GROWERS CONTRACTS
for SWEET CORN

UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE
Agricultural Experiment Station, and Extension Service in Agriculture and Home Economics
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Growers Contracts for Sweet Corn
An Analysis of Different Types of Cannery Contracts and the Relation of Maturity to Yields and Quality

By W. A. Huelsen, Associate Chief in Olericulture

FULLY NINE-TENTHS of the Illinois sweet-corn acreage is grown under contract with canneries. In 1934 sweet corn was grown for sale (canning and marketing) on 68,729 acres on 6,992 Illinois farms.¹ In 1935 approximately 90,000 acres, and in 1936 about 78,000 acres were grown for canning alone. Over 7,000 Illinois farmers are thus directly interested in growers' contracts and the various factors which govern yields, contract prices, and income per acre.

Until recently almost all the canners in Illinois used a flat-price growers' contract, under which a predetermined price is paid for each ton of unhusked sweet corn delivered at the factory. In many respects this type of contract has proved to be unsatisfactory; but the efforts that have been made to introduce improved forms have resulted in a certain amount of confusion, and in some instances have aroused considerable opposition from the growers. There has been a general lack of understanding of the various factors which enter into the drawing of a growers' contract, particularly the relation between yields and contract prices. The progressive changes in yield as maturity advances, and the bearing of these changes on methods of drawing contracts are discussed in this circular on the basis of experimental data reported in Bulletin 432 of this Station.

YIELD VIEWED DIFFERENTLY BY CANNERS AND GROWERS

Much of the confusion which arises between canners and growers when modified contracts are introduced is due to radically different views of what constitutes "yield." Yield of sweet corn may be interpreted in seven distinct ways. Growers look upon it solely on the basis of the number of tons per acre, expressed as (1) gross yield of unhusked ears, (2) net yield of husked ears, or (3) cut kernels. Canners may contract corn upon any one of these three bases. Quality of the product does not necessarily enter into the growers' conception of yield.

¹Data from 1935 U. S. Farm Census.
at all; and if a flat price is paid for the gross product, growers will be chiefly interested in harvesting when total weight is highest.

The canner, on the other hand, is interested in quality as well as in total weight. He considers yield from the standpoint of (4) cases of corn packed per acre; but for the purpose of determining the cost of the raw product he measures yield in terms of (5) prime husked ears per ton of gross corn, (6) prime cut kernels per ton of gross (or net) corn, or (7) cases of corn packed per ton of corn purchased.

Whether the canner buys corn on a flat price or on a basis of quality, the price which he pays for the raw product is determined by (1) the returns from competing crops and (2) the price he receives for his canned goods. The second of these factors is determined to a considerable extent by the quality of the raw product, for a fancy quality of canned corn can be packed only from high-quality ear corn. When the canner offers growers a modified contract, therefore, he is usually trying to improve the quality of the raw product. Since such an improvement enables him to pay higher prices, the grower’s best interests are served by cooperating in this effort.

Tomato canners have taken the lead for a better quality of raw product by adopting the U. S. Department of Agriculture system of grading and of paying a premium for U. S. No. 1 grade tomatoes. Altho similar grades for sweet corn have been established, no Illinois corn canner has as yet been able to interest his growers in the system.

CHANGES IN SWEET CORN DURING ADVANCING MATURITY

The whole matter of reconciling the meaning of "yield," as interpreted by growers and by canners, depends, for all practical purposes, upon an understanding of the changes that occur progressively in the ears of sweet corn during advancing maturity. During this period the ears go thru a series of complex changes which affect both yields and quality. Moisture content decreases, toughness of hull increases, and the ratio of sugar to starch widens. The ears remain in the prime canning stage for only a few days and then deteriorate rapidly. A technical study of these changes has been made by the Illinois Agricultural Experiment Station and reported in Bulletin 432. The results are discussed here from the standpoint of their significance economically to both growers and canners.

Decline in Moisture Content

After the ear-shoot has been pollinated, it grows rapidly in size and weight. The kernels are developing, becoming filled at first with a
watery fluid which changes successively to a milky, then to a creamy state, and finally passes into the early and then the late dough stages. In such varieties as the Evergreens and Country Gentleman that have been derived from dent-corn parents, the kernels dent in the early dough stage.

