



# Harvest

A QUARTERLY BULLETIN ISSUED IN THE INTERESTS  
OF GROWERS BY J. WATTIE CANNERIES LIMITED





# Harvest

**VOL. 1 NO. 2**

**PUBLISHED BY**

**J. WATTIE CANNERIES LTD.**

**HASTINGS & GISBORNE**

## **OUR COVER**

**Once again . . .**

**Wattie's pea-viners first in  
the field!**

## **FOREWORD**

All being well, and with good co-operation from the weather-man, from now on, we should be on the threshold of the biggest season we have ever experienced. Crop prospects for the most part are bright, in both Hastings and Gisborne, and markets are likewise brisk.

It has been a poor growing season for asparagus, it is true, and a great disappointment following the two previous light crops. However, the season has suited other crops in spite of many frost scares.

Broad beans, now being harvested, are looking well, although very late maturing. Peas have never looked better. If no flooding occurs from now on, peas should be even in maturing, with good long vine growth. This promises heavy yields and good harvesting conditions, with satisfactory results to all. We can always assure a clean harvesting job in a good crop, but it's difficult to get good results in a poor crop.

Fruit crops are heavy. In fact, peaches are very heavy indeed, and will require judicious thinning to keep fruit-size up. It is well to remember that a light crop of large peaches will pay better than a heavy crop of low-priced peaches. Money expended on thinning will be repaid in the ultimate result.

Bean planting has of necessity been delayed due to the late season, and to avoid clashing with the peak period of peas in January. There is ample moisture at present to get them off to a good start, and in any case soil conditions were too cold to suit bean growth up to mid-November.

I would like to take the opportunity, on behalf of the Management, to wish all a very Happy Christmas, and trust you will share with us a Prosperous New Year.

Yours sincerely,



Hastings Field Supervisor.



# THIN those PEACHES !

The crop of canning peaches is perhaps one of the heaviest we have experienced. Although this issue of "Harvest" will be too late to be very useful, we are concerned that some growers don't appreciate how severe thinning should be in seasons like this. Small peaches are not profitable to either grower or processor. For some years we at Wattie's have been paying a bonus of  $\frac{1}{2}$ d. per lb. on all peaches over  $2\frac{1}{2}$  inches in diameter, to offset to some extent the extra cost of thinning.

It may not be too late to run over the trees again where thinning has not been heavy enough, although our field staff hope to contact our growers during the thinning season. Perhaps the best way to size up the situation is to thin a tree and then count the fruit left on. One leader only on an evenly developed tree need be counted. Then work out in cases or pounds weight the amount of fruit on the tree. One of the heaviest crops we have knowledge of would run out at 25 tons of fruit to the acre. This is over 500lbs. per tree on fully-grown trees, or 10 dump cases.

Trees this year have fruit throughout the tree, not just on the outside, and spaces of from eight to ten inches should be left between fruits. This gives a good crop of well-sized fruit, providing fertilizers have been readily applied and no lack of moisture is experienced.

Markets for small fruit are difficult, and the cost of handling a small peach is far greater than a large one. We trust, therefore, that growers will give this matter every consideration, in the interests of all concerned.

It has also been noticed that trees are more susceptible to disease such as blast, following a very heavy crop. It must help to keep a tree healthy and to bear every year if we look after the following main points:—

*Thinning peaches in the orchards  
of W. H. Taylor,  
Hastings.*

- (a) Thin according to an estimated weight of crop.
- (b) Make certain the trees receive adequate fertilizer to produce both a crop and healthy new wood in the same year.
- (c) If no irrigation is available, thin a little extra fruit from the tree.
- (d) Irrigation of stone fruit in Hawke's Bay is essential in most seasons to ensure the best possible crops consistently.
- (e) Complete thinning by the end of December if possible.

