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CROP FARM BUSINESS MANAGEMENT

IN UNCERTAIN TIMES*

by

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The last few years have seen some tremendous extremes in onion yields and prices and in onion growers' incomes. The next few years could be just as erratic. With costs rising and farms getting larger the effect of a crop failure or a run of low prices could be more serious than it might have been a few years ago. What can be done to guard against such unfortunate events?

Farm business operations

The first line of defense against an uncertain future is to make sure your farm business is capable of returning the highest income possible, and that your living standards leave some margin of safety. This means careful attention to all aspects of management from planning to organizing and controlling the operation. You need to keep up with the latest information on varieties, cultural practices, and pest control so that you secure the highest possible yields. Good records are essential for proper control of expenses. You should know the earning capacity of your farm under typical or average yields and prices, and maintain your standard of living so that you can continue to expand your investment or set up financial reserves. If you have a good profitable business under normal times you will be in position to withstand a year or two of low prices or reduced yields, or at least recover quickly.

There are some special considerations, however, that enter into management of a risky business such as onion growing apart from the usual concerns. These have to do with production uncertainty, price uncertainty, and the combined effect of these two on income uncertainty. I would like to discuss what you can do on your own, and some remedies that may require group action, either voluntary cooperation or through government regulation.

Production risk

Production problems are an important source of instability in income, affecting both revenues and expenses. Yields are the best indicator we have of production risk, although official yield estimates do not tell the whole story. Production risks vary from one location to another. Average yields of onions gathered by the New York Crop Reporting Service indicate some of the differences (table 1). Over the

* Onion Industry Meeting, Canandaigua, New York, February 26, 1976.

TABLE 1: NEW YORK ONION YIELDS BY SECTIONS

Year	Orange County	Orleans Genesee	Oswego	Madison	Steuben Yates Ontario	Wayne Other	New York Average
50 pound bags per acre							
1968	480	760	760	280	650	682	560
1969	520	660	610	590	620	630	570
1970	640	760	740	700	780	538	680
1971	620	670	660	480	620	558	620
1972	360	510	480	300	340	450	400
1973	350	540	620	470	600	568	440
1974	630	590	430	470	500	428	580
1975	500	510	594	500	500	520	510
Average	512	625	613	573	576	547	545
High	640	760	760	700	780	682	680
Low	350	510	430	280	340	450	400
Range	290	250	330	420	440	232	280

Source: New York Agricultural Statistics, New York Crop Reporting Service, Albany, New York.

past 8 years the Orleans-Genesee (Elba) area has had the highest average yields and narrowest range from high to low. At the other extreme Madison County (Canastota) has had the lowest average yields and shares with Steuben-Yates-Ontario (Potter and Prattsburg) the greatest range. The average for the State falls between these two extremes.

Even in the same area some growers seem to be able to avoid disasters better than others. Careful attention to tillage, spacing, and other cultural practices apparently will reduce the impact of bad weather. Improvement of irrigation and drainage operations can help avoid the ravages of floods or drought, of hedges or other windbreaks the effects of high winds, and of variety selection and other cultural practices the damage from unseasonable temperatures. Most of these practices either cost money or reduce the size of the crop in return for reducing risk, so there is some trade-off that should be considered. But costs in onion growing are rising to the point where yield losses have become very expensive, and make most such practices profitable.

Yields do not follow the same pattern in all areas in New York. The 1970 growing season was a good one in most areas, but not as good as 1968 in Oswego. The 1972 season, largely due to Hurricane Agnes, was a disaster in most areas, but not as bad as 1974 in Wayne County and Oswego.

Growers faced with extreme production risk sometimes disperse their operations over a larger territory to avoid local crop failures. Wheat farmers on the Great Plains often operate in several counties to spread the weather risk, even though costs may be higher than if the operations were all at one location. An onion grower could avoid risk by farming in Orange County as well as in Elba, but the cost could

be prohibitive.

