Macadamia industry benchmark report

2024 season

including trends since 2009

Project MC22000

Department of Primary Industries
Macadamia industry benchmarking and sustainability insights 2022-27

Queensland Government

Table of contents

Acknowledgements

This report has been produced as part of the “Macadamia industry benchmarking and sustainability insights 2022-27” project (MC22000). This is a joint initiative of the Queensland Department of Primary Industries, the University of Southern Queensland, NSW Department of Primary Industries and the Queensland Alliance for Agriculture and Food Innovation.

The project has been funded by Hort Innovation, using the macadamia research and development levy and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture. The Queensland Government has also co-funded the project through the Department of Primary Industries.

Disclaimer

Results presented in this report are based on data provided by industry participants. Figures shown are based on summary statistics using underlying data that is not included in this report.

While every care has been taken to ensure the validity of information collected and analyses produced, none of the project partners, nor any persons acting on their behalf, make any promise, representation, warranty or undertaking in relation to the appropriateness of findings in this report and expressly disclaim all warranties (to the extent permitted by law) about the accuracy, completeness, or currency of information in this report.

Readers should seek independent advice to confirm any information in this report before relying on that information in any way. Reliance on any information provided within this report or by any of the project partners is entirely at your own risk. The project partners will not be responsible for, and will not be liable for, any loss, damage, claim, expense, cost (including legal costs) or other liability arising in any way (including from the project partners’ or any other person’s negligence or otherwise) from your use or non-use of the report or from reliance on information contained in the report or that the project partners provide to you by any other means.

About the project

The benchmarking project is supporting improved productivity, profitability and sustainability within the Australian macadamia industry. The current project builds on previous benchmarking and best practice work conducted since 2001. Yield, quality and planting information has been collected annually from macadamia farms throughout Australia since 2009. This information is provided either directly by growers or by processors on their behalf. Production cost data has also been collected annually since 2013.

There are four key elements within the MC22000 benchmarking project, each of which offers different opportunities to participate and gain insight to support decision making:

Confidential farm benchmarking

All benchmarking participants receive a confidential, personalised farm benchmark report each season, comparing their individual farm performance with groups of similar farms based on a range of criteria such as region, tree age or farm size. Seasonal data collection commences in the last quarter of each calendar year, following completion of harvest. Minimum data required includes plantings (tree counts, area planted and tree ages) and consignment information (tonnes produced, kernel recoveries and factory rejects). Growers can provide their own consignment data or simply provide consent for data to be sourced from their processor(s). Optional additional data can include operating costs, seasonal limitations and resource inputs (e.g. water, electricity and fuel). Confidential benchmark reports are produced as soon as data collection is complete, typically during the first quarter of the following season.

Regional Benchmark Group meetings

Facilitated meetings are held in all major production regions each season to review and discuss findings from the previous season. All benchmarking participants who submit seasonal data are welcome to attend these meetings, which are typically run during the second quarter of each calendar year.

Industry reporting

This industry report provides all industry stakeholders with a summary of yield, quality and cost trends within the Australian macadamia industry. The report includes analysis of the previous season as well as long-term trends based on up to 15 years of data. Industry reports are published during the third quarter of every alternate calendar year.

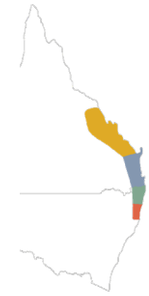
The team is also committed to providing information on request from bona- fide industry stakeholders (subject to available resources). The team typically produces many of these reports for growers, processors, investors and agencies each season. Contact the team at macman@dpi.qld.gov.au for more information.

Key results from the benchmark study are also regularly published in industry media such as the AMS News Bulletin.

On-farm crop loss study

This intensive study is measuring on-farm crop loss over multiple seasons on a range of farms within major production regions. Factors being investigated include pests, diseases, harvesting, dehusking, sorting and climate. Identification and analysis of on-farm losses will provide insight into their economic significance to farm businesses and industry.