The story is recalled where an orchardist showed a new chum how to pull the fruit off the tree. When the man came in for lunch, the orchardist asked him how he got on. The new chum remarked that he had pulled all the fruit that he could see on the first six trees. "Good," said the orchardist; "now go back and pull the rest off, and they'll be about right."

There is the other saying, too, that you want to get your worst enemies to thin your fruit for you. **It is seldom, if ever, that too much fruit is removed at thinning time.** It would be well to look back on the record crop of two seasons ago and recall the tremendous amount of under-sized fruit that was produced that year. This, of course, applies to any pip or stone fruit for any market.

So—thin! thin!! thin!!!







*First crop of peas in New Zealand to be sprayed for weed by helicopter: Hastings.*

## Further Report on Pea Spraying

Since our last report, several hundred acres of peas have been sprayed for weed control by helicopter. It is pleasing to report that the results are most satisfactory. Coverage is uniform and complete, the only misses being near overhanging trees. The speed of application is a major factor, and with a fair amount of wind this year, ground spraying was lagging badly at one stage. But one or two mornings' work with the helicopter soon brought the job up to date. However, there are limiting factors which have to be watched. One, of course, is the fact that only M.C.P.B. can be used, and that drift is apt to be more severe than ground application. The answer would be a non-hormone-type spray with control of a wide range of susceptible weeds. Perhaps some day that will come. At least we have the answer to Amaranthus, or Prince of Wales Feather, which is a great step forward.

### LIMITATIONS.

Apart from Amaranthus control, D.N.B.P. has been satisfactory in both Hastings and Gisborne this year. Rainfall was ample in the early part of the season, making weeds succulent and easy to kill. In hot, dry Septembers of certain seasons, control is difficult. In Gisborne M.C.P.B. was disappointing, giving excellent control of docks but regrowth of most other weeds. In Hastings, results have been satisfactory. Many growers expect to see weeds die completely and fairly quickly with this material. In many cases, however, weeds are never killed, though growth is so slow that it does not interfere with the crop. If peas were left for seed, nightshade or berryweed could be a problem. Recommendations are still being made along the lines stated previously. Where "Prince" is a problem, M.C.P.B. must be used, especially in crops planted after October 1st, otherwise D.N.B.P. is still recommended.



Limitations are often encountered where M.C.P.B. could be used, were it not for the proximity of glasshouses, tomatoes, young asparagus, grapes, roses and other susceptible crops. We can't afford to take risks. No complaints have been encountered so far, although pasture and grain spraying has done damage to peaches and tomatoes. In spite of a warning in the local Press to the effect that M.C.P.B. is a volatile spray, this is not a correct statement of the case. Direct drift only does the damage. Drift can be dangerous over a fair distance, it is true, and care must be taken. Droplet size should not be too fine, as atomised particles will drift further than coarse particles. Boom height should be kept as low as possible while still allowing proper coverage.

### COMBINATION SPRAYS.

One of our main problems in weed control is to kill *Amaranthus* and *Nightshade* at the same time. M.C.P.B. is too doubtful on *Nightshade*, but is the only answer to *Amaranthus* or *Prince of Wales Feather*. On the other hand, *Nightshade* is one of the easiest weeds to kill with D.N.B.P. A combination of these two sprays, it was thought, could be the answer. Chemists advised that the materials were compatible if kept well agitated. Consideration was given to the fact that D.N.B.P. tends to wilt and burn the plant tissue, which would interfere with the translocation of the hormone M.C.P.B., and poor results were anticipated.

Several trials of mixtures have been carried out in spite of this, and show promise:

3 pints D.N.B.P. 20%, plus  $\frac{1}{2}$  pint M.C.P.B.—Results erratic.

2 pints D.N.B.P. 20%, plus 1 pint M.C.P.B.—Results fair.

It was found a few years ago that M.C.P.A. gave good control of both *berry-weed* and *Prince of Wales Feather*, but was rather drastic on peas. Knowing that M.C.P.B. reverts to M.C.P.A. through the action of the plant, a mixture of the two has been used. Results are very promising as far as weed control is concerned, and tests will prove whether the crop is affected.

