, plants of the larger and smaller companies are intermingled or adjacent.

All beet processors are members or have representation in seven national organizations. 4/ In addition, the eastern companies are members of the Farmers and Manufacturers Beet Sugar Association (jointly with growers' associations), while the western ones are members of the Western Beet Sugar Producers, Inc. Thus, membership and direction of the organizations are overlapping, or interlocking. The activity of three of the associations is stated or implied to be policy, of three it is research, and of one it is the directing of "industry non-research activities."

The existence of federations of growers' locals makes it difficult for processors to offer prices greatly out of line between neighboring factory districts. Here again, however, the growers cannot hope to equal the processors in acquaintance with the relative sugar marketing positions of any two districts. The company's factory and central office analyzes various aspects of area procurement as a matter of operational control, and can keep its information confidential.

A processing company with a number of factories concentrated in one area and with no competition in the purchase of beets is in an especially strong bargaining position. Such a processor will not be seriously harmed by losing acreage in certain localities. If beets are plentiful in the general area, any factory with a short supply can be supplied from outside its district; if beets are scarce, the factory with the poorest supply can be closed for the season and the crop diverted elsewhere. Some contracts permit processors to have beets processed at a factory owned by another processor, to guard against low volume and ruinous costs in case of breakdown or crop failure.

4/ United States Beet Sugar Association, The Sugar Association, Inc. (joint with cane sugar processors), Sugar Information, Inc. (joint with cane sugar processors), Sugar Research Foundation (joint with cane sugar processors), American Sugar Beet Policy Committee (joint with sugar beet growers' associations), American Society of Sugar Beet Technologists, Beet Sugar Development Foundation.

In areas where a number of one-factory firms are located, the processors sometimes engage in active competition for sugarbeet acreage. In practice competition occurs almost entirely in nonprice provisions; that is, in services to producers or in concessions regarding management practices or other conditions.

SELECTION OF GROWERS AND CHOICE OF PROCESSOR

The beet grower is legally free to contract with whom he wishes, but his opportunities to change sugar companies and to substitute other crops for beets vary widely among producing areas.

In many beet growing areas in the Great Plains and in the Northwest there is effective competition between beets and other vegetable crops. In the eastern sugarbeet States (Michigan, Ohio, Wisconsin, Illinois) beets have a smaller part in most farmers' programs than they do in the West, although the acreage of sugarbeets per farm has increased markedly since World War II. In the Red River Valley of Minnesota and North Dakota the lack of competition from other crops has encouraged a rapid increase in beet acreage.

Where competition with other crops is not strong the proportion of cropland devoted to beets tends to be higher than in other areas. Beets are often fitted into a somewhat fixed grain-and-forage crop rotation coordinated with a livestock enterprise. The long-term nature of this kind of farm organization makes it important to a farmer not to relinquish his beet market lightly. Furthermore, beet acreage allotments, actual or potential, under the U. S. Sugar Act have strengthened farmers' reluctance to reduce their beet production. A small acreage of beets, or no acreage, in one year will affect the history on which future allotments may be based.

In California, where beet growing is less closely related to crop rotation and to livestock than in most other States, the grower has somewhat greater freedom to choose each year between sugarbeets and alternative crops. Many California farmers rent land for large-scale operations, in some cases renting different land for beets each year. The acreage allotment is made to the operator rather than to the farm, markets for alternative crops are available, and much of the same equipment is required for many of the competing crops.

Factors indirectly related to marketing, such as indebtedness to the processing company or the availability of production credit, may hold a dissatisfied grower with a company. Services furnished by a company may also be the deterrent to change. Some growers think that shifts between companies may earn them the ill will of all processors. Nevertheless, numerous growers do contract beets to more than one company with no ill results.

The processor's latitude in selecting growers depends in large part on the number of farmers in the district who want to grow beets and the acreage they wish to grow in relation to the acreage desired by the processor. Acreage available to the processor is influenced by (1) the area of suitable soil, (2) profitability of competitive crops, and (3) number of beet processors competing for supplies.

The success of a beet processor in securing desirable growers depends on numerous factors, of which the price offered for beets and its relation to those of alternate crops is only one. Beet payment schedules in adjoining factory districts are frequently identical, or nearly so, even when the factories are owned by competing processors. Competition among processors includes many nonprice matters, some of which are inserted in beet contracts, and some of which apply less formally to certain individuals or groups.

NONPRICE PROVISIONS OF SUGARBEET AGREEMENTS

A written contract between a sugarbeet grower and a processor constitutes the formal arrangement between the parties. Samples of the eastern and western types of beet production and delivery agreements are given in the appendix.

The formal contract is supplemented by oral arrangements and custom. Such contracts and arrangements serve to integrate the growing, processing, and selling operations of the beet sugar enterprise. This integration assures the processor the quantity and quality of beets he needs for efficient operation of the factory. It assures the grower a market at a price related to the price of sugar and the use of certain facilities and services provided by the processor to produce, harvest, and deliver the crop.

The processor has only limited control over the grower, since the grower is in physical control of the farm, equipment, and operation, and is responsible for production. The contract stipulates general subordination of the grower to the processor's direction, but few processors attempt complete enforcement.

The processor's nonprice responsibilities stated in the contract consist principally of furnishing planting seed, accepting delivery of the beets, sampling and testing the beets as prescribed, and paying for the beets on a specified time schedule. But many customary activities are not stated. They rest on an unwritten and somewhat indefinite basis. An example is the privilege granted the grower of purchasing beet pulp for feed. Usually no terms are stated, either as an absolute price or as a differential relative to the open market. These terms the processor sets later.

Although both processors and growers have investments which must be operated over a period of years to be profitable, the contracts cover only one season.

The sugarbeet acreage contracted to a factory is influenced by (1) the factory's capacity, (2) competition from other processors, (3) the company's sugar marketing allotment, (4) the beet acreage allotment for farms in the factory district, (5) competitive crops, and (6) the company's estimate of profitable marketing prospects. Although a general understanding usually is reached between the company and the growers' association, the processor's district agricultural staff and the grower agree on the acreage for each farm and the location of the land. Other factors considered are: Soil quality, disease, crop rotation, availability of irrigation water, livestock enterprise, credit, equipment, and the farmer's record as a sugarbeet producer.

A contract for a satisfactory acreage of beets and sufficient financing to permit a desirable crop rotation depends on the individual grower's position relative to his fellow growers.

The contract may specify the amount of planting seed per acre, permissible planting period, time and extent of fertilization and irrigation, and certain conditions of harvest and delivery. These requirements usually conform rather closely to the practices of the more successful growers in the area. Specifications of this type in the contract may tend to force growers to conform more closely to approved practices than they otherwise might.

Seed selection and procurement are controlled by the processor through provisions in the contract requiring the grower to purchase seed from the processor. This practice has been almost universally satisfactory.

Divergent interests of growers and processors form the basis of some other controls enumerated in many of the grower-processor contracts. These include extent of irrigation and fertilization. Both water and nitrogen, properly used, promote the yield of sugar from the beet plant. Improperly used, however, they promote further vegetative growth without much additional sucrose; more pounds of beets must be processed for each pound of sugar recovered, and processing costs increase. This problem is likely to arise whenever growers are paid for beets on the basis of the average sucrose content of all beets delivered to a factory.

The manner and timing of beet harvest and delivery are both important to the efficient operation of the factory. Intermittent operation is costly, but harvested beets deteriorate rapidly in warm weather. During the early part of the season, harvest and delivery are scheduled in close coordination with factory use. At times this is a matter of contention among growers or between growers and the company. Growers complain of having to stop a harvesting crew for a day, or several days. At other times, bad weather, harvester breakdowns, or other misfortunes make it impossible for growers to meet their schedules.

Most contracts state that the grower must perform in a "farmerlike" manner. In addition certain requirements often are more explicitly expressed; for example, "The grower will follow instructions of the Company in regard to preparing the soil, seeding, caring for, harvesting, pitting, and delivering the crop." The virtue of most of these provisions is widely recognized.

A condition to which growers sometimes object is the explicit exclusion of company responsibility for crop failure or other disadvantage, even though, at least in the grower's opinion, it results from company direction or advice. The grower carries the production risk alone although he has contracted away important parts of the management function.

Services by the processor are of continuing importance in beet production. Although growers individually do much to improve methods and equipment, the companies' greater total resources permit them to perform services which an individual grower cannot undertake. The principal services are (1) research, (2) development of new equipment, (3) labor recruitment, and (4) help of agricultural fieldmen.

Company research on sugarbeet production has been mainly in breeding to produce better varieties. However, much attention has also been given to farm equipment, farm practices, and the control of insects, diseases, and weeds. Processing companies, Government agencies, and equipment and chemical manufacturers have cooperated in research, with the beet sugar companies as major contributors.

Planters specifically designed for sugarbeet seed were among the earliest pieces of equipment developed for beet growers. Labor shortages during World War II led within a decade to practically universal adoption of some type of mechanical harvester. Continuing efforts are being made to improve planters, harvesters, thinners, and other machines used in growing sugarbeets. Since the end of World War II, mechanization has reduced substantially the hours of labor required to produce and harvest a ton of beets. Spring and summer labor, under favorable circumstances, has been reduced as much as 80 percent. Some campanies and growers are looking forward to the elimination of "hoe" labor.