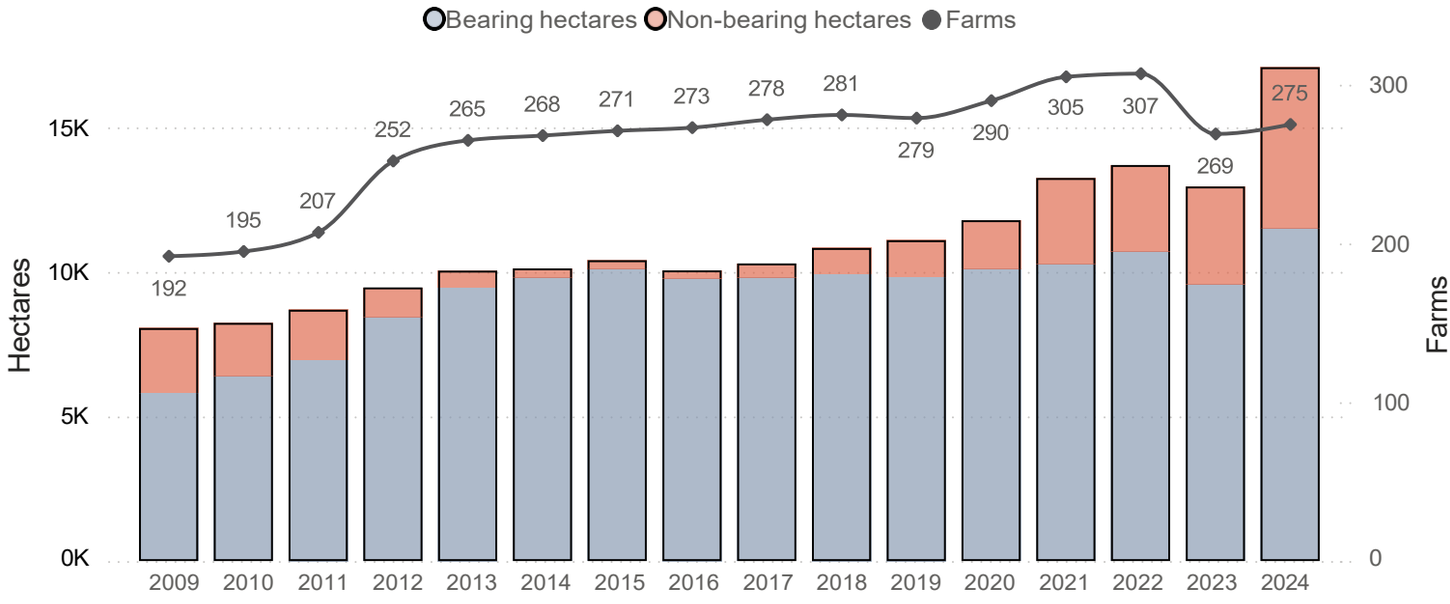
Scope and coverage



Results published in this report are based on available data collected up to March 31, 2025.