The mixture contained  $1\frac{1}{2}$  pints M.C.P.B. and  $\frac{1}{2}$  pint of M.C.P.A. Other combinations are being investigated. (M.C.P.B. when quoted is based on 4lbs. a.e. per gallon.)

To ascertain the effect on crop weights, a trial using straight M.C.P.A., M.C.P.B. and combinations of the two, and checked against D.N.B.P., are being undertaken. Reports maintain that M.C.P.B. reduces yield, and we wish to check this again this year.

The whole question of weed control is very interesting and complex. In the early stages, when D.N.B.P. was the only spray used, a lot of work went into the questions of aperture size and spacing of nozzles, boom heights, pressure, amounts of water per acre, etc. Solid-cone nozzles have proved most satisfactory, and pressure and rates of application have more or less been standardised; but with new materials and combinations of sprays the fight against weeds still continues. Every effort is being made to find a most suitable and economic outcome. Improvement over the years has been steady and very few crops are lost due to weeds to-day.

## What are Peas worth to the Grower ?

In the past it was an easy matter to know exactly the returns per pound of peas harvested. With the introduction last year of a new system whereby payment was made according to maturity, many growers found it difficult to follow. For the benefit of new growers and as a reference, the grade and price are set out herewith. These are the prices ruling for the 1957-58 season, the only variation being that  $\frac{1}{2}$ d. per pound bonus is paid for peas planted during the month of August.

### PRICE PER POUND TO GROWERS FOR 1957-58 SEASON.

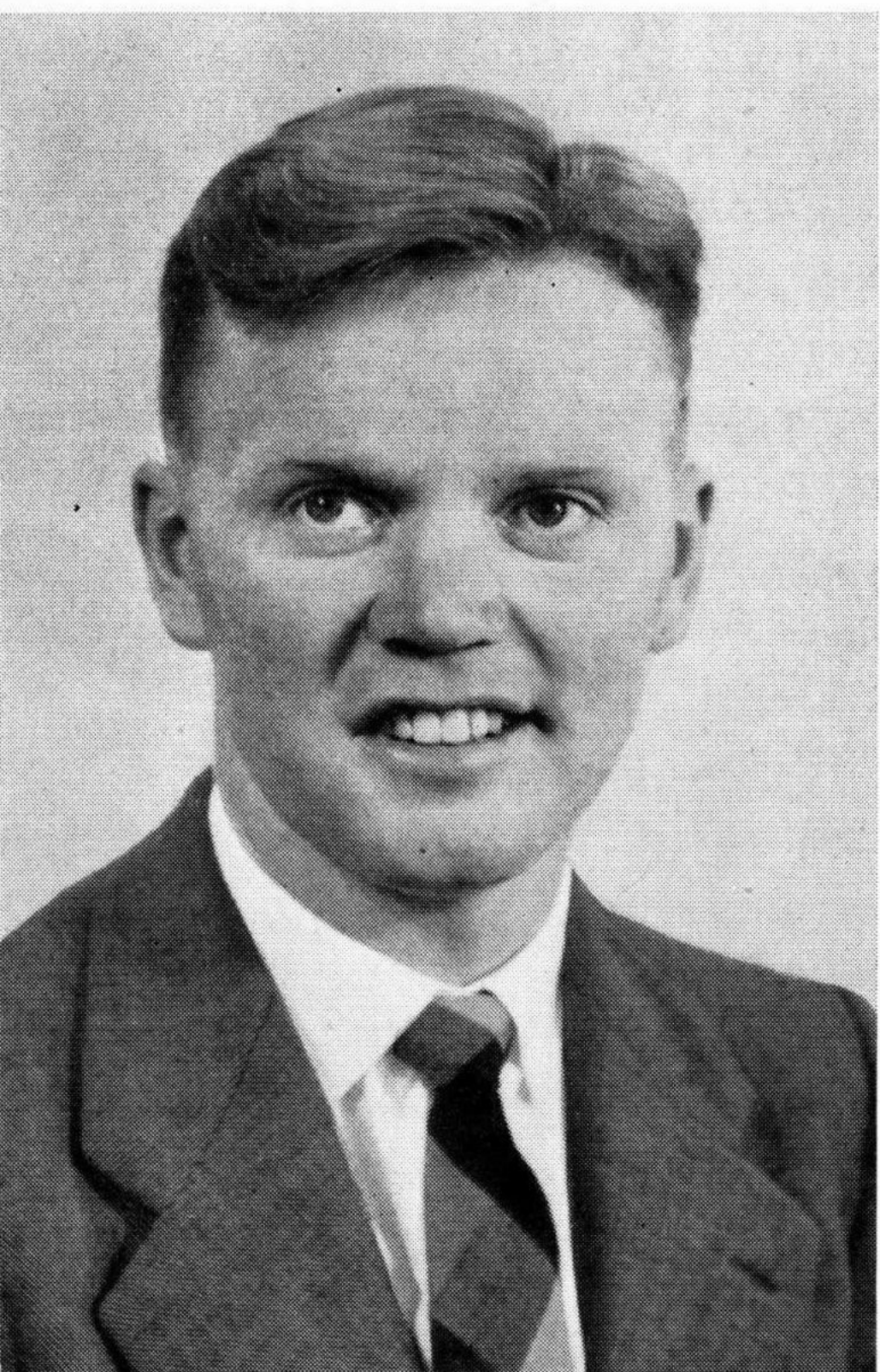
Tenderometer Reading.	Price per Lb.	Grade.
Under 85	6.6d.	1
86—90	6.3d.	2
91—95	5.2d.	3
96—100	4.3d.	4
101—105	3.7d.	5
106—110	3.3d.	6
111—115	2.9d.	7
116—120	2.6d.	8
Over 120	2.5d.	9