Nearly every company owns planters, harvesters, and thinners for rental or loan. Most of them express the desire to close out this service, but few have been able to do so completely. Equipment rental (or loan) has served a multiple purpose. It has accommodated small growers, demonstrated better types of machines, and served as a district reserve.

Recruitment of labor has been one of the most important single items of company service. Processors spend at least as much money on recruitment as on research, and they apparently recover less than half the cost in the form of direct charges to the growers. Growers in some areas are reported reluctant to adopt mechanization completely lest they lose this source of workers for their other crops as well as sugarbeets.

The agricultural fieldman employed by the processor performs some important services. He supervises receiving stations and deliveries and represents the company in transactions with the growers. His duties are to supervise contract compliance, facilitate growers' operations, and encourage improvements in methods of producing beets.

Rather widely scattered estimates from fieldmen, company officials, and State extension field staffs, as well as the sugar factory budgets indicate that around 50 percent of the fieldman's time is devoted to beet production. Information from one county director of agricultural extension indicates that sugar company fieldmen were putting in much more work on sugarbeets and related crops than the county extension staff. One company executive says, "Some growers do not want to see a fieldman, and some ask advice on every decision."

Where fully utilized, the field staff's activities include advice and instructions, accommodations, and errands of all kinds. Delivery of a few bags of seed from town, a petiole test, loan of a planter, a spray for bean beetles, and cattle market information, may be part of the activity of a good fieldman. In many districts the fieldman helps the beet grower with any farm problem.

Few services by the processor are explicitly pledged in the beet contract. Research and information are not mentioned; equipment and labor recruitment are sometimes implied; the field staff is referred to in relation to things required of growers but not supplied by processors. In every factory district, however, various services are discussed and accepted as customary.

It is not possible to isolate the effects of management integration from other developments in the industry. Problems have continued to arise in the form of beet diseases and pests, ineffectual cultural methods, and poor harvesting practices. Concurrently, however, some serious problems have been solved and others brought under control. An important example is the requirement that only company-furnished seed be planted. This unified control, plus the accompanying programs of breeding and seed development, has been a major factor in reaching the present degree of development in the industry. At the same time most processors have done little to reward individual growers for producing beets with high sucrose content.

PRICE PROVISIONS OF SUGARBEET AGREEMENTS 5/

A unique feature of the sugarbeet contract is its "price participation." Instead of a fixed price for his beets, the grower receives a specified share of the net returns from the sale of sugar. Usually this is expressed as a percentage in the eastern contract and by a more complicated formula in the western contract. Price participation amounts to a sharing of sugar price risk, which is still significant although less so than prior to the passage of the U. S. Sugar Act.

5/ For details see specimen contracts in appendix.

In the participating contract net proceeds are defined as returns for sugar (in some cases sugar and byproducts) after deducting the company's "sales and marketing expenses." In selling beets the grower becomes a silent partner in the marketing of sugar.

The price provisions of beet contracts have two general forms--the eastern and the western. The eastern contract frequently is referred to as "50-50," the implication being that 50 percent of the proceeds from the sale of products is paid for beets. Nowhere has the return actually been held to 50 percent. Some companies divide the income from the sale of all products--sugar, molasses, and beet pulp. Some divide only the income from sugar. The percentage varies accordingly. Some pay growers a premium when sugar net price exceeds a specified figure; some pay additional increments for deliveries beyond a specified tonnage.

The western contract employs a different application of the participating principle. Payments to growers per ton of beets and their proportion of net proceeds from sugar vary with the net price of sugar and the sucrose content of the beets. Payments are stated in dollars per ton of beets instead of percentage of sugar net income. Table 1 shows a well-developed price schedule for a western contract. Price variations in this schedule are more regular than in most contracts, and thus better illustrate the basic characteristics.

In the western contract two ways of applying the payment formula appear. One is used throughout California, and the other is prevalent elsewhere in the West. Both forms provide for sampling each grower's beets to determine an allowance for foreign matter and any deficiency in trimming. In California each grower's beets are also sampled and tested for sucrose. Payment is based on these tests. In other Western States, tests for sucrose commonly are made only when the beets go into the processing line and the identity of the grower has been lost. Payment to all growers is then made on the average sucrose content for the factory district. This supposedly costs the company the same amount for beets, and makes some saving in testing and recordkeeping.

This practice of paying on an average sucrose content offers a grower no incentive to grow beets with high sucrose content. Any economical way to get a greater yield of beets per acre appeals to the grower, even if the sucrose content is lowered. The factory prefers beets with high sucrose content because of lower processing costs per pound of sugar recovered. This conflict of interest has caused considerable discontent among growers in some areas. The reluctance of some processors to assist in experimental tests has increased the discontent of growers in these areas.

Regardless of whether beet payments are made on an individual grower's record or a district average, they are based on sucrose content, not sugar recovered. 6/ An important factor in favor of this practice is its simplicity; it permits payment to be made to growers even though the quantity of sugar recovered from each grower's beets is unknown. Also, sucrose content has the advantage of excluding any influence of differences in factory efficiency that would be reflected in rates of sugar recovery.

The use of sucrose content seems to assign risks between growers and processors in an appropriate way. Variations in beet quality affect returns to the grower, and variations in factory efficiency affect returns to the processor. Table 2 shows, for the price schedule of table 1, the share of sugar net going to typical western growers at varying sugar nets and sucrose contents.

6/ For the industry as a whole, sugar recovery has averaged around 86 percent of the sucrose content in recent years.

Table 1.--Specimen schedule of processor's payments to grower per ton of sugarbeets, western area 1/

Average net price per 100 pounds of sugar	Percentage of sugar (sucrose) in beets												
	24	23	22	21	20	19	18	17	16	15	14	13	12
Dollars	- - - - - Dollars - - - - -												
8.00	20.184	19.274	18.370	17.472	16.580	15.694	14.814	13.940	13.072	12.210	11.354	10.504	9.660
7.50	18.984	18.124	17.270	16.422	15.580	14.744	13.914	13.090	12.272	11.460	10.654	9.854	9.060
7.00	17.400	16.606	15.818	15.036	14.260	13.490	12.726	11.968	11.216	10.470	9.730	8.996	8.268
6.50	15.816	15.088	14.366	13.650	12.940	12.236	11.538	10.846	10.160	9.480	8.806	8.138	7.476
6.00	14.232	13.570	12.914	12.264	11.620	10.982	10.350	9.724	9.104	8.490	7.882	7.280	6.684
5.50	12.648	12.052	11.462	10.878	10.300	9.728	9.162	8.602	8.048	7.500	6.958	6.422	5.892
5.00	11.064	10.534	10.010	9.492	8.980	8.474	7.974	7.480	6.992	6.510	6.034	5.564	5.100
4.50	9.480	9.016	8.558	8.106	7.660	7.220	6.786	6.358	5.936	5.520	5.110	4.706	4.308
4.00	8.280	7.866	7.458	7.056	6.660	6.270	5.886	5.508	5.136	4.770	4.410	4.056	3.708

1/ Schedules in grower-processor contracts are extended if necessary, as follows: "If the net return for sugar and/or sugar content is higher or lower than those shown in the foregoing schedule, payment shall be determined in proportion, using the immediately succeeding or preceding interval, as the case may be, as the basis for calculation."

Table 2.--Percentage of net sugar price that processor pays sugarbeet grower, western area 1/

Average net price per 100 pounds of sugar	Percentage of sugar (sucrose) in beets												
	24	23	22	21	20	19	18	17	16	15	14	13	12
Dollars	- - - - - Percent - - - - -												
8.00	61.12	60.87	60.62	60.50	60.25	60.00	59.75	59.62	59.37	59.12	59.00	58.75	58.50
7.50	61.33	61.07	60.80	60.67	60.40	60.13	59.87	59.73	59.47	59.20	58.93	58.80	58.53
7.00	60.29	60.00	59.71	59.43	59.29	59.00	58.71	58.43	58.29	58.00	57.71	57.43	57.29
6.50	58.92	58.62	58.46	58.15	57.85	57.54	57.38	57.08	56.77	56.46	56.31	56.00	55.69
6.00	57.50	57.17	56.83	56.67	56.33	56.00	55.67	55.50	55.17	54.83	54.50	54.33	54.00
5.50	55.64	55.45	55.09	54.73	54.36	54.18	53.82	53.45	53.09	52.91	52.55	52.18	51.82
5.00	53.60	53.20	53.00	52.60	52.20	51.80	51.60	51.20	50.80	50.40	50.20	49.80	49.40
4.50	51.11	50.67	50.22	50.00	49.56	49.11	48.67	48.22	48.00	47.56	47.11	46.67	46.44
4.00	50.25	49.75	49.25	48.75	48.50	48.00	47.50	47.00	46.75	46.25	45.75	45.25	45.00

1/ Based on table 1.

Table 3.--Sugarbeet growers' share in increases and decreases in sugar net price, western area 1/

Average net price per 100 pounds of sugar	Percentage of sugar (sucrose) in beets										
	23	22	21	20	19	18	17	16	15	14	13	12
Dollars	- - - - - Percent - - - - -										
8.00 - 7.50	58.14	58.14	58.14	58.14	58.14	58.14	58.14	58.14	58.14	58.14	58.14	58.14
7.50 - 7.00	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74
7.00 - 6.50	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74
6.50 - 6.00	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74
6.00 - 5.50	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74
5.50 - 5.00	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74
5.00 - 4.50	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74	76.74
4.50 - 4.00	58.14	58.14	58.14	58.14	58.14	58.14	58.14	58.14	58.14	58.14	58.14	58.14

1/ Based on table 1. Percentages derived from price schedules in most western contracts would be less uniform than those shown here.

