

# QUALITY MANAGEMENT PROGRAMME REVIEW – 2000/2001 SEASON

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## 1. SUMMARY

This report reviews the NZBSC Quality Management Programme activities undertaken for the 2000/2001 season.

The programme ran smoothly throughout the season with excellent cooperation between growers, packers, exporters and the quality management team.

It was another difficult season for growers, packhouses and exporters though the season did start off well with extremely high prices being obtained due to the reduced volumes from Mexico, Tonga and Japan. Even airfreight was used for the first time due to the high prices being obtained in the market place. As the volumes increased during the middle to latter part of the season prices fell, with some paddocks being by-passed as a result of the lower prices. The main packing season started later this season and total volumes were lower than normal. Ships had long delays and even had to go to a number of ports to get enough squash.

Un-seasonal weather patterns in the Gisborne district were experienced this season. Lower sunshine hours and high rainfall made life difficult for growers and packhouses and created problems with the keeping quality of product in the market.

Northland didn't fare much better either due to heavy rainfall. One grower lost 25 acres due to flooding. Manawatu on the other hand was a lot drier than in past seasons and this helped to reduce the incidence of rots.

Hastings generally had a better season though the main packing season was three weeks later starting. A late frost at the end of the month wiped out one paddock.

The main emphasis for the Quality Management team this season was maturity due to the problems experience in the market place in the previous season. A number of paddock assessments were undertaken by Quality Management Officer's (QMO's) throughout the various squash districts combined with the introduction of spot audits at packhouses during the first month of packing, helped to reduce the maturity problems this season. Some lines were failed for maturity by QMO's over this period and advice was also given to two growers during paddock assessments not to harvest.

A trial was undertaken this season to determine if there was a correlation between dry matter and/or brix and current maturity indicators to enable objective assessments of maturity. The results of this trail were unavailable at the time of writing this report.

The NZBSC Grade Posters are also currently being updated.

## 2. AUDITS OF INDUSTRY GRADE STANDARDS

A total of 187 industry grade standards were undertaken during the season. These inspections either occurred as part of a quality management audit, or as a stand alone end point product inspection.

The average number of defects found per 300/600 piece squash sample inspected is shown in the table below.

<u>Actionable Pests</u>	<b>2000/2001 Season</b>
Rots	1.96
<u>Major Defects</u>	
Cuts and Punctures	2.71
Maturity	2.03
Bruising	0.26
Sunburn	0.59
<u>Total Major Defects</u>	5.59
<u>Minor Defects</u>	
Bronzing	0.60
Field Spot	0.09
Callousing	4.65
Oedema	0.65
Misshapen	1.32
Skin Rub	0.43
Sooty Mould	0.05
Vine Mark	3.62
Long Stalk	1.54
Button Loss	0.80
Size	3.03
<u>Total Minor Defects</u>	16.80

## 3. TRAINING

A total of 8 quality controllers successfully completed the training course this season. Courses were held in Northland, Gisborne and Hastings.

## **4. INDUSTRY STANDARDS PROGRAMME**

### **4.1 Grade Standards**

The only change to the grade standards this season was that smalls below 1kg were not permitted to go to Japan.

There were no breaches under the NZBSC Export Marketing Strategy during any of the Quality Management Officer audits throughout the season.

### **4.2 Packhouse Quality Manual**

The 2000/2001 NZBSC Packhouse Quality Manual was updated prior to the season. The only change to the manual this year was that the spray diary for Korea and USA were added.

The updated NZBSC Packhouse Quality Manual was distributed to packhouses prior to the season at the preseason meeting.

### **4.3 District Buttercup Squash Committees**

No meetings were held during the season.

### **4.4 Monitoring of Packaging Standards**

A total of 31 bin inspections were carried out at packhouses. There were no non-compliances this season relating to bins not meeting specification. One bin assembler was spoken to with a request not to assemble bins with knots all in a line on bin faces.

Collapsible bins used by packhouses this season have been very successful.

### **4.5 Packing & Grade Standard Dispensations**

A total of ten packaging dispensations were granted this season by HEA. These were for collapsible bins, reduced size of base bearers, bulk shipments, airfreight bins, and Hi Cube bins.

One grade dispensation for trialing of "mini" Buttercup Squash was granted by the HEA.

### **4.6 Port Surveillance**

During the season 58 ships were monitored. Assessments targeted the first three vessels leaving each port and continued on a random basis throughout the season. Surveillance was again increased towards the end of the season.

Port surveillance activities operated smoothly with only one line being turned down due to rots. This consignment was returned to the packhouse for repacking.

The following areas of concern were, however, identified during port surveillance activities;

- a) An increase in the number of broken boards was noted from all ports. Most of these had broken at knots and had to be fixed by wharfies prior to export.
- b) Squash continues to be damaged when loaded into reefer containers due to overfilling of bins.