# Introducing our new Assistant Field Supervisor M. R. (Mike) Crooks

Many Hastings growers will have already met Mike, who commenced duties as our Assistant Field Supervisor on November 1st. They will also realize that although he is young, he has had considerable experience along the right lines for his work with us.

Applications for this position were numerous, and a choice was difficult. In selecting Mike, we feel we have made a sound choice. We know growers will join with us in wishing him wide usefulness in his new field of work. Co-operation from growers can make this job congenial and interesting. He is able to talk in growers' language and is very keen to learn as well as help.



**MIKE  
CROOKS**

Mike has lived in the Hastings district for many years prior to his final education at Lincoln Agricultural College. For the past two years he has held the position as Horticultural Instructor with the Department of Agriculture, Nelson. His parents own an orchard near Hastings, so he has had practical experience in that line. While in Nelson he was associated with fruit-growing and the production of canning and freezing crops.

Mike is still studying. He has yet to write a thesis to obtain his National Diploma in Fruit Culture. We all wish him success in this. There should be no doubt that he will come through with flying colours. While at Lincoln, as an Horticultural Diploma student, he received the reward granted to the "keenest and most improved student," and his references from the College are excellent.

Mike has a pleasing personality and is a keen sportsman, Rugby and cricket coming first. He is well known in junior and lower grade Rugby in Hawke's Bay. He also represented Ellesmere Union, Canterbury and Nelson as a junior player while living there. He was club captain at cricket while at Lincoln. He is also keen on table tennis and indoor basketball.

We welcome Mike to our team, and can recommend him to growers with confidence. In the past month he has already proved himself observant and keen.



# Rook Destruction . . .

Rooks or crows have caused considerable consternation among farmers in some areas for many years. Damage to many crops such as grain, pumpkins, corn or maize and peas is general. The rook population was kept under control for many years by shooting. During the war years, however, when both manpower and ammunition were at a premium, the colonies built up to the stage where some severe damage was being done.