As sucrose content decreases beet payments typically represent a decreasing percentage of sugar net. The decrease is apparently intended to compensate processors for the increased processing cost, per pound of sugar recovered, of handling beets of lower sucrose content. In districts where growers' payments are based on individual tests, high sucrose can be of substantial direct advantage to the grower. No major friction appears to have developed over the discounts for low-sucrose beets.

Growers have frequently criticized two other aspects of sugarbeet pricing. One is the variation in their percentage of sugar net when the sugar price changes. The other is the use of net price, rather than gross, as the basis of participation. Sales and marketing expenses, including the excise tax in recent years, have usually averaged about 20 percent of gross sales receipts.

Relatively few complaints are heard from growers or their representatives regarding the prices received for beets when sugar actually sells at about the level of currently expected prices. At this level, the grower's share is about 58 percent of the net. Growers do often question the logic and ethics of the variation in their percentage when the price differs from expectations. The price schedule of the western contract is normally drawn up in such a way that when net return per hundredweight of sugar rises above, or falls below, the level of recent years, the share of net that goes to the farmer in beet payments decreases. Typically it decreases at an accelerating rate, so that about three-quarters of the change in sugar net income will be reflected in the price received by the beet grower. 7/ This is illustrated by tables 2 and 3 and figures 1 to 4. In a general way, and expressed differently, the same principle holds in the typical eastern contract.

This type of gradation is insisted on by the processors to limit their hazard in case of low sugar price. It does not reduce the total hazard, but it puts more of it on the grower's shoulders.

Instead of relieving the grower of interest in price changes and making him a piece-rate worker, as contract producers of many farm commodities are sometimes said to be, the participating contract makes him very much interested in changes in the sugar market. 8/ His share--about 58 percent--in sugar net return should not obscure the fact that he bears three-quarters of the joint risk of price fluctuations.

MARKETING RISKS

As shown in the preceding discussion, the sugarbeet contract assures the processor that his marketing costs will be covered before sugar returns are divided between processor and producer. The arrangement is advantageous to the processor in case of decreasing sugar price or increasing sugar marketing cost; conversely, it is advantageous to the grower if sugar prices rise or sugar marketing costs decline.

Some growers contend that their 75-percent share of changes in marketing cost is excessive; that there is little inducement to processors to increase their marketing efficiency. This was examined in considerable detail in an earlier report by the

7/ For the schedule in table 1 this is true for all prices except at the extreme high and extreme low sugar nets--situations not expected to occur.

8/ For discussion of the marketing margin for beet sugar see Larkin, L. C., Farm and Retail Prices for Beet Sugar, U. S. Dept. Agr., AMS-424, Nov. 1960; and The Sugar Dollar From Consumer to Grower, U. S. Dept. Agr., Sugar Rpt. No. 108, Apr. 1961, pp. 5-19.

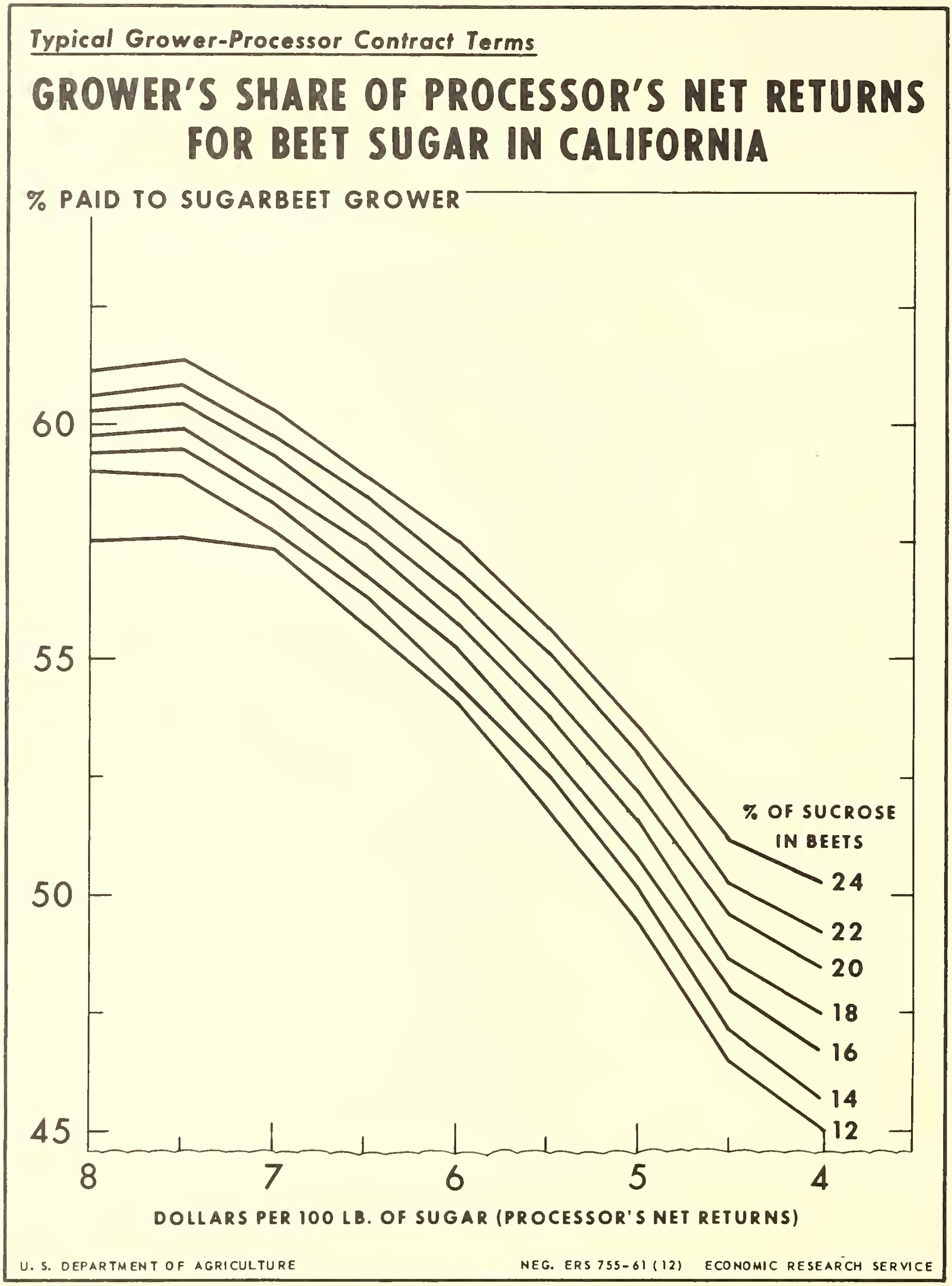
Typical Grower-Processor Contract Terms
GROWER'S SHARE OF PROCESSOR'S NET RETURNS FOR BEET SUGAR IN CALIFORNIA
% PAID TO SUGARBEET GROWER
60
55
50
45
% OF SUCROSE IN BEETS
24
22
20
18
16
14
12
8
7
6
5
4
DOLLARS PER 100 LB. OF SUGAR (PROCESSOR'S NET RETURNS)
U. S. DEPARTMENT OF AGRICULTURE
NEG. ERS 755-61 (12)
ECONOMIC RESEARCH SERVICE