Insurance is available for some growing crops, and changes an uncertain cost into a known expense. Private companies sell hail insurance on small grains in the Midwest. The Federal Government offers multiple risk insurance on a number of crops, including grapes in New York. Insurance on potatoes was tried but discontinued. The premiums got too high in relation to coverage, and participation declined. Experience with fruits and vegetables, apart from citrus, has not been favorable. Management is too important in affecting production risks that poorer managers tend to seek coverage, requiring higher rates and resulting in continued deficits in premiums relative to indemnities.

The best approach for the onion grower faced with production risks is to grow the healthiest and biggest crop feasible, maintain soil in as good condition as possible, attend to ditches and windbreaks, and work hard in support of community projects to obtain better control of water levels in the area. With good management and some luck you can join the group that always seems to be able to get a crop even under the worst weather conditions.

Price risks

You know how much prices can vary even within one season. Top prices may occur early in the season, at mid-season, or toward the end (table 2). Over the past 8 years, according to Market News reports, there were two years when highest onion prices came at harvest time, two when they came in January, and four years in March. Of course, if everyone tried to sell at the top the prices would not have followed this pattern. Who is to know at the beginning of the season which way prices will go? The rule of thumb to sell early on a big crop and hold on a short crop seems to work for extreme situations, but is not much guide for years like 1975. The best strategy for most growers is a fairly steady rate of sales throughout the season. Few growers have the equipment and labor to ship a large volume in a short time. The market requires a steady flow of onions.

Average onion prices vary widely from one year to the next mainly because of changes in the size of the national onion crop and the fact that onions in total have what is called an inelastic demand. Changes in the crop size are mainly due to changes growers make in acreage, apparently responding to last year's prices. These acreage changes are often compounded with unexpected weather conditions that make it difficult to predict the market. Growers all across the country seem to interpret the price signals in just about the same way. The March, 1976, intentions will probably indicate that growers intend to increase acreage this spring, but if the Texas crop is early and large and prices fall in March and April we may be saved from an oversupply next fall.

Growers have attempted for many years to insulate themselves against changes in prices. Individually they have tried vertical integration and the use of futures contracts.

TABLE 2: WESTERN AND CENTRAL NEW YORK ONION PRICES

<u>Bulk Price to Growers U.S. No. 1 medium yellow globe</u>			
Season	October	January	March
per hundredweight			
1968	\$ 3.00	\$2.00-2.75	\$ 1.60-2.75
1969	3.00-3.50	4.00-8.00	6.50-8.00
1970	2.00	1.50-1.75	1.00-1.25
1971	2.75-3.75	2.75-3.25	3.00-4.50
1972	7.00-8.00	9.00-14.00	15.00-18.00
1973	6.00	6.50-12.00	5.00-8.00
1974	3.00-4.50	3.00	5.00-7.00
1975	7.00-8.00	9.00-10.00	

Source: Marketing New York State Onions, Federal - State Market News Service, Rochester, New York.

Vertical integration

Vertical integration in this case means doing more of the marketing. The grower bulk or wholesale price of most commodities tends to vary more from year to year than prices further up the marketing channel and especially at retail. The U.S.D.A. recently reported that New York onions sold in New York City in November 1974 for 19.0 cents per pound, of which the New York grower got 4.7 cents. A year later the retail price rose to 23.2 cents, and the grower returns to 9.4 cents. The grower return doubled, but the retail price went up by less than one quarter. The marketing margin actually declined.

Some growers pack and ship onions in volume partly to reduce price risk. Other growers, perhaps with smaller volume, grade and pack for sale to local supermarkets or on farmers' downtown markets. These growers can avoid some of the price extremes that those who sell in bulk encounter.

Futures contracts

Organized commodity futures markets provide a mechanism for some farmers to avoid price risks, but not for onion growers any more. Some New York field corn growers are now considering whether to sell December futures and essentially lock themselves into a known price. A study done at Cornell a few years ago found that Long Island potato growers could reduce price variation by selling Maine November futures each spring just prior to planting, without much change in the average price they would have obtained over a period of years. Under these conditions most potato growers still appeared to prefer to take the risks rather than hedge on the market.