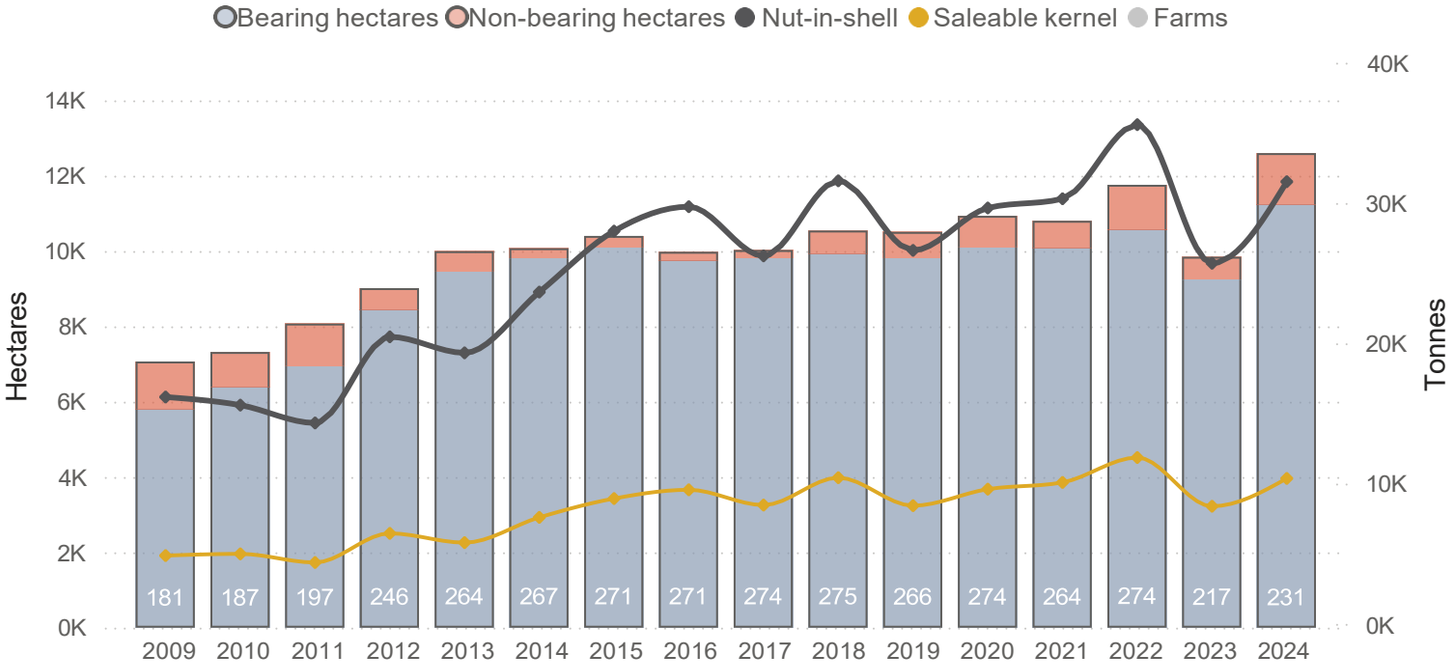
A total of 275 farms covering 17,079 planted hectares submitted data for the 2024 season prior to this date.

Planted area for all participating farms

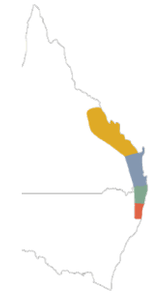


The 2024 benchmark sample represented approximately 54% of national industry production for that season, based on the Australian Macadamia Society's total crop estimate of 57,850 tonnes of nut-in-shell at 10% moisture content (AMS, 09 December 2024). This estimate is based on factory receipts of the Australian Macadamia Handlers Association (AMHA) and estimated production for non-members.