For packing sweet corn whole-kernel style, with the kernels cut as close to the cob as possible, the ears must be snapped when the majority of the crop has reached the milk stage, better known as the "roasting-ear" stage. The moisture content of the kernels ranges at this time from 72 to 76 percent. Whole-kernel-style corn packed within this moisture range will generally be fancy in quality.

In packing cream-style sweet corn, the kernel is cut about one-eighth inch deep and the remaining kernel contents, known as the "cream," are scraped from the cob. The cut corn is then mixed with a sirup containing sugar, salt, and water. Fancy cream-style corn can be packed from sweet corn snapped when the average moisture content of the kernels reaches about 70 percent. The kernels are still creamy but include a small amount of semisolid material resembling thin dough. As the moisture content falls below 68 percent, the liquid content of the kernels changes to dough which becomes firmer as maturity progresses. The quality of the corn has now become impaired and only a standard grade can be packed. Below 64-percent moisture content the kernels are no longer suitable for commercial canning.

The percentage of moisture at each canning stage varies somewhat, depending on variety, climate, and season—but the sequence never varies. The ripening process is always characterized by loss of moisture; and the moisture content of the kernels is therefore a reliable way of measuring maturity.

Increasing Toughness of Hull

Tenderness of hull is one of the chief factors determining the quality of sweet corn. In scoring canned sweet corn for quality, 35 out of a possible 100 points are assigned to tenderness of hull alone. Since, in all varieties of sweet corn, ripening is characterized by successive increases in the toughness of the hull of the kernel, these changes may be used as an additional measure of maturity.

Of course, some varieties of sweet corn are inherently more tender than others. Country Gentleman, for instance, is more tender than Evergreen at comparable stages of maturity throughout the whole canning range, and since it more readily meets the consumer demands, it always brings higher prices than comparable grades of canned Evergreen.
Consequently canners are obliged to offer lower prices for such varieties as Evergreen. Growers are, however, compensated for this reduction by correspondingly larger acre-yields, both of ears and of stover for stock feeding, from the lower-priced varieties, and therefore the acre-returns may actually be practically identical.

Changes in Chemical Composition of Kernels

The successive changes in the appearance of the kernel contents ranging from a translucent liquid to a hard dough, which characterize the ripening period, are accompanied by constant and rapid changes in physical and chemical composition. Some of these changes can be used as accurate measures of the maturity and quality of the kernels.

One of the most important changes is the decrease in sweetness (sugar content) and the increase in starchiness which accompany advancing maturity. At the same time the moisture content decreases in the husks, cobs, and kernels, and the toughness of the kernel hull increases. Hot weather accelerates these changes and cool weather slows them down. The rate also varies with the variety. These changes have been studied in great detail, and their importance cannot be over-emphasized.

SILKING AS A MEASURE OF MATURITY

Maturity of sweet corn in the field can be determined by two methods. The first is the “thumb-nail test” for determining the character of the kernel contents by examining the exudate obtained when the kernel is pressed by the thumb nail. The second is to determine the “mid-silking point,” that is, the time when half the total number of silks have emerged, as a basis of predicting the approximate time of harvest. Ordinarily the canner’s field man uses the mid-silking point for prediction purposes, and when the field is ready to harvest confirms his observations by means of the thumb-nail test.

Uniformity of Maturity Depends on Length of Silking Period

The uniformity with which a field of sweet corn matures depends upon the length of the silking period, for the ears mature in the same sequence as the silks emerge. High yields are characterized by short silking periods, because a given field must be harvested at one picking, and that when the earliest ears reach the prime canning stage. High yields are possible only when most of the ears reach the same stage of maturity simultaneously.
The relationship between silking and maturity was studied in an experiment at the Illinois Station with highly selected strains of open-pollinated Country Gentleman and Narrow Grain Evergreen grown from the best grade of seed on fertile soil in a good season. All the ear-shoots in two fields of the sweet corn were tagged the day the silks emerged, and were uniformly harvested 22 days after tagging. All the filled ears uniformly reached the cream-style canning stage 22 days after silking irrespective of whether the silks appeared on the first or the last of the 13 days during which silks emerged. The lower ears on two-eared stalks lagged one or two days behind the upper ears in silking and consequently in maturity. The greatest percentage of cull ears was produced by the earliest and latest silking ear-shoots. The lower shoots had more culls and weighed less than the upper shoots.

This experiment showed that all filled ears will eventually pass thru the prime canning stage if permitted to do so; but practically the grower is obliged to snap when the earliest-silking ears reach the prime stage. Delay would mean that the earliest ears would be dented and past the canning stage. On the other hand, snapping at the proper time for the earliest ears entails a considerable loss in acre-yields unless the period of silking for the field is relatively short.