Figure 1

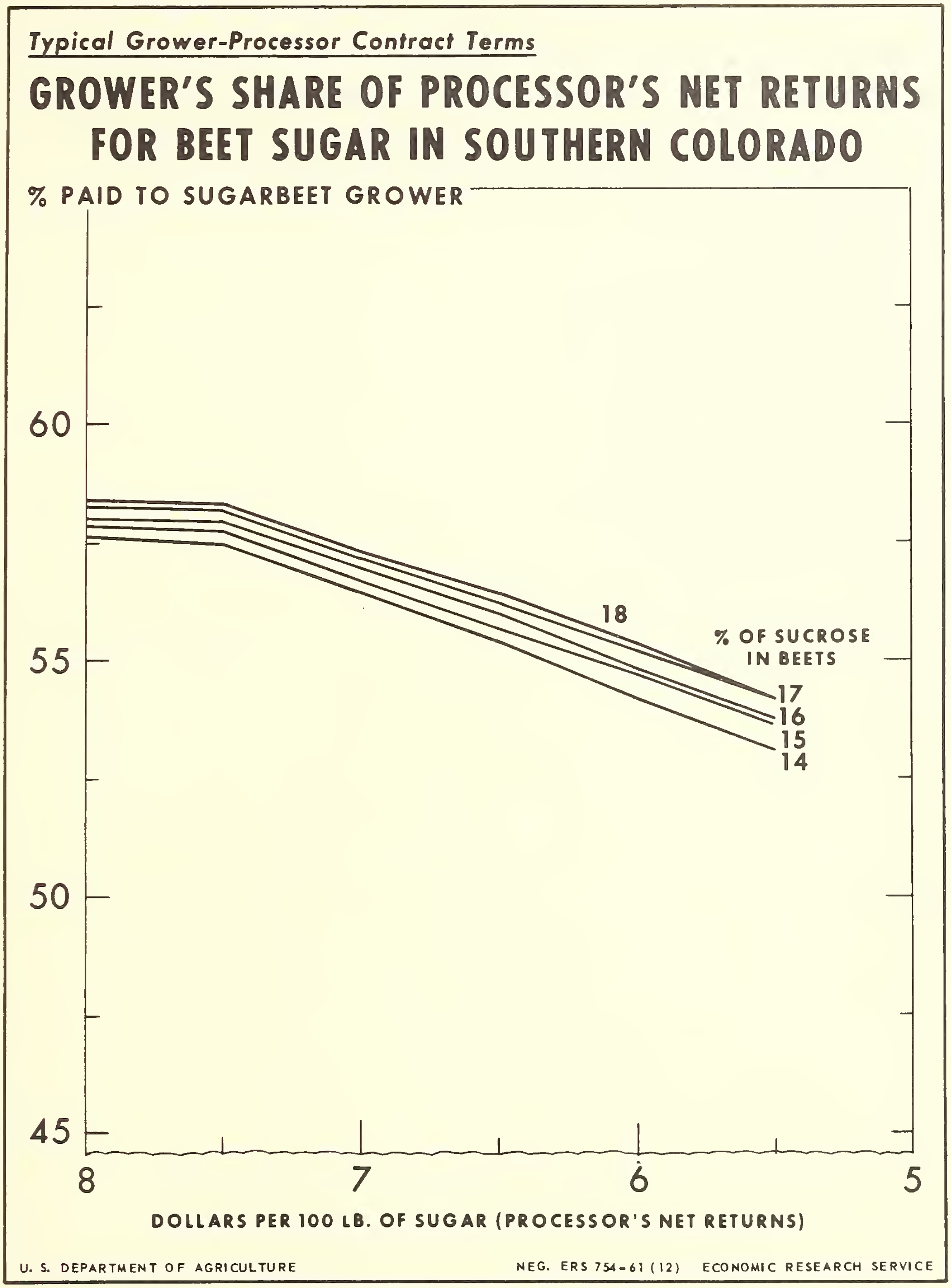
Typical Grower-Processor Contract Terms
GROWER'S SHARE OF PROCESSOR'S NET RETURNS FOR BEET SUGAR IN SOUTHERN COLORADO
% PAID TO SUGARBEET GROWER
60
55
50
45
18
% OF SUCROSE IN BEETS
17
16
15
14
8
7
6
5
DOLLARS PER 100 LB. OF SUGAR (PROCESSOR'S NET RETURNS)
U. S. DEPARTMENT OF AGRICULTURE
NEG. ERS 754-61 (12)
ECONOMIC RESEARCH SERVICE

Figure 2

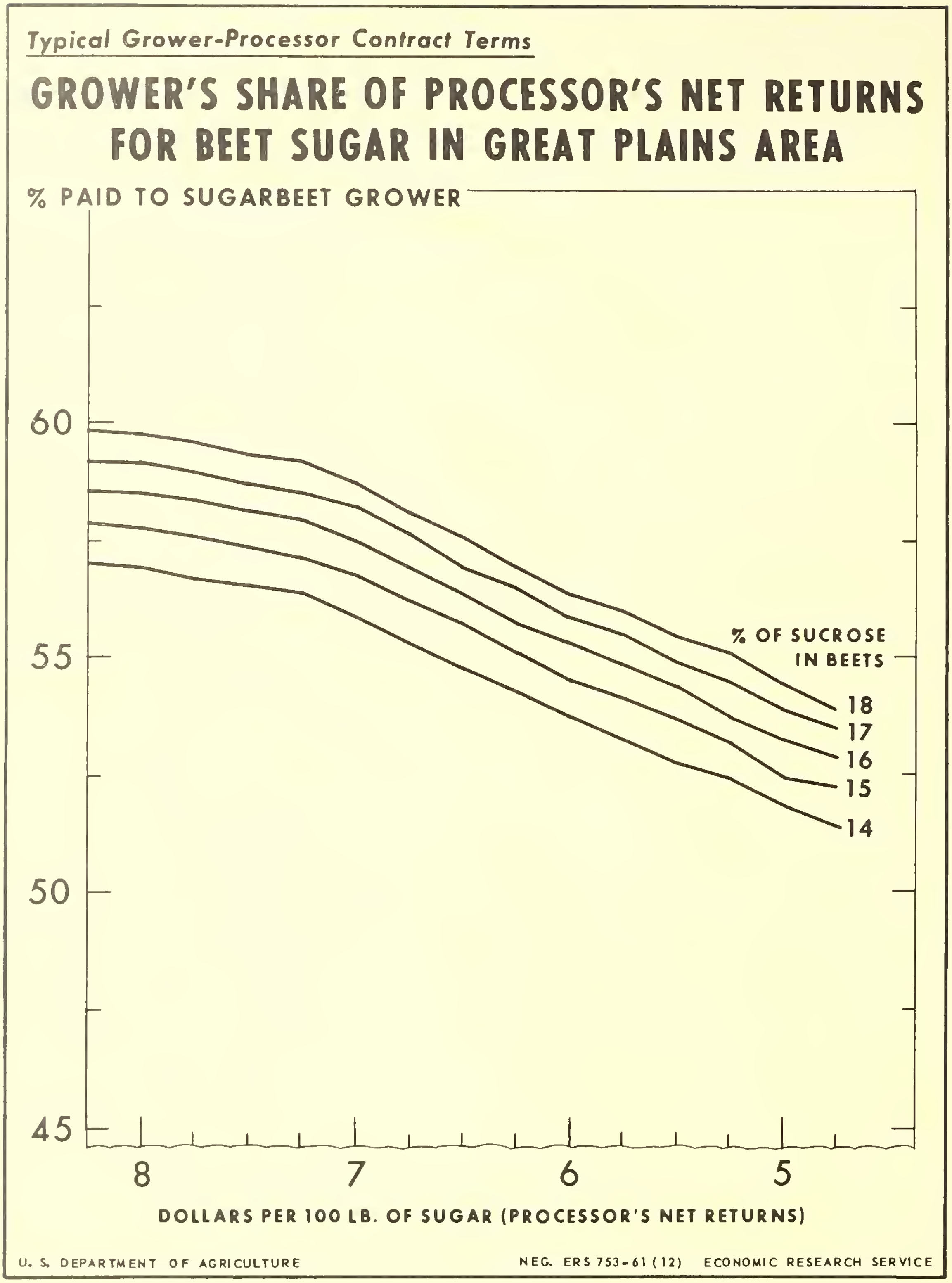
Typical Grower-Processor Contract Terms
GROWER'S SHARE OF PROCESSOR'S NET RETURNS FOR BEET SUGAR IN GREAT PLAINS AREA
% PAID TO SUGARBEET GROWER
60
55
50
45
% OF SUCROSE IN BEETS
18
17
16
15
14
8
7
6
5
DOLLARS PER 100 LB. OF SUGAR (PROCESSOR'S NET RETURNS)
U. S. DEPARTMENT OF AGRICULTURE
NEG. ERS 753-61 (12) ECONOMIC RESEARCH SERVICE

Figure 3

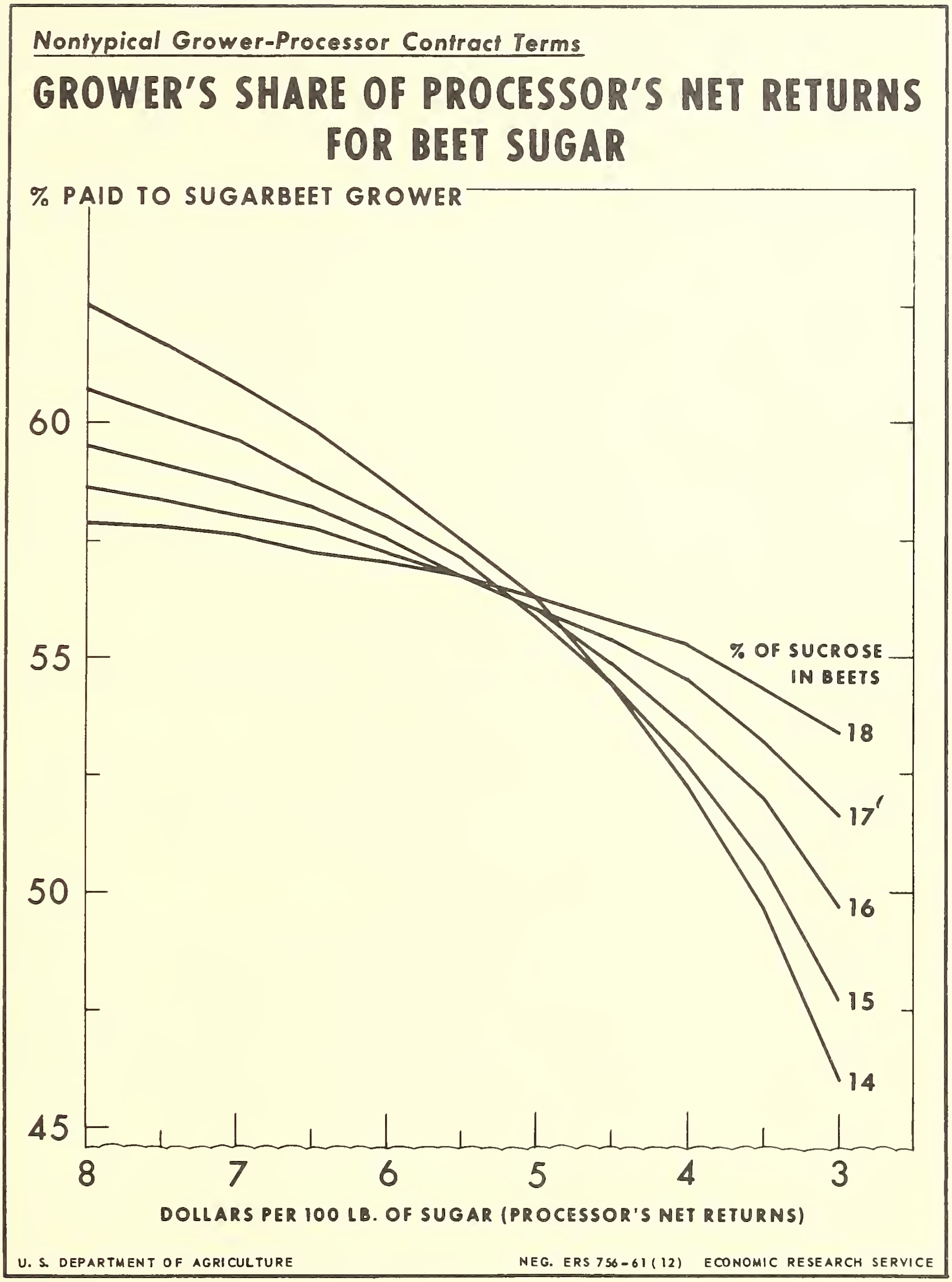
Nontypical Grower-Processor Contract Terms
GROWER'S SHARE OF PROCESSOR'S NET RETURNS FOR BEET SUGAR
% PAID TO SUGARBEET GROWER
60
55
50
45
% OF SUCROSE IN BEETS
18
17
16
15
14
8
7
6
5
4
3
DOLLARS PER 100 LB. OF SUGAR (PROCESSOR'S NET RETURNS)
U. S. DEPARTMENT OF AGRICULTURE
NEG. ERS 756-61 (12)
ECONOMIC RESEARCH SERVICE