Production and planted area for bearing farms only

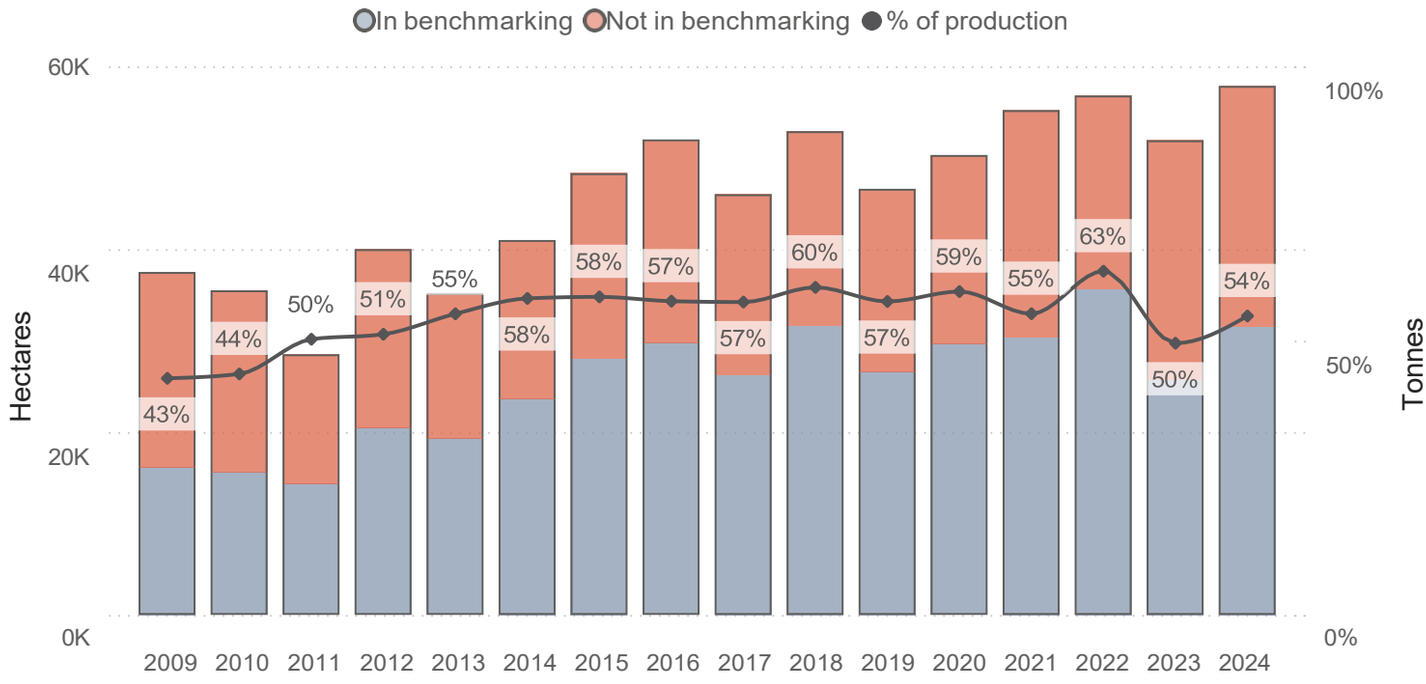


Scope and coverage



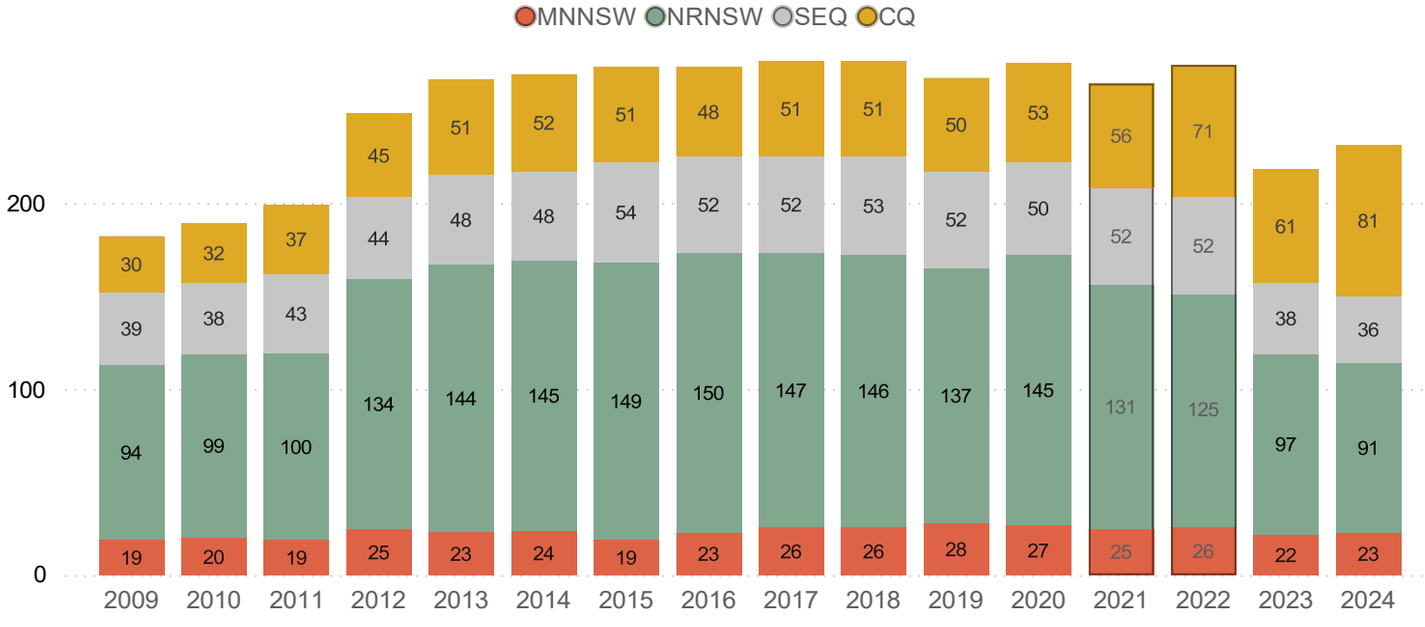
Yield and quality data was provided by 231 bearing farms for the 2024 season, representing 11,234 bearing hectares and 31,519 tonnes of nut-in-shell at 10% moisture content. Cost data was provided by 87 of those farms, totaling 5663 planted hectares and 15,108 tonnes of nut-in-shell. A total of 109 farms provided resource use data for the 2024 season.