## METHODS OF DESTRUCTION.

The Committee decided to make ammunition available to gun clubs and individuals to increase shooting activities. The best time for shooting is just before the young learn to fly. Many hundreds were destroyed in this way. Another method was the poisoning of grain which was spread on the paddocks when peas were planted. A few good kills were made, but the wily rooks soon discovered the effect of the poison and told their neighbours all about it. As a result this method had to be discontinued, and shooting was carried on as before. Although it was fairly effective, shooting tended to disturb the rookery, and resulted in a wider distribution of the birds over the country, leading to the building of new rookeries in widespread localities. The birds are now found over a very wide area of Hawke's Bay.

## A NEW POISON.

A new poison which is tasteless and odourless has now been developed. It is called 1080 for convenience, but the chemical is sodium monofluoracetate. It is a deadly poison with no known antidote. For this reason great care is necessary in its use. It is not available to farmers, but is distributed and used only by the Department of Agriculture officers. The local poison was laid by J. G. Niccol, Livestock Instructor, with the help of members of the Rook Committee, of which T. Ryan is chairman.

## METHOD OF POISONING.

Following on very successful results in the South Island, an isolated rookery was chosen, and bread, cut in small cubes, was fed out for a couple of days to test the

amount of poison required. As the poisoned bread not eaten by the rooks had to be picked up afterwards, this was important. After the poison had been fed out in a marked area, the next job was to collect the dead birds and bury them, otherwise they might become a menace to dogs and other animals that might eat them. It is interesting to note that the amount of the poison required to kill is in direct proportion to the weight of the animal. Thus if a dog did eat a rook—which is unlikely—it would not do it any harm. It would have to eat several for the poison to be effective or fatal.

A very small amount of poison is required to kill a rook. After taking the poison which is laid near a rookery, they seem to suspect something amiss and make for their usual haunts. Some drop before reaching the rookery, but most of them get there only to fall to the ground shortly afterward. There is no flapping or noise; they simply fall without movement. The fact that the birds make for home makes the work of picking up quite simple, as the dead birds are in a concentrated area. For this once, the rook is co-operative!

## RESULTS.

Two lots of poison have been laid near Hastings—one last Autumn and another in November of this year. On the first trial over 400 birds were counted and buried, and in the second over 500. It was intended to carry out more poisoning in other smaller rookeries, but since the November kill, the birds have dispersed so widely that there are not enough concentrated in any one area to make another attempt feasible in the meantime.

There is opposition by some people toward the destruction of rooks. We are agreed that these birds have their place in the scheme of things, but there have been cases from time to time when tremendous damage has been caused. We realize that it would not be practicable to destroy them all in any case, but to reduce the population as has been done must help considerably. At least we know there is no suffering with 1080, and the Rook Committee will continue to keep the matter under surveillance.



## SWEET CORN.

The production of this crop for canning and freezing is taking a major place in our sales and has increased rapidly since introduced by our Gisborne factory to the consumers of New Zealand and abroad. With about 1,000 acres being grown annually, considerable trial work is necessary. There are nine varieties being grown on a commercial scale this year and no less than ten new varieties under trial.

Growers and factory alike want a high-yielding crop, but there are many other features to consider: the height of cobs and the number per plant, disease resistance, flavour, colour, quality and length of maturity. Substantial improvements in yield have already been made.

Grub control is receiving attention, and our Field Supervisor in Gisborne is trying several methods this season. A large area has been treated with Aldrin-Superphosphate, broadcast at 1cwt. per acre over the whole area. Aldrin has also been sprayed into and along the sides of the furrows made by the planter. One paddock has also been sprayed with 50% D.D.T. wettable powder. To date this season, the only damage found has been caused by Wheat Stem Borer. The damage from this pest usually disappears when growth speeds up in warmer weather.