Figure 4

Department. 9/ The authors of that report concluded that the division of sugar net return agreed to by the processor and the grower's representative is of necessity a subject of negotiation. More of the risk could, by agreement, be shifted to the processor, but it probably would result in lowering beet prices enough to compensate the processor for assuming the greater risk.

Inadequacy of grower's information about the processor's marketing practices and costs is a further cause of some growers' dissatisfaction with the basis of sugar-beet pricing. 10/ Growers' representatives have unsuccessfully requested further details of sugar prices, merchandising practices, and marketing costs. In lieu of such information they have attempted to have some agreed statement of marketing practices included in the contract, such as: "Gross sales price as herein used in determining net return on sugar sold shall be the publicly announced prices of various sized packages plus the regular prepays to points where sugar is delivered. The company agrees that no price concessions or rebates will be included as sales expenses. Price announcements will be filed and made available for audit of net return." No such statement has appeared in any contracts.

More information is needed on competitive pricing idiosyncrasies and changes in distribution practices. Announced regional prices of refined beet sugar (table 4) are lower in the Chicago-West territory than in any other sizable area. Table 5, which gives the region of origin for sugar sold in the Chicago-West territory, shows that large quantities of sugar were shipped to the territory from areas with higher announced prices.

One trade authority refers to Chicago as "the great dumping ground for homeless refined sugar." He remarks further that sugar market information is not very good except for New York City. 11/ These facts seem to some growers to be at variance with a policy of announced prices and circulated price lists.

Beet sugar in the Chicago-West territory commonly has an announced price 20 cents less per 100 pounds than the price for cane sugar. 12/ In recent years this differential for industrial grades of sugar has disappeared in the Pacific Coast States. Growers frequently question the processors' necessity for selling beet sugar below cane sugar.

The development of bulk storage in company-owned facilities in consuming centers has introduced a new marketing problem in the determination of sugar net returns. In some cases bulk storage may have resulted in the transfer of certain cost items between the production and marketing accounts. Sugar storage at the factory is charged to production, but storage in leased or company-owned space away from the factory is charged to marketing. Processors who store part of their sugar at consuming centers away from the factory can deduct storage costs for such sugar in calculating net returns, and payments to growers will be smaller than if the sugar were all stored at the factory site.

9/ Jackson, D., DeLoach, D. B., and Kinzhuber, R. J., "Marketing Sugar Beets," U. S. Dept. Agr., AMS-137, Nov. 1956.

10/ Specimen audits of processors' returns from beet sugar sales for both eastern and western contracts are shown in the appendix. Some growers have expressed the feeling that such audits check only the consistency and arithmetic of the companies' systems of accounting, and not the original sales records.

11/ Lamborn, Ody. In "Beet Sugar Economics," edited by R. H. Cottrell. The Caxton Printers, Ltd., Caldwell, Idaho, 1952, pp. 73 and 335-37.

12/ Concerning the meaningfulness of Chicago list prices, see U. S. Dept. Agr., Sugar Rpt. No. 105, Jan. 1961, p. 16.

Table 4.--Selected base prices per 100 pounds of refined sugar, last week of June, 1960 1/

Area	Beet sugar	Cane sugar
	Dollars	Dollars
Northeast	--	9.40
Pacific	8.90	8.90
Gulf	--	9.30
Chicago-West	--	2/ 9.00
Chicago-West	8.80	--
Michigan:		
Except southwestern corner	8.80	--
Southwestern corner	8.60	--
Northern Indiana	--	9.10
Southern Indiana	--	9.30
Southwestern Ohio	--	9.25

1/ For description of sugar "basis prices" and discussion of Chicago-West prices, see U. S. Dept. Agr., Sugar Rpt. No. 63, July 1957, pp. 6-13.
2/ With a 10-cent direct shipping allowance deductible.

Lamborn Sugar Market Report, N. Y., July 5, 1960.

Table 5.--Primary movements of sugar into and out of the Chicago-West territory, 1958

Origin or destination	Into Chicago-West	Out of Chicago-West	Net into Chicago-West
	1,000 short tons	1,000 short tons	1,000 short tons
Northeast	60	122	-62
Southeast	0	1	- 1
Gulf	374	14	360
Southwest	44	47	- 3
Pacific Coast	256	3	253
Pacific Northwest	190	2	188
Chicago-West 1/	805	805	0
Total	1,729	994	735

1/ Shipments within the territory.

U. S. Dept. Agr., Sugar Report No. 101, Sept. 1960, p. 3.

Thus some growers' representatives seeking possible improvement for their members in the basis of sugarbeet contracts have raised several interrelated questions regarding the efficiency and equity of the present arrangements. These relate largely to the bearing of market risks, and to some of the elements that determine sugar net return, and hence the marketing risks. These elements may be grouped roughly into two types: Sugar distribution and pricing practices, and cost allocation practices.

It has been suggested that a neutral observer determine whether any gross deficiencies in these elements exist in the industry. However, neither party has expressed a desire for policing of the agreement. Interest of the growers has been expressed, rather, in an improvement of their position through a modification of the basis of agreement.

ALTERNATIVE FORMS OF RELATIONSHIP

Various alternatives to the existing forms of relationship between sugarbeet growers and processors have been suggested as means of improving industry operations including marketing. Among these alternatives are: (1) Payment of a flat price by processors (with quality differentials) for beets, (2) division of the physical products of sugarbeet processing between grower and processor with each marketing his portion, (3) production of beets by the processors with hired labor, (4) processing of the grower's beets for a fee to be charged by the processor, and (5) operation of sugarbeet factories by growers. Examples of all five forms may readily be found in production and processing of other crops. They require careful scrutiny, however, to judge how they would change the efficiency of the beetsugar industry and the economic relationships of the parties. Differences in legal terminology or connotation do not necessarily imply economic differences. For example, alternatives 2 and 4 might be identical in effect, depending on the agreements made under them.

The items of major interest in this study concern industry efficiency and equity between the growers and processors. Three fundamental questions are: (1) Who would control the marketing of the sugar; (2) who would bear marketing risks or how would they be divided; and (3) would production and processing of beets be integrated more or less than at present?

Marketing efficiency would tend to improve if the party bearing the market risk also controlled marketing operations. If growers received sugar in payment for their beets, there would be a larger number of sellers, and total marketing costs presumably would increase. However, coordinated marketing by a number of growers' organizations could modify the increase by avoiding needless duplication of sales forces and facilities, and by reducing cross-hauling. Some degree of integration (or coordination) of production and processing management is important in the efficient procurement of the raw material of the beet sugar processor.

A fixed price for sugarbeets, with differentials for quality differences, not only would place sugar marketing in the hands of the processors, but would place the market risk entirely on their shoulders. They might attempt to minimize the risk by offering lower prices to beet growers. Management would need to be no less integrated than at present.

Division of the physical products of sugarbeets between growers and processors obviously would divide both the marketing function and marketing risks. Growers would face the alternative of developing a sugar marketing organization or selling through brokers or agents. Total cost of marketing probably would increase because it is doubtful that the decrease in processors' costs for marketing their share of the products would represent as large an amount as the cost incurred by the growers in marketing their share. Some offsetting benefit to consumers might flow from increased competition among sellers in the beet sugar market. Such an arrangement would involve no change in integration.