Benchmark sample coverage by NIS production



The chart below shows the number of bearing farms participating in benchmarking each season. Participation within Northern Rivers and South East Queensland has generally decreased in recent seasons, especially following the significant fall in nut-in-shell price in 2023. Over the same period participation has increased in the Central Queensland region, which now represents the largest proportion of the sample by both planted area and number of participating farms.

Bearing farms by region



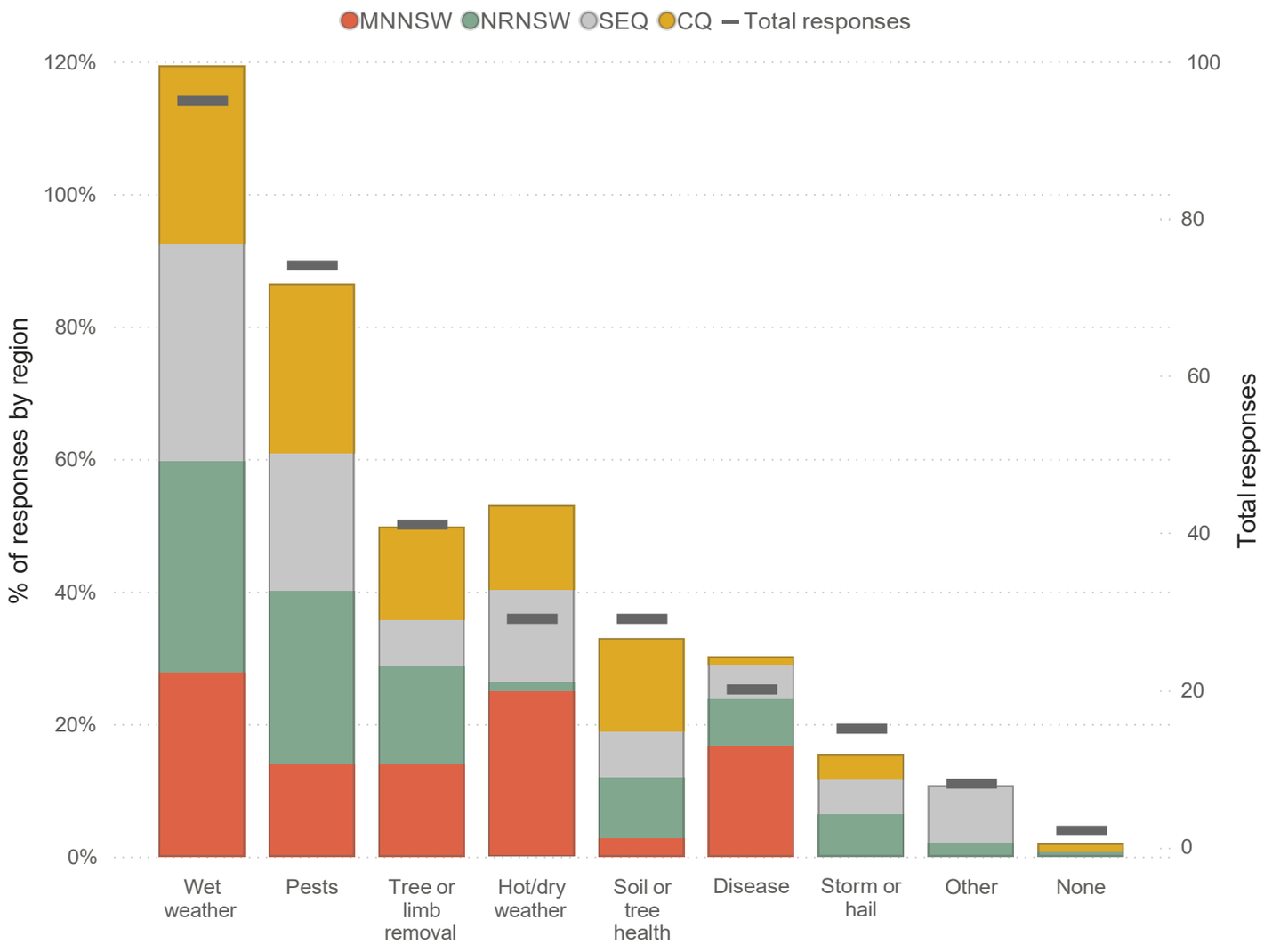
Limiting factors for the 2024 season

The chart below shows the major factors limiting production for each production region. These results are based on survey responses from participants, who were asked to rank the major limiting factors affecting production on their farm based on their observations throughout the season.