Some growers can contract with processors in advance of planting at prices that do not change much from year to year. This option is

not available to many onion growers in New York, but for some can serve to reduce price variation on a part of the crop.

The possibility of entering into long term contracts with fresh produce buyers has been considered from time to time. There would seem to be advantages on both sides. But such an arrangement would take a great deal of trust and commitment by both sides in addition to the signatures on the contract, and this may be lacking in most cases.

In summary, the grower selling in bulk from week to week is at the mercy of a highly variable market. Individuals can reduce price variability by doing more of the marketing or by entering into longer term contracts. They also should consider whether the costs of marketing can be recovered or whether provisions of the contract would be sufficiently favorable, as well as the advantage of less price variation.

Group action

Growers collectively have sometimes been able to partially insulate themselves from price variation, provided that they were willing to allow market forces to operate relatively freely. One way to do this is through a grower cooperative or marketing company. Such an operation can gain the advantages of both market integration and some dispersion of risk. The members of the Pro-Fac Cooperative that market their products through Curtice-Burns, for example, share in the risks by pooling the profits or losses obtained from marketing a large number of products through one organization.

Direct production control to reduce variation in supplies might appear to be feasible, but would encounter many problems in application. Our experience with potato acreage allotments following World War II demonstrated how difficult it was to operate such a program. Acreage allotments tended to freeze existing production patterns. Our economic system for all its faults does provide for changes necessary to permit the adoption of new methods, the shifts from one area to another, and the growth of successful enterprises. Letting market forces make these decisions seems cruel at times, but at least is impartial and encourages progress.

Buffer stocks or funds

Without directly controlling production grower prices might still be given greater stability by some means of supply or financial management. In years of larger than normal production part of the crop could be set aside at the beginning of the season, and then could be fed back into market channels if supplies ran short. There may be difficulty in developing such a program since the public still objects to the destruction of food products. Unfortunately fresh onions cannot be carried from one season to the next. Frozen cherries can, of course, and this is the basis for the Tart Cherry Marketing Order. Removal of

supplies of onions in years of over production would support the market in periods of depressed prices, but not do much to ease shortages in years of small crops.

Another approach also requiring public support would be to set aside part of the revenue from the crop during years of high prices and use such funds to supplement returns in years of low prices. Levies made in high price years would be returned in low price years. This would require accurate records of grower sales, and important decisions on timing and amounts of payment into and out of the fund. Such buffer funds, as they are called, have been used in countries such as Australia to stabilize wheat prices. Growers, of course, could set up their own buffer fund.

Somewhat similar to the buffer fund concept is that of price insurance. British Columbia has attempted to operate government sponsored price or income insurance programs for fruit growers with premiums paid in part by growers and in part by the Province. Price, however, is not really something that can be insured, and many problems have been encountered in operating this program.

Major changes in market prices from one season to the next are mainly due to changes in supplies. Supply management, a popular term, can be very difficult for a crop that can be so widely grown. Growers can still reduce the price risk, but not entirely, by performing more marketing services, entering into longer term contracts, or cooperating voluntarily with growers of other commodities. Government programs may create more problems than they solve.

Income uncertainty

Price and production risk would not be so serious if they offset each other, and low prices occurred when growers got high yields and vice versa. Unfortunately this does not happen. Because of the inelastic nature of demand onion prices fluctuate more than total production, small crops are worth more than large ones, and onion prices and grower incomes tend to go up and down together.

Two ways to reduce annual variation in income are through diversification and tax management, while the effects of income variation can be avoided by appropriate use of credit or savings programs.

Diversification

Diversification is a common way to reduce income variation. Growers who specialize in onion production are in a more risky position, although they may do better over the longer run, than are those who grow several crops such as onions and potatoes. Best combinations of enterprises include crops that do not have the same fluctuations in prices, or grow well under different weather conditions.

Some growers or their wives have part time or full time jobs off the farm. These jobs can provide a basic income during periods of low prices or crop failure, but may also hamper the operation of the farm.