Production of sugarbeets by the processor would leave both the marketing function and the bearing of marketing risks with the processor. The principal objective of such a change presumably would be to gain economies of production. Because beets are always grown as part of a rotation with other crops and often livestock, it seems very unlikely that production by the processor would be economical. It has been attempted but never proven successful.

Processing of beets for a fee would make the producer responsible for marketing, with the complete marketing risks on his shoulders. A shift to this type of operation would increase the growers' control of production, and processing would become a hired service. As a result, the cost to the grower for processing and marketing could be expected to rise; processors would want extra compensation for the increased risk of inadequate quantity or quality of their raw material supply.

Operation of factories by growers represents another form of organization in which beet growers would control marketing and carry all price risks. Under a growers' organization, integration of production and processing would be at least as great as at present, and perhaps greater than with custom processing for a fee. Individual growers might be expected to accept direction from a growers' organization at least as readily as they now accept it from independent processors. As with custom processing, a growers' organization could develop economical and efficient marketing policies and patterns of physical distribution.

In none of the alternatives is a quantitative measure of efficiency possible, and even an array must depend on individual judgment. Furthermore, determining the grower-processor relationship that would make the industry most efficient would give only a partial answer to the problem presented. Growers' representatives are concerned with ways of adjusting the beet contract to improve their position. They are dissatisfied with present application of the principle of growers' sharing in marketing risk through the existing type of price participation. Neither growers nor processors have expressed willingness to abandon the present type of arrangement even though it largely separates marketing from the bearing of marketing risk. Integrated control of management likewise is criticized freely as to detail of application, but not in principle.

In a mechanical sense desirable adjustments can be made in structure and operation, but the preferences of growers and processors are the source from which change must come. Only by negotiating differences in these preferences can a structure and relationship be reached that offers significant advantages over existing arrangements.

The fact that all the sugarbeets grown in the United States at the present time are sold by growers to processors under a price participation contract does not mean that this arrangement is always the best one. Other arrangements, such as the cooperative ownership of processing plants, occur in certain other countries where sugarbeets are grown. Grower cooperatives which own plants for the production of raw sugar from sugarcane exist in certain areas in the United States and in other countries. In some cane growing areas in the United States contracts for the purchase of sugarcane provide that the grower may elect to receive payment either in money or sugar. While payment in money appears to be the most common arrangement, some growers have chosen to be paid in sugar.

Recently the beet sugar industry in the United States has experienced a rapid increase in output. Further expansion appears to be desired by various segments of the industry. In a number of areas, farmers who have not been growing sugarbeets have expressed interest in doing so. Some new factories will be needed before this will be possible.

These circumstances make grower-processor relationships of unusually great interest at the present time. They may also provide a favorable opportunity for the trial of new types of arrangement for growing and processing beets in one or more localities.

APPENDIX

Specimen Contract, Eastern States

SUGAR BEET CONTRACT Concerning Raising and Delivery of Sugar Beets for Campaign of 1958.

WITNESSETH, That for and in consideration of the mutual covenants and payments hereinafter set forth, the respective parties hereto mutually undertake and agree as follows:

1. The Grower agrees to prepare land for, plant, block, thin, cultivate, harvest, and deliver during the season of 1958 __________ acres of sugar beets, to be grown on land situated in Section ______________ Township of __________ County of _______ State of ______________.

2. Seed will be furnished by the Company and charged to this contract at the rate of sixty-five cents per pound for segmented seed. The Grower agrees to use no seed other than that furnished by the Company; to plant the number of pounds to the acre for the various types of seedings as recommended by the Company; and to plant no seed on land that contained a crop of beets during the previous year. The title to the seed and to the crop of beets from the time when same begins to grow, shall be and remain in the Company. Any seed furnished to the Grower under this Contract and not planted shall be returned to the Company before August 1, and the Grower will be given credit for and only for such seed returned in good condition in unopened bags before that date, and after that date the Company will not give credit for any seed furnished to the Grower. The Grower agrees not to drag up nor destroy any planted seed nor any portion of the sugar beet crop, being grown under this contract, without first consulting the Company.

3. The Grower agrees that he will harvest and deliver to the Company all sugar beets grown by him under this contract, when and as directed, at the Company's factory or in cars at designated receiving stations of the Company. The Grower further agrees that all beets grown by him shall be properly topped, that is to say, by cutting off the tops squarely at the base of the lowest leaf scar where a leaf has grown; that the beets will be delivered free from foreign substances liable to interfere with factory operations; that no loose dirt will be removed from delivery vehicle until it has been weighed back, and that all beets shall be subject to deductions for dirt and improper topping. In the event a beater topper is used to remove beet tops, the Grower shall complete harvesting of the beets thus topped within forty-eight hours after the beater shall have commenced to remove the tops. Moreover, if a beater topper is used for removing the leaves the beets must nevertheless be properly topped as above defined before delivery to the Company.

4. The Grower also agrees that the entire cost of transportation to the Company's factory on the gross weight of all beets, whether shipped directly to the factory by him or delivered by him to receiving stations outside the factory yard, shall be paid by him, or if advanced by the Company, shall be charged to this contract and deducted from the first moneys due under the terms of this contract. In making any such advances or arranging for transportation, it is understood the Company is acting solely as agent for the Grower.

5. The Company has the privilege at any time during the growing and harvesting season to enter upon the land set forth for the purpose of determining the condition of the land and the quality and condition of the beets grown under this contract. At its option, the Company may refuse to pay for any diseased, frozen, damaged, or improperly topped beets; beets that contain less than 12% sugar; beets of less than 80% purity, or beets that the Company for any other reason may deem not suitable for the manufacture of sugar. In no event shall the Company be liable to the Grower for failure or partial failure of the crop, or for beets not harvested, or for beets not delivered to and accepted by the Company.

6. The Company agrees that all beets delivered and accepted under the terms of this contract shall be processed or converted into sugar, pulp and molasses and that such products shall be sold from time to time as the Company in its discretion may determine; but the Company shall not be liable in any way for any mistakes or errors of judgment in the manufacturing or sale of sugar, pulp or molasses or other act in connection with this contract, nor for delays, non-performances or losses caused by strikes, fires, breakdown of plant, accidents, or other causes not commercially and practicably controllable by it.

7. In case the Grower does not give the beets proper care, or fails to harvest and deliver the crop, then the Company shall have the right to enter upon the land described, and care for, cultivate, harvest, deliver, and retain the crop and charge the expense thereof to this contract.

8. On account of all beets delivered and accepted in accordance with terms of this contract, the Company will pay per net ton of beets delivered an amount equal to fifty per cent (50%) of the average "net proceeds" (as hereinafter defined) realized from the sale of sugar, pulp and molasses produced by the Company from an average net ton of all beets received at its ____________ Plant from the 1958 crop.

9. Neither a partnership nor a controlled employment or agency is hereby created or intended, but the intention and effect of this agreement is to make the Grower an independent contractor. The Company shall not be responsible for any act of the Grower nor of his employees or agents, nor for the Grower's obligations for labor, cartage, or otherwise.

10. The "net proceeds" from the sale of sugar, pulp and molasses, or any of them, shall be the amount received by the Company (less any differential collected for sugar packed in other than bulk bags of 100 pounds each) after deducting actual cost of outbound freight, brokerage, cash discount, insurance, credit insurance, storage, declines and allowances, advertising, educational expenses, loading, warehouse heating and repacking; deductions shall also be made for all taxes whatsoever imposed upon the processing, production, ownership, handling, possession, or sale of sugar, pulp and molasses, including any tax or charge which is now or may hereafter be imposed by the United States or any other governmental authority or agency.

11. The net weight of beets, delivered by the Grower under this contract, shall be determined by the net tons registered on the records of the Company from the Grower's final certificates of sugar beet weight.

12. An initial payment hereunder shall be made by the Company December 15th, 1958 on account of all beets delivered up to and including November 30th, 1958, at the highest rate per ton that the Company may deem to be justifiable taking into consideration anticipated production and returns from the sale of said products. On

account of beets delivered after November 30th, 1958, the Company shall likewise make an initial payment January 15th, 1958. The Company at its option may make any additional advance or advances from time to time in such amounts as it may deem justifiable prior to final settlement. Final settlement shall be made within fifteen (15) days after all sugar, pulp and molasses made by the Company from the 1958 crop shall have been sold and paid for, but in the event all such products are not sold before October 1, 1959, final settlement shall be made with the Grower October 15th, 1959, as if the products unsold October 1st, 1959 had been sold at the average "net proceeds" realized by the Company on the sale of such products up to and including September 30, 1959.

13. The Grower hereby authorizes and directs the Company to deduct from any moneys coming due on account of beets delivered under this contract a sum not to exceed three and one-half (3 1/2) cents per net ton, one and one-half (1 1/2) cents per ton to be paid to the ________________ to be expended in accordance with and under the direction of the Grower members of the Board of Directors of said association in defraying the Grower's pro rata share of the expenses of the ________ ________________________________ activities in the Grower's behalf; and not to exceed two (2) cents per ton to be paid to the local Beet Growers Association having membership in the ____.

14. A firm of Certified Public Accountants, licensed to practice in the State of __________ shall be employed by the Company to examine its books, records and accounts and determine the "net proceeds" and the amount per ton payable to the Grower under the terms of this contract.