Practices That Tend to Shorten Silking Period

Any practice which shortens the silking period and consequently promotes uniformity of maturity automatically increases the acre-yields and returns. Canners, well aware of this fact, usually purchase the best seed obtainable, grade the seed for uniformity of size (for plants from small seeds are known to mature later than those from large seeds), and dust the seed with disinfectants in order to promote uniformity of germination. And the growers endeavor to obtain uniformity of maturity and high yields by providing favorable conditions for growth—growing the crop on well-drained fertile soil, thoroughly preparing the seedbed, planting seed at a uniform rate and depth, and cultivating thoroughly and carefully. The use of lime, legumes, rock phosphate, and hill fertilization on fields where fertility is lacking, promotes uniform as well as more rapid and greater growth. The sweet-corn hybrids that are now rapidly becoming popular return high yields chiefly because of their remarkable uniformity. Hybrids usually increase the unhusked acre-yields only moderately, but much larger increases occur in the prime husked ears and prime cut kernels, indicating that most of the gain is due to their superior uniformity.
MATURITY IN RELATION TO ACRE-YIELDS

The belief on the part of the growers that delaying harvest will increase the acre-yields is the principal point of disagreement with the canners. It is well known that the ripening period is characterized by rapid increases in the total weight per acre. But contrary to popular belief the maximum weight is reached at a relatively early stage of maturity, and a decrease then occurs.

The progressive changes in yields in a normal field of open-pollinated Country Gentleman sweet corn are shown in Table 1. The maximum acre-yields in tons were obtained as follows: unhusked ears, 26 days after mid-silking; prime husked ears, 22 days; prime plus dented husked ears, 26 days; and prime cut kernels, 22 days. There was thus a lag of four days from the point of highest yield of prime husked ears and prime cut kernels to the point of highest yield of total unhusked ears. But the important fact here is that there was no significant increase in the yields of any of these ears or ear parts after the twentieth day. That is to say, the increases in yields after the twentieth day were so small that they were probably due to chance, and such increases cannot be counted upon to occur regularly. Thus there is nothing to be gained by delaying harvest beyond the time when the yield of prime husked ears and prime cut kernels reach the maximum.

According to the percentages of moisture shown in Table 1, the time to harvest this field for cream-style canning was between the twentieth and the twenty-second day after mid-silking, when the moisture percentages were 71.2 and 68.7 respectively. A fancy cream-style grade can be packed from Country Gentleman and Evergreen varieties only from corn averaging about 70 percent moisture. The time of maximum yield thus corresponds to the prime cream-style canning stage. In other varieties and under unusual conditions the best cream-style canning stage may be reached at percentages of moisture somewhat above or below 70 percent. In such varieties as Country Gentleman and Evergreen, dented ears first appear when the kernels of prime ears test about 70 percent moisture. Thus the first appearance of dented ears is an excellent guide to follow in determining when to snap these varieties of sweet corn for cream-style canning. The term "dented ears" as used in this connection refers to ears having more than one dented kernel.

The progressive development of ‘yield’ in the experimental field of Country Gentleman sweet corn described in the foregoing paragraphs is not in accordance with the popular opinion on the subject. During the period immediately following pollination the development of the
## Table 1.—Effect of Advancing Maturity on Acre-Yields of Sweet Corn and on Percentage Distribution of Yield Components

(Country Gentleman sweet corn; each figure is an average of ten replications)