## NUMEROUS OTHER TRIALS.

Broad beans have come into favour very rapidly since we first introduced them as a frozen pack last year. Several new varieties are being investigated. The same applies to Lima beans, little known in New Zealand, but very popular in America. It is both

frozen and canned. Our factory was the first in New Zealand to produce this pack when it was canned two years ago. The pack was small, and sold immediately it was marketed. We are growing this crop again this year and have introduced three new varieties. Green broccoli was introduced on the local market for the first time last year. It requires more development.

Tomatoes are an important crop in both Hastings and Gisborne. Various varieties have been tried over the years, and we have two new varieties this year. A new automatic tomato peeling and coring machine was imported from America last year—the first outside America. Whole peeled tomato products require a medium-sized tomato of good colour, flavour and uniformity. Our present varieties—Scorsby as an early and Tatinter following—are excellent croppers of good quality fruit, but a slightly smaller fruit would be more desirable to reduce sorting costs. (If you prefer—call it a vegetable!)

These covers most of our variety trials, but there are many more aspects to be considered in the production of fruit and vegetables. They include weed control, especially on peas and asparagus; seed inoculation of peas; manurial trials; harvesting methods and so on. There is never an end to this absorbing part of food production. With this brief outline of some of the activities behind the scene, growers will realize that a considerable amount of work is being carried out to assist them in achieving heavier crops of better quality and therefore a better return for the producer and processor alike.



# Behind the Scenes . . . in Processed food production

In a food processing organization the size of J. Wattie Canneries, a great deal of research and experimentation is necessary, and by its very nature, little is heard of it. This applies to the production of raw material on the land, machinery, actual processing, quality control and testing the final article. Let us consider the production side just now, with something more on processing later on.

Trials of various kinds have been carried out for many years on both fruit and vegetables. Many Hastings growers will recall the introduction of new varieties of corn, beans, tomatoes, prunes and apricots shortly after the company's first 110-acre farm was purchased at Mangateretere, near Hastings. Although little has been heard of these introductions, they have proved very valuable. Knowledge is still being gained on root stock and varieties of apricots and prunes. Future development of these fruits is being considered as a direct result.

Each year other trials are being carried out. Since R. I. June became Field Supervisor in Hastings in 1952 and L. R. Renouf followed in Gisborne, a great deal of helpful knowledge has been gained. Some of these trials are carried out on our own land, but many are done on growers' properties. We are very grateful for the co-operation of growers, with respect to these trials. There never seems to be any difficulty in finding a grower willing to have any trial we wish, carried out on his property.

## PEA VARIETIES.

A score or more pea varieties have been tried over the past years. Last year six varieties were grown under trial, and this year there are seven varieties in our trial plot in Hastings. These have been obtained from England, U.S.A. and Holland. We are constantly looking for a more satisfactory early maturing variety than W. F. Massey. An early maturing pea is essential to extend the harvesting season, but we want something more robust and easier to thresh than Massey if possible. Our main crop variety at present is Victory Freezer. This has proved a fine all-round variety, giving satisfactory production, vine growth and disease resistance, with reasonable quality, colour and flavour. A similar variety with slightly smaller seed size would be the ideal.

## GREEN BEANS.

Green beans are going through a transition stage at the present time. White seeded varieties are replacing dark seeded ones to a large extent, and climbing beans with their better flavour are being demanded by the public, especially in frozen lines. With this in view, we have already tried several varieties previously, and this year have four pole varieties and six dwarf in our trials. Last year the buff-seeded variety, Tenderbest, gave the highest yield. It was a new introduction from America.



Peas under the heading of 85 are not desirable and would only occur on a small part of a crop not worth returning for at a later date. None of these peas have been harvested to date.

The price is paid out on individual loads which are tested immediately they arrive, over the weighbridge or from the scales of the stationary viner. An average sample is taken from all over the load, and of this sample several readings are taken to ensure a fair average for the particular load.