15. Any advances made on this contract in the way of seed, cash, labor, transportation costs or otherwise, with interest at the rate of 6% per annum on cash advances, including labor, shall be a first charge against the proceeds of this contract.

16. The Grower represents that he is qualified to execute and perform this contract, and that no person other than a signer thereof has any right or interest in, or claim, or lien upon the proceeds of this contract.

17. The Grower has no interest in or title to the crop that can be sold or mortgaged. No sale, assignment, mortgage nor pledge of this contract or its proceeds shall be valid unless the Company consents thereto in writing and endorses its consent on this contract. Any sale, assignment, mortgage or pledge of this contract or its proceeds to which the Company gives its consent shall be subject and subordinate to the right and title of the Company.

18. This agreement is subject to any adjustment in acreage if and as required by the United States Secretary of Agriculture or any other governmental authority acting under authority of law.

19. No agent has any authority to change or alter the terms and conditions of this contract, and it shall not be valid unless and until signed by an officer of the Company or its Plant Field Manager.

20. In addition to the payments hereinbefore provided, the Company will, on account of all beets delivered and accepted in accordance with the terms of this contract, pay per net ton of beets delivered, an amount equal to an additional fifteen per cent (15%) of the amount by which the average "net proceeds" (as herein defined) received from the sale of sugar produced by the Company from an average net ton

of beets received at its _________ plant from the 1958 crop of beets exceed \$6.70 per hundred pounds provided, however, that such additional percentage shall not be applicable to net proceeds in excess of \$9.00 per hundred pounds.

Dated ____________________________ 1958

____
(Signature of Grower)

By ____________________________________

____
(Postoffice Address)

Specimen Contract, Western States

SUGAR BEET CONTRACT
FOR CROP SEASON OF 1958

Receiving Station ______________________

Contract No. ____________________

Date of Contract ______________________________ 1958.

(hereinafter called the Corporation) and ____________________

____ of ______________________ County,
(A corporation, a partnership, an individual)*

State of __________________________, (hereinafter called the Grower) hereby agree as follows:

1. The Grower shall, in a farmerlike manner, during the 1958 cropping season, grow, harvest, and deliver in good condition to the Corporation, at the receiving station designated above, ______________ acres of sugar beets, on the following-described lands: ____

____

Section ___________, Township _____________, Range _____________, and County, State of ________________. The above acreage shall be planted not later than May 20, 1958, unless written consent is given by the local agricultural fieldman of the Corporation for later planting. The Grower shall not use more water during the growing season than necessary properly to develop the plants. Such beets shall be harvested and delivered as and when scheduled by the Corporation until October 20. On and after October 20, the Grower shall harvest and deliver all unharvested beets as soon as possible, without further notification, and shall complete delivery of all beets by December 1. The Corporation shall not be obligated to receive any beets after December 1.

The acreage of beets herein contracted for is expressly subject to any reduction deemed necessary by the Corporation on account of any allotment or quota imposed upon or applicable to the Grower and/or the Corporation in respect to production of beets and/or processing, shipment or sale of beet sugar, by virtue of any law, governmental regulation, or order; and this contract shall obligate the Grower to grow and the Corporation to buy only such reduced acreage of beets.

2. The seed to be used in growing such beets shall be furnished by the Corporation for the price of fifty-five cents (55¢) per pound for processed seed and sixty cents (60¢) per pound for processed and double-treated seed. Seed furnished by the Corporation shall not be planted upon any land not contracted to the Corporation. Any such seed not planted shall be returned in good order in the original unopened bags to the Corporation at the end of the planting season and the Grower credited therefor. No credit will be given for seed not returned prior to July 1, 1958.

3. All beets grown under this contract shall be delivered to the Corporation at the receiving station designated herein properly topped (i.e., squarely cut off at the base of the bottom leaf, in the case of medium or small-sized beets, and trimmed up the crown from the base of the bottom leaf in the case of large beets, in every case with distinct evidence of leaf scar to be left after top tare is taken), subject to proper deduction for tare, and free from dirt, stones, trash or other foreign

substances of any kind liable to interfere with the work of the factory. The Grower shall protect the beets from sun and frost after removal from the ground. The Corporation may reject any beets, if the above-mentioned conditions have not been properly complied with, as well as any diseased, frozen or wilted beets, beets of less than 12% sugar or less than 80% purity, or beets which for any other reason are not suitable for the manufacture of sugar, anything in this contract to the contrary notwithstanding.

4. All beets grown in accordance with and under this contract shall be bought by the Corporation and paid for by it according to the following terms and schedule of prices:

The price per net ton (2,000 pounds) for beets delivered hereunder to the Corporation shall be determined upon the average net proceeds per one hundred (100) pounds of sugar (as defined in paragraph 7 (a) hereof) received by the Corporation from the sale of sugar manufactured at its ____________ factory which is sold and delivered during the period October 1, 1958 to September 30, 1959, inclusive, and also upon the average sugar content of all 1958-crop beets sliced at the ____________ factory of the Corporation (except that, if the ____________ factory does not operate with respect to 1958-crop beets, such average net proceeds and sugar content shall be determined as provided in paragraphs 7 (b) and (c) hereof) in accordance with the following schedule:

Average Net Proceeds for Sugar per 100 Pounds	AVERAGE SUGAR CONTENT (%) OF BEETS							
	18.5	18.0	17.5	17.0	16.5	16.0	15.5	15.0
$8.50	$16.47	$15.98	$15.50	$15.01	$14.53	$14.05	$13.55	$13.09
8.00	15.44	14.98	14.53	14.07	13.62	13.17	12.71	12.27
7.50	14.41	13.98	13.56	13.13	12.71	12.29	11.87	11.45
7.00	13.21	12.82	12.43	12.04	11.66	11.27	10.88	10.50
6.50	12.06	11.70	11.34	10.98	10.63	10.27	9.92	9.57
6.00	10.94	10.61	10.28	9.95	9.63	9.31	8.99	8.68

Fractions of sugar proceeds and beet tests shall be in the same relative proportion. If sugar proceeds or beet tests are higher or lower than shown in the foregoing schedule, the price to be paid for beets shall be increased or decreased in proportion to the immediately preceding price interval.

5. The provisions of paragraphs numbered 6 to 18, both inclusive, as shown on the reverse side hereof, are hereby accepted as part of this contract.

Landowner ______________________ Grower ______________________
(To be signed by Landowner or his Agent) Grower ______________________

Address ______________________ Address ______________________

Agent ______________________ ______________________

Address ______________________

Rental ______________________ By ______________________

*Strike out all but the appropriate designation. If a partnership, the names of all partners should appear and each partner should sign the contract.

6. Settlements will be made as follows: For all beets delivered prior to November 5, settlements will be due on the 20th day of November, and on or before the 15th day of the month next following the month of delivery for all beets delivered on or after November 5. The foregoing settlements will be made at as high an amount per ton as may be justified in the judgment of the Corporation, based upon the Corporation's estimate of the average sugar content of all beets to be sliced and the Corporation's estimate of the average net proceeds to be received by it, as aforesaid. Further settlements will be made from time to time in such amounts as the Corporation may deem to be justified by market conditions and the quantity of sugar sold. Final settlements for all beets delivered hereunder shall be made in accordance with this contract not later than October 31, 1959.

7. (a) The average net proceeds for sugar sold as aforesaid shall be determined by deducting from the gross sales price all such charges and expenditures as are regularly and customarily deducted from the gross sales price of sugar, in accordance with the Corporation's system of accounting heretofore established, showing net proceeds from sugar sold and delivered, and by deducting also: The excess cost of packaging over the cost of packaging in the standard 100-pound bag designated by the Corporation as such; and any amounts which may be paid or accrued by the Corporation for excise, sales, or other taxes, or for other charges or payments of any kind, either now or hereafter levied, exacted or imposed, directly or indirectly on, or with respect to, or arising out of, the manufacture, processing, production, ownership, possession, holding for sale, sale, marketing, or shipment of such sugar or any part thereof, or on all or any part of the proceeds of such sale. Such average net proceeds, determined as aforesaid shall be verified by a firm of independent certified public accountants chosen by the Corporation, which verification shall be conclusive.

(b) In the event that the ____________ factory of the Corporation does not operate in 1958 with respect to 1958-crop beets, the average net proceeds per 100 pounds of sugar received by the Corporation from all sugar manufactured from 1958-crop beets purchased for such ____________ factory shall be the average net proceeds received by the Corporation during the period specified in paragraph 4 hereof from sugar obtained by the Corporation at the factory or factories where such beets are sliced.

(c) The sugar content of the beets grown hereunder shall be determined by taking the average of the tests made of all beets sliced in the ________ factory of the Corporation, or if such factory does not operate in 1958 with respect to 1958-crop beets, by taking the average of the tests made of the beets in the factory or factories where such beets are sliced which are designated by the Corporation as being purchased for such ___________ factory, and will be ascertained and determined by tests made (at the Corporation's expense) in the laboratory of either such ________ factory or the factory or factories where such beets are sliced, and all such analyses shall be accepted as final.

8. The Corporation, unless notified in writing by the Grower prior to October 1, 1958 not to make such deductions, shall be entitled, at the sole option and election of the Corporation, to deduct from any monies coming due for beets delivered under this contract, not to exceed the sum of three-cents (3¢) per ton on all beets delivered by the Grower hereunder and to pay such amount to the ________________________
____.