<table>
<thead>
<tr>
<th>Days after mid-silking</th>
<th>Unhusked ears</th>
<th>Husked ears</th>
<th>Cut kernels</th>
<th>From prime ears</th>
<th>From dented ears</th>
<th>Moisture, prime ears</th>
<th>Moisture, dented ears</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Prime</td>
<td>Prime plus</td>
<td>Green</td>
<td>Culls</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dented</td>
<td>dented</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acre-yields in tons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. . . . . . . . . .</td>
<td>3.08*</td>
<td>1.49*</td>
<td>1.49*</td>
<td>.25*</td>
<td>.16*</td>
<td>.72*</td>
<td></td>
</tr>
<tr>
<td>18. . . . . . . . . .</td>
<td>3.15*</td>
<td>1.74*</td>
<td>1.74*</td>
<td>.16*</td>
<td>.07*</td>
<td>.89*</td>
<td></td>
</tr>
<tr>
<td>20. . . . . . . . . .</td>
<td>3.39*</td>
<td>2.07*</td>
<td>2.07*</td>
<td>.11*</td>
<td>.04*</td>
<td>1.06*</td>
<td></td>
</tr>
<tr>
<td>*22. . . . . . . . . .</td>
<td>3.37</td>
<td>2.15*</td>
<td>.15*</td>
<td>2.30*</td>
<td>.01*</td>
<td>1.31*</td>
<td>1.10*</td>
</tr>
<tr>
<td>24. . . . . . . . . .</td>
<td>3.58</td>
<td>2.11*</td>
<td>.36*</td>
<td>2.47*</td>
<td>.01*</td>
<td>1.24*</td>
<td>.22*</td>
</tr>
<tr>
<td>26. . . . . . . . . .</td>
<td>3.58*</td>
<td>1.38*</td>
<td>1.16*</td>
<td>2.54*</td>
<td>.09*</td>
<td>.92*</td>
<td>.77*</td>
</tr>
<tr>
<td>28. . . . . . . . . .</td>
<td>3.37</td>
<td>.62*</td>
<td>1.84*</td>
<td>2.46*</td>
<td>.04*</td>
<td>.37*</td>
<td>1.18*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage yields (weight of unhusked ears = 100)</th>
<th></th>
<th>Percentage, wet basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. . . . . . . . . .</td>
<td>48.9*</td>
<td>77.2</td>
</tr>
<tr>
<td>18. . . . . . . . . .</td>
<td>55.2*</td>
<td>75.1</td>
</tr>
<tr>
<td>20. . . . . . . . . .</td>
<td>61.1*</td>
<td>71.2</td>
</tr>
<tr>
<td>*22. . . . . . . . .</td>
<td>63.8*</td>
<td>68.7</td>
</tr>
<tr>
<td>24. . . . . . . . . .</td>
<td>59.9*</td>
<td>64.0</td>
</tr>
<tr>
<td>26. . . . . . . . . .</td>
<td>37.9*</td>
<td>66.5</td>
</tr>
<tr>
<td>28. . . . . . . . . .</td>
<td>18.0*</td>
<td>66.3</td>
</tr>
</tbody>
</table>

*Point where highest yield was returned.

bTemporary increase in moisture content caused by rain.

*Significantly less than the highest yield. Where no asterisk is shown, the difference was largely due to chance.
ears, and consequently the gain in total weight per acre, is very rapid, but after the fifteenth day the rate of increase begins to slow down until the point of maximum weight is reached. After this point the total weight begins to decline.

The gains in total weight per acre are net gains. They are due to ear growth plus accumulation of food materials in the kernels, minus constant loss of moisture from all the ear parts. When ear growth stops and rate of moisture loss equals the accumulation of food materials, the point of maximum yield is reached. The decreases in total yield are due to the fact that rate of food storage slows down and is exceeded by loss of moisture, giving a net loss in weight.

**TYPES OF GROWERS CONTRACTS**

In normally maturing sweet corn produced under average growing conditions such as those for the crop analyzed in Table 1, the ordinary gross-tonnage contract would be fair to both canner and grower. At the proper stage for cream-style canning, more than 60 percent of the unhusked weight in these experiments consisted of prime canning ears, and more than 30 percent consisted of prime cut kernels. According to extensive data obtained by the Illinois Station and a number of cooperating canners, normal Country Gentleman sweet corn husks out by weight 60 percent prime canning ears, Narrow Grain Evergreen 58 percent, Golden Cross Bantam 62 percent, and 8-rowed Golden Bantam 55 percent. The ratio of prime cut kernels to unhusked ears is 30 percent for Country Gentleman, 28 percent for Narrow Grain Evergreen, 33 percent for Golden Cross Bantam, and 26 percent for 8-rowed Golden Bantam.

These percentages are average husking and cutting percentages and are known as bases. They are used by the canner in determining the contract price of sweet corn. In poor or in unusually good years the crop will fall either below or above the base; and the possible increases in good years are smaller than the possible decreases in poor years.