### **4.7 Quality Management Training**

In conjunction with the preseason meetings, all AgriQuality New Zealand Ltd Quality Management Officers (QMO's) inspecting and auditing squash attended training sessions to ensure there was consistent interpretation of the NZBSC Quality Management Programme. Training sessions were held in Pukekohe and Hastings.

## **5. RESIDUE ASSURANCE PROGRAMME**

### **5.1 Spray Diary Audits**

This season spray programmes for all major export markets (not just Japan) were available to industry personnel. This made the process of confirming lines as suitable for export to specific markets much easier.

Throughout the season spray diaries received by packhouses were checked for compliance with the NZBSC export spray programme. This was undertaken by Quality Controllers (QC's) in those packhouses. These checks were audited at least twice during the season (once for one packhouse that only packed for 3 days) as part of random spot audits. Where squash was endpoint inspected, the spray diary for the line was checked by the QMO.

Almost all diaries were complying with the programme requirements. Where diaries did not meet the requirements a sample of squash from the line concerned was sent for residue testing and the area of concern discussed with the QC. Follow up audits confirmed that the QC was following the checking requirements for spray diaries and taking the appropriate action.

There were a number of cases where the grower had given the NZBSC their Growsafe accredited number at registration time, but towards the end of the growing period the crop was sprayed by helicopters. Although the pilots were accredited this had to be confirmed with the Council.

It is recommended that the registration form is amended to allow for the Growsafe accredited numbers of all operators associated with each crop of squash to be listed at the time of a grower registering. The spray diary will be changed for next season to allow all numbers to be recorded.

There were a few instances where growers had not recorded the property location the spray diary related to, requiring QMO's to contact growers to complete the missing information.

Overall there have been very few non compliance issues relating to agrichemical use on Buttercup Squash for export this season.

### **5.2 Residue Monitoring**

This season a total of 50 random and 5 target residue samples were taken from export lines throughout the country during the export season. Most tests confirmed that MRL requirements were being met by growers.

Of the 50 random samples eight tests showed a low level of dieldrin in the lines tested. Trace backs were undertaken and the growers concerned informed of the Council requirements. There is concern over the number of random tests showing dieldrin residues in lines of squash destined for export. This could have significant implications for growers regarding the area of clear land available for growing squash in the future.

Of the 5 targeted samples 4 were taken from grower lines where there was concern that application dates of agrichemicals did not, or may not meet, the spray programme requirements in that withholding periods were/could be exceeded. The other targeted sample was taken due to concern at the interval between applications and the application rates used.

The MRL's were exceeded for the chemical's concerned in one targeted sample leading to the grower concerned having to have two consecutive clear residue samples prior to exporting squash. In two samples a low level of dieldrin and a low level of DDT were detected. The other two samples showed the MRL's had not been exceeded.

A further 4 samples were taken which were paid for by the growers concerned, to meet the residue clearance requirements. As a result of a residue found last season, and the withholding periods not being met, two growers were each required to have two consecutive samples of their squash tested for residues and show clear results prior to exporting the product. The results of these tests showed the lines met MRL's for the markets concerned.

## **6. PRESEASON MEETINGS**

Pre season meetings were held in Northland, Pukekohe, Gisborne, Hawkes Bay and Manawatu.

Updates to this year's Quality Management Programme were outlined at these meetings. Dr Cheah from Crop and Food also gave a presentation on powdery mildew. This was well received.

Generally the meetings were well attended except for Hastings, where numbers were down from last season. The packhouse inspectors that were not in attendance were updated by the local QMO prior to the commencement of the season.

## **7. GRADE POSTERS**

AgriQuality New Zealand has been working with the NZBSC to develop new Grade Posters. The existing posters are out of print and present supply requirements are having to be met by colour copying required stocks. The posters are in need of updating in a number of areas (eg clearer photos of some defects, size of defects relative to background, etc) and it was felt they would benefit from consistent presentation and NZBSC branding.

The revised posters will be available for next season.

## **8. RECOMMENDATIONS**

- 8.1** That the Maximum Grade defect level for smalls be reassessed. This is currently set at 10%, that is, in a 600 fruit sample up to 53 smalls can be permitted before product requires a regrade.
- 8.2** That the NZBSC to consider a R & D project to assess the effect that rain has on the keeping quality of squash at outturn.
- 8.3** That the NZBSC reconsider the methods of shipment permitted to transport early season squash. Using dry box could assist the maturation process in transit, whereas the use of reefer shipments tends to hold the maturity level or at best allow maturation at a much slower rate.
- 8.4** That the registration form is amended to allow for the Growsafe accredited numbers of all operators associated with each crop of squash to be listed at the time of a grower registering.
- 8.5** That the spray diary be changed for next season to allow all Growsafe applicator numbers to be recorded.

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