Shifting acreage from one crop to another in anticipation of changing market prices can be very risky. Since onion growers generally have had a good year this might be the time to reduce onion acreage, if alternatives are available. The danger in shifting from one crop to another is that uncertain weather can still have an unexpected impact on the size and value of the crop next year.

Income tax management

Under an income tax system with progressively higher rates for higher incomes those growers with fluctuating incomes pay more tax than those with stable incomes. But several actions can be taken to reduce the added tax burden and bring greater stability to after tax income.

Before the end of the tax year an estimate should be made of taxable income to determine the size and type of tax problems. You may have an opportunity to schedule sales of onions or of capital items to even out income. Purchases of next years' seed, fertilizer, or pesticides can also be made in advance, although within certain limits. Growers frequently make major capital investments in years of high income since funds are available and the impact on the tax is substantial. There are hidden costs in replacing equipment too early or in making unnecessary investments simply because of the tax effect. It may be better to pay the tax and use the remaining funds to reduce the mortgage. If the mortgage is all paid off and further capital investment is not needed one might consider a tax sheltered pension plan such as Keogh or Individual Retirement Account.

After the end of the tax year care should be taken to insure that tax liability is reduced to the minimum through choice of depreciation methods and rates and the selection of either standard or itemized deductions. Investment credit records should be completed whether credit is used in the current year or not.

In years of high income the income averaging provision may help reduce taxes if current year income is at least \$3,000 more than 120 percent of the average taxable income of the past four years. If a loss was incurred within the previous four years the amount may be applied against the current year's income. In years when losses are sustained part of the tax payment of earlier years may sometimes be recovered. Unfortunately personal exemptions, allowances, and deductions not taken in years of low income are permanently lost.

Savings or credit

In a risky business it is desirable but not always possible to have some savings to fall back on following a series of adverse years. Most growers are short of funds even after a good year, but those that

can should consider setting up some form of emergency fund. Fortunately our credit agencies are well established and can help tide growers over periods of financial shortage. From a practical business standpoint the credit agency needs to be assured of the earning potential of the business over the longer run, and this requires conservative estimates of future income based on expected yields, prices, and production costs. Again, good records and a realistic operating budget will help in obtaining financial support over a period of difficult times.

Conclusions

The onion business is full of risk and uncertainty. For many growers that is a challenge they enjoy. But if you are concerned about prospering, or even surviving, under these conditions there are a few points to consider.

1. The best defense against uncertainty is a financially sound business. If you can get high enough yields and keep costs under control so that you can grow onions for \$4 per hundred you are in much better position to survive a bad year or two than if your costs are \$6 per hundred. You may not make money every year but you will still be ahead in the long run.

2. Healthy, fast growing, early maturing plants can usually withstand unfavorable weather and pests of one kind or another much better than weak slow growing specimens. Growers who get good yields in good years often do not have as severe losses as others in poor growing seasons.

3. Actively support community or regional projects to improve control of the water table in your region. Rainfall variation is one of our most serious weather hazards. Improvements in our ability to handle floods or droughts will pay big dividends in the future.

4. Look critically at your marketing methods. If you sell entirely in bulk can you take the kind of price variation this involves? Should you consider doing more of the marketing yourself, selling under longer term contract, or cooperating with others to share the risk?

5. Supply management should be considered, but no simple scheme will eliminate fluctuations in market prices. A partial reduction may be achieved, but at some expense and loss of individual initiative. Only you can decide whether the benefits are likely to outweigh the expenses.

6. If your only business is growing onions you know what kind of a rollercoaster you are riding. You can avoid some of the panic, and the thrill, by diversifying into other crops, or taking a job even part time off the farm. This may be more necessary if you are in a high risk area.

7. Our tax system provides certain opportunities for those with variable incomes to avoid part of the additional burden a progressive tax rate would otherwise impose. Make sure you take advantage of such provisions, but at the same time do not make unnecessary purchases in good years simply to reduce the tax payment.

8. Keep on good relations with your credit agency. This means maintaining accurate and complete records from which to prepare financial statements. A clear picture of the earning capacity of your farm under typical conditions will be the most effective means of securing financial help to tide you over a difficult time.