**Flat-Price Gross Contract Fair Only With Normal Crops**

The type of growers' contract commonly used is, in effect, a simple agreement under which the grower undertakes to grow a specified acreage of sweet corn and the canner agrees to purchase for a flat price per ton the gross or unhusked ears that are produced. Certain minimum specifications for the maturity and condition of the corn are usually included. This type of contract is fair to both parties only when crop conditions are normal.
In unusually good crop years the average quality of the corn is high and the majority of the growers should, if condition of the corn were considered, receive a higher price than this type of contract allows. Also, in any group of growers some will produce corn which exceeds the average while that produced by others will fall below it.

On the other hand, poor growing conditions, damage from insects and diseases, bad weather, and other crop hazards, all reduce the sweet-corn crop below normal, so that the number of cases which the canner can pack per ton of gross corn falls below the average. The cost of packing canned corn is thus very materially increased without, however, necessarily increasing its selling price. In poor crop years, therefore, the majority of the growers probably receive more for their corn under this type of contract than it is worth.

It is because of the foregoing conditions that the flat-price gross-corn contract is open to the criticism of being unfair to both the canner and the grower. The remedy lies in a different type of growers' contract, modified as described in the following section.

"Modified" Contracts Fairer for Both Parties

Three types of modified contract are superior to the flat-price gross-weight contract just discussed.

Husked-ear basis. Some canners in Illinois buy corn on the basis of the number of pounds of husked prime canning ears in the load. As prime canning ears, some of these canners will include up to 5 percent slightly dented ears, whereas others will include no dented ears. The ratio of prime canning ears is calculated from a representative sample of 50 to 100 pounds drawn from each load brought in, and weighed, husked, graded, trimmed, and weighed again.

The contract price paid for husked corn is calculated from the base—60 percent husked prime ears per ton of unhusked corn for Country Gentleman. Thus in one ton of unhusked corn in normal condition there would be 1,200 pounds of prime husked ears (60 percent of 2,000 pounds). And if the prevailing price of Country Gentleman sweet corn were $12 a ton of unhusked ears, the contract price for husked ears would be $20 a ton.

Cut-kernel basis. In some eastern sections, in Maine for example, sweet corn is purchased on the cut-corn basis. The sample drawn is run thru a cutter and the price paid depends on the ratio between the unhusked ears and the cut kernels. The contract price is determined from a base in this method also. In Illinois the base for Country Gentleman cream-style corn is about 30 percent, and at a price of $12 a ton gross the cut kernels would bring $40 a ton.
Usable unhusked ears. The gross-corn contract may be so modified as to avoid the undesirable features of a flat price. One method used in Illinois consists of buying on the basis of usable unhusked ears. A representative sample is drawn from each load as weighed, the husks are stripped back but not removed, and the ears are trimmed. The usable ears are then sorted out and weighed, and the percentage of these ears by weight establishes the grade of the load. The price paid is on the basis of 100 percent usable corn, with a dockage according to the percentage of nonusable ears.

How Modified Contracts Work

The manner in which the different types of sweet-corn contracts would actually function is indicated in Table 2, where are shown the returns to the grower from hypothetical yields of 3 gross tons an acre of Country Gentleman sweet corn under four forms of contract. The prices per ton for the corn as unsorted unhusked ears, as sorted unhusked ears, as prime husked ears, and as prime kernels used in this table have been placed at figures that will bring the same returns, regardless of the form of contract, when the crop is of normal quality.

On the gross basis the return would be $36 an acre irrespective of the condition of the corn, provided the canner accepts it. On the modified gross basis, allowing a dockage of 7 percent, the return would be $36.27 an acre. The dockage of 7 percent is the average, and the canner should consequently offer a price approximately $1 higher than the straight gross price of $12 a ton.

On the husked-ear basis at $20 a ton of prime husked ears, corn testing 60 percent prime husked ears would bring $36 an acre, and the grower would be penalized or rewarded at the rate of 20 cents per gross ton for each 1-percent difference in the amount of prime husked ears below or above the base.

On the cut-kernel basis at $40 per ton of prime cut kernels, corn testing 30 percent cut kernels would also give a return of $36 an acre, and an increase or decrease of 40 cents per ton gross weight would be made for each 1-percent difference.