9. To ascertain the quality of the beets, the Corporation's representatives shall have the privilege from time to time during the growing and harvesting season of entering the field and taking samples of the beets for testing purposes.

10. In the event a shortage of cars after October 30 should cause serious delay to the Grower, he may deliver beets at receiving stations where mechanical pilers are located, provided that no frozen or damaged beets shall be received for piling, and that no loose dirt shall be removed from the wagon or truck boxes (which must have dirt-tight bottoms and dirt-tight side hinges) until after having been weighed back.

11. Any advance made to the Grower by the Corporation in the way of seed, fertilizer, cash, labor, equipment rental, or otherwise, shall be considered as part payment for the crop of beets and be the first lien thereon and the Corporation shall be entitled to deduct from any amounts due hereunder any and all indebtedness whatsoever which may be owing at any time by the Grower to the Corporation.

12. The Grower and other growers who have entered into sugar beet contracts with the Corporation may, at their own expense, have representatives (weighman, tareman, and chemist) to scale house, tare room, and laboratory to check weights, tares and sugar analyses, such representatives to be experienced in the line of work to be performed and satisfactory to the Corporation.

13. Fire, labor trouble, accident, act of God or of the public enemy, weather or other cause beyond the control of the parties which prevents the Grower from the performance of this contract or which prevents the Corporation from utilizing the beets contracted for in the manufacture of sugar therefrom at the Corporation's __________ factory, shall excuse the Grower or the Corporation, as the case may be, from the performance of this contract.

14. The Grower shall comply, in the production, cultivation, harvesting and delivery of sugar beets, with all applicable laws and authorized rules and regulations (including, but not limited to, the conditons upon which full payments are authorized by law to be made with respect to sugar recoverable from sugar beets) relating to the employment of persons under 18 years of age. The Corporation's purchases of beets hereunder will be made in reliance upon the Grower's agreement to comply with all such requirements.

15. The Grower is an independent contractor. Agricultural or other advice may be offered the Grower by the Corporation's representatives, but the Grower's status as an independent contractor shall not be thereby affected. In no event shall the Corporation be responsible for any failure or partial failure of crop or damage to beets.

16. No agent of the Corporation may change, waive or modify any of the terms or provisions of this contract, which constitutes the entire contract between the parties.

17. This contract shall be in duplicate, each of which shall be signed by both parties above named.

18. When signed by the Grower and Chief Agriculturist of the Corporation, or such other person or persons as may be designated by the Corporation, this contract shall bind both the parties hereto, their respective heirs, legal representatives, successors and assigns, but the Grower shall not assign this contract without the written consent of the Corporation, the successors or assigns.

Specimen Audit, Eastern Contract

October 5

TO OUR GROWERS:

We have employed to examine our books, records, and accounts relative to the determination of net proceeds payable to the beet growers.

Their certificate of this determination is reproduced below and on the reverse side is a schedule of the computation of net proceeds from the sale of products.

CERTIFIED PUBLIC ACCOUNTANTS

October 1

Dear Sirs:

We have extended our annual examination of the records of to include the amount due growers for beets delivered under the sugar beet contract. We have reviewed the records relative to beets delivered by growers and we have also made test checks of sales, inventory and operating records.

The net proceeds realized from the sale of sugar, pulp and molasses produced from 167,530.38 tons of beets of 14.22% sugar content is shown in Exhibit A, attached hereto.

The amount payable to growers for each ton of beets delivered is computed as follows:

	Quantities Produced	Quantities Produced per Ton of Beets	Average Net Proceeds per Unit	Average Net Proceeds per Ton of Beets
Sugar	378,487.65 cwts.	2.2592 cwts.	$ 7.6721 per cwt.	$17.3328
Pulp	8,446.00 tons	.0504 ton	40.7954 per ton	2.0561
Molasses.	5,744.73 tons	.0343 ton	20.6947 per ton	.7098
				$20.0987
Growers' 50% interest				$10.0494

Additional amount due growers as provided in paragraph of contract

Net Proceeds on sugar per cwt.	$7.6721	
Sugar in excess of $6.70 per cwt.	.9721	
15% of excess	.1458	
Per ton of beets ($.1458 x 2.2592).		.3294
Growers' share per ton of beets delivered		$10.3788
Previously paid		9.5000
Balance payable		$ .8788

In our opinion, based upon our examination, the average net proceeds and the amount payable to growers for each ton of beets delivered, have been computed in accordance with the terms of the sugar beet contract.

Yours very truly,

Certified Public Accountants

If there is anything in the above certificate or statement on the following page that is not clear to you please contact your fieldman or our office.

The gross return to you for each ton of beets delivered from the crop amounts to $12.8688 made up as follows:

Payment by company.	$10.3788
Government sugar payment (does not include deficiency or abandonment payments)	2.4900
Total	$12.8688

Exhibit A.--Statement of Total Net Proceeds from Products Produced from Beet Crop in Accordance with Terms of Beet Growers' Contract.

	SUGAR			PULP			MOLASSES		
GROSS PROCEEDS:	CWT.	Average per CWT.	Amount	TONS	Average per ton	Amount	TONS	Average per ton	Amount
Products sold, less returns, price declines and allowances	378,738.00	$8.8934	$3,368,253.52	8,445.175	$42.7388	$360,936.81	5,735.77	$22.0170	$126,284.67
Expenses deductible under terms of contract with beet growers:									
Processing tax		$ .5344	$ 202,389.19		$	$		$	$
Freight		.2273	86,087.54						
Cash discount		.1770	67,049.99						
Brokerage and commission		.0870	32,949.23					1.2448	7,140.01
Warehouse expense:									
Labor handling		.0690	26,139.00		1.6794	14,182.31		.0619	355.20
Air conditioning		.0169	6,353.15						
Insurance		.0072	2,745.03		.0112	94.93		.0086	49.44
Compensation insurance and payroll taxes		.0065	2,458.50		.1508	1,273.24		.0070	40.04
Repacking labor		.0024	905.95						
Outside warehousing					.0651	550.00			
Personal property taxes		.0416	15,757.58						
Sundry		.0043	1,613.79		.0369	312.00			
F. & M. Beet Sugar Assocation:									
Advertising		.0452	17,119.60						
Educational		.0025	960.35						
Total expenses		$1.2213	$ 462,528.90		$ 1.9434	$ 16,412.48		$ 1.3223	$ 7,584.69
Net proceeds on products sold ..	378,738.00	$7.6721	$2,905,724.62	8,445.175	$40.7954	$344,524.33	5,735.77	$20.6947	$118,699.98
Add inventory in process at end of campaign	1,537.48	7.6721	11,795.70	.825	40.7954	33.66	59.22	20.6947	1,225.62
Deduct products produced from process stock on hand at beginning of campaign	(1,787.83)	(7.6721)	(13,716.41)				(50.26)	(20.6947)	(1,040.12)
NET PROCEEDS	378,487.65	$7.6721	$2,903,803.91	8,446.000	$40.7954	$344,557.99	5,744.73	$20.6947	$118,885.48

October 24

To Beet Growers

Gentlemen:

The net return from sale of sugar by the Company during the period commencing October 1 and ending September 30 as shown by the statement below, has been determined in accordance with paragraph 6 of the beet contract, which reads as follows:

"The net return on sugar sold shall be determined by deducting from the gross sales price all such charges and expenditures as are regularly and customarily deducted from gross sales price of sugar, in accordance with The Company's system of accounting heretofore established, showing net receipts from sugar sold after deducting also the excess cost, as determined by The Company, of special packages and specialty sugars, and all excises, taxes, payments and/or charges now or hereafter levied, exacted or imposed, directly or indirectly, on or with respect to, or arising out of, the manufacture, processing, production, ownership, possession, holding for sale, sale, marketing or shipment of such sugar or any part thereof, or on all or any part of the proceeds arising therefrom."

STATEMENT OF SUGAR SALES PER 100 POUNDS OF SUGAR

Gross Return from Sugar Sold (After deducting Federal excise tax of $0.634 per 100 lbs.)		$8.259
Sales and Marketing Expenses:		
Freight charges on sugar to destination	.804	
Trade cash discount on sugar allowed customers	.175	
Insurance (on sugar only)	.006	
Taxes (on sugar only)	.060	
Storage (on sugar in outside warehouses. No charge for storage while sugar is in factory warehouses)	.041	
Loading and handling charges on sugar	.052	
Differentials received over excess cost of special packages and specialty sugars	(.014)	
Salaries (covering Sales Department only)	.014	
Telegraph and Telephone (covering sugar sales only)	.004	
Advertising (covering sugar sales only)	.034	
Traveling Expenses (covering sugar sales only)	.003	
Brokerage and Commissions (covering sugar sales only)	.029	
Miscellaneous, including office expenses, stationery, uncollectible accounts, etc. (covering sugar sales only)	.004	1.262
Net Return from Sugar Sold		$6.997

Dear Sirs:

We have made an examination of your accounts for the purpose of ascertaining the average net return per unit of 100 pounds received by your Company from sugar sold during the period commenced October 1, and ended September 30, both dates inclusive. We find that such net return on sugar sold as aforesaid, determined in accordance with the terms of your contract with the growers, amounted to $6.997 per 100 pounds, as set forth in the Statement of Sugar Sales above.

Yours truly,

Certified Public Accountants.