### THE TENDEROMETER.

The tenderometer is an electrically driven machine which severs the peas and registers their resistance on a dial. Payment is made according to this reading. The peas are first washed to make sure no dirt, grit or foreign matter enters the machine. This, of course, would influence the resistance and thus give an incorrect reading. These instruments are now used throughout the world and are considered so accurate that payment according to their reading is universally accepted. The machine is checked each morning and samples are also checked on other machines as an extra precaution. Thermos flasks are sent between the Hastings and Gisborne factories and those of other firms for this purpose. The readings have been checked against laboratory methods as well, so the grower is safeguarded to the fullest extent.

In the past it was left to the field man's knowledge to say when the crop should be taken, and laboratory tests revealed when the crop had become too ripe. With a machine to measure the maturity on each load, the grower now gets the benefit of any variations in his paddock. Payout last year, therefore, was actually more per pound, on the average, than previously. If there is a reasonable area in a crop, obviously less mature than another, an effort is always made to separate its yield. This is particularly so in freezing crops, as very immature peas are of little use to the grower or the factory. There is too much waste in them, as only reasonably-developed peas are of any use. Under-developed peas are lost in vining.

This schedule has been worked out over the years to give the grower a uniform return, no matter at what stage of maturity the crop is taken. Thus, if an immature crop is taken, the weight is of course less, but the price per pound is more. A very mature crop will give a greater yield in

weight, but the price to the grower is less per pound. During last season, paddocks were measured out and half was taken for freezing at the ideal reading of between 100 and 105 on the tenderometer. The other half was left to mature for canning, and the returns for each part were within a few pence per acre. It was pleasing to know this was the case, as the grower is assured of the same return no matter when his crop is harvested.

### PEA HARVESTING.

Harvesting in Gisborne is done by cutting the peas and taking them to the stationary viner. In Hastings, the bulk of the harvesting is done by mobile viners. This year we will have thirteen of them operating at one time. This should ensure that no crops will be left unless it is because of conditions such as heavy rain which are beyond our control. As an added precaution, there are three stationary viners standing by, if required. Although we have the largest area of peas ever planted, the capacity of the field and factory operations has been increased to deal with them.

The actual harvesting operation varies considerably from paddock to paddock as far as the mobile harvesting is concerned. Long-vined crops that are of uniform density can be harvested with very little waste indeed. Sparse or short-vined crops have to be mown ahead of the viners. Some crops may have to be mown on one or two sides only. Harvesting is varied according to the crop, to the best of our ability. It is not possible to get all the peas through the machines if the ground is rough.

It has been proved time and time again that it is better to pull a crop direct than to mow it first and then follow with the mobile viners. Mowing itself knocks off a great many pods. The machines were designed to pull the peas direct, and it is better to miss a few plants completely, than to mow unnecessarily. With many years' experience behind us, growers can be assured that the best possible will be done to harvest as much of their crop as possible. You want the returns—we want every pound of peas we can get this year.


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### PLEASE NOTE THESE TELEPHONE NUMBERS.

Our Field Supervisor's number in Gisborne is now 4354.

Our Assistant Field Supervisor's number in Hastings is 6190.





**T**HERE'S no peace—but plenty of goodwill—at Wattie's during this height of the processing season. Round-the-clock shift-work is scarcely conducive to tranquillity, for either staff or management!

Nevertheless, if our esteemed printers don't break down under their burden of work; and if the Post Office can clear the fantastic volume of mail already banked up; you should be reading this before Christmas.

We think of you kindly at this time, despite everything; because with your help as growers, the harvest is but an embarrassment of riches, from which we all profit: and the happy holiday-makers who demand our foodstuffs are served by our joint labours at this time.

We thank you for your support. The grower has a special place in our esteem, and we express to you all our sincerest good wishes for such leisure as you are able to enjoy during the Festive Season.

*A HAPPY CHRISTMAS TO YOU ALL!*





# **J. WATTIE CANNERIES LTD.**

**HASTINGS & GISBORNE**

*Food Processors to the Nation*