While under these four methods of contracting, the price per acre would, as already stated, be practically the same whenever the yields were normal, in an exceptionally favorable season the percentage of gross usable ears, net prime ears, and kernels, as well as the total weight per acre, will increase to some extent. With increases in quality (percentages of prime ears and kernels), the grower will get a larger return per acre under a modified form of contract than under
GROWERS CONTRACTS FOR SWEET CORN

TABLE 2.—ACRE-RETURNS UNDER FOUR TYPES OF CONTRACTS
(Based on Country Gentleman sweet corn yielding 3 tons an acre of unhusked, unsorted ears)

<table>
<thead>
<tr>
<th>Contract</th>
<th>For unhusked ears</th>
<th>For unhusked ears sorted</th>
<th>For prime husked ears</th>
<th>For kernels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat-price gross-weight contract</td>
<td>$12</td>
<td>$13</td>
<td>$20</td>
<td>$40</td>
</tr>
<tr>
<td>Modified gross-weight contract</td>
<td>$35*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prime-husked-ears contract</td>
<td></td>
<td>$38.40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cut kernels contract</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*aCorn of normal condition.

a flat-price gross-weight contract. When, on the other hand, the crop is poor, these percentages will drop and the return per acre will be reduced more under the modified than under the flat-price contract.

Since the element of risk is greatest when corn is purchased on the flat-price gross basis, canners are more conservative in the price they offer under this arrangement. Under the three other forms a canner is able to determine more exactly what he is purchasing, and consequently, in the long run, is in a position to offer a comparatively
higher contract price. And, what is just as important, the grower is paid strictly according to the condition of his crop, so that careful management and the production of a superior product is rewarded by increased returns.

Thus the interests both of the canners of sweet corn and the growers are best served under one of these three forms of modified contract.

Speculative Contracts, Competing-Crop Basis, Undesirable

The contract price of sweet corn is determined partly by the prices of competing crops (page 4), in Illinois limited to field corn. One ton of sweet corn is usually estimated to be equivalent to about 17 bushels of field corn (Table 3). Land which will produce 3 tons of sweet corn to the acre is assumed to be capable of producing about 45 to 50 bushels of field corn. Accordingly the contract price of sweet corn per gross ton on this basis would be about 17 times the price anticipated for field corn the following fall. If field corn is expected to bring 60 cents a bushel, the sweet-corn contract price would be about $10 a gross ton. Other factors of course enter into determining the sweet-corn contract price, which does not fluctuate to the same extent as the price of field corn and is practically never less than $7 a ton.

Altho the contract price of sweet corn is partially determined by the future market for field corn, there is actually no relationship between the prices of field corn and canned sweet corn other than that both are affected by general price trends. Nevertheless, when the late-winter price of field corn is high, the growers naturally anticipate a high market also the following fall, and they demand a correspondingly high contract price for sweet corn. Otherwise they will grow field corn instead of sweet corn.

This situation has given rise to a form of sweet-corn contract that offers a fixed price per ton subject to the provision that if the price of a specified grade of field corn, usually No. 3, averages above a certain amount during a specified period on the Chicago Board of Trade, the canner will pay a specified premium over and above the fixed contract price. The premium usually amounts to 10 cents or more a gross ton of sweet corn for every increase of one cent per bushel of field corn over a base price mentioned in the contract. The limit of advance is generally about $2 a ton, equivalent to an increase of about 20 cents a bushel in the price of field corn.

There is little justification for this type of sweet-corn contract. It is simply a device to induce growers to plant sweet corn instead of field
<table>
<thead>
<tr>
<th>Section of Illinois</th>
<th>12-year average</th>
<th>1935</th>
<th>1934</th>
<th>1933</th>
<th>1932</th>
<th>1931</th>
<th>1930</th>
<th>1929</th>
<th>1928</th>
<th>1927</th>
<th>1926</th>
<th>1925</th>
<th>1924</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average acre-yields of field corn, bushels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Ratio of field corn (bushels) to sweet corn (tons)</td>
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*From *Illinois Crop and Livestock Statistics*, published by the Illinois Department of Agriculture, and U. S. Department of Agriculture cooperating. The counties included in each section are:


Central—DeWitt, Logan, McLean, Macon, Marshall, Mason, Menard, Peoria, Stark, Tazewell, and Woodford.

East—Champaign, Ford, Iroquois, Kankakee, Livingston, Piatt, and Vermilion.
corn. And inasmuch as it introduces a one-sided element of uncertainty, it may have the effect of destroying the contract market for sweet corn. Where the contract market for a cannery crop has disappeared, the crop must be grown either as free acreage or under an open-price contract, and under either method the price the grower receives is dependent upon price fluctuations at the time of marketing. He must take what he can get, as he does with other crops. This unfavorable condition now exists with respect to some cannery crops, especially tomatoes, in certain eastern states.