It is important to note that not all benchmarking participants chose to share these observations. The coloured bars and left axis show the percentage of survey responses in each region for each of the limitations shown. These percentages are relative to the total number of responses received for each category of limitation, which are shown on the right axis.

Wet weather and pests were the most commonly reported factors affecting production across the benchmark sample in 2024.

Factors limiting production

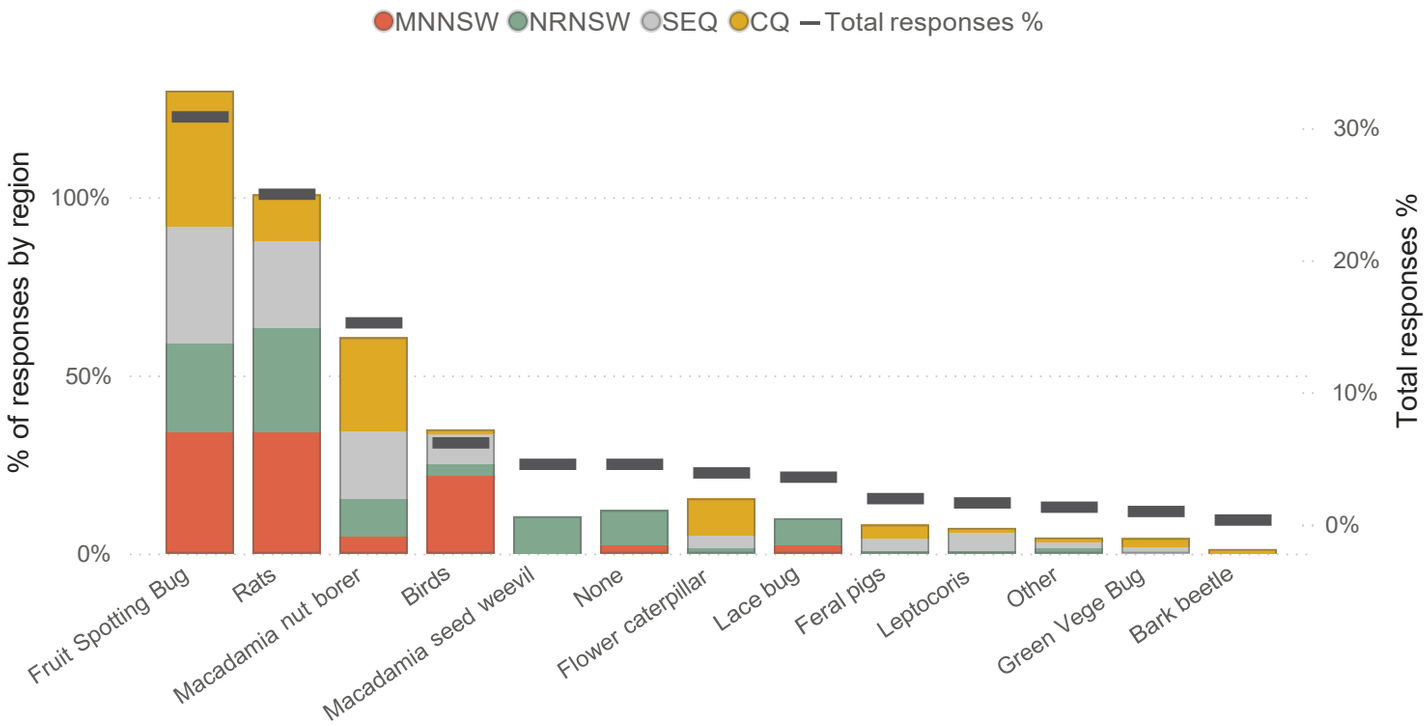


Limiting pests and diseases for the 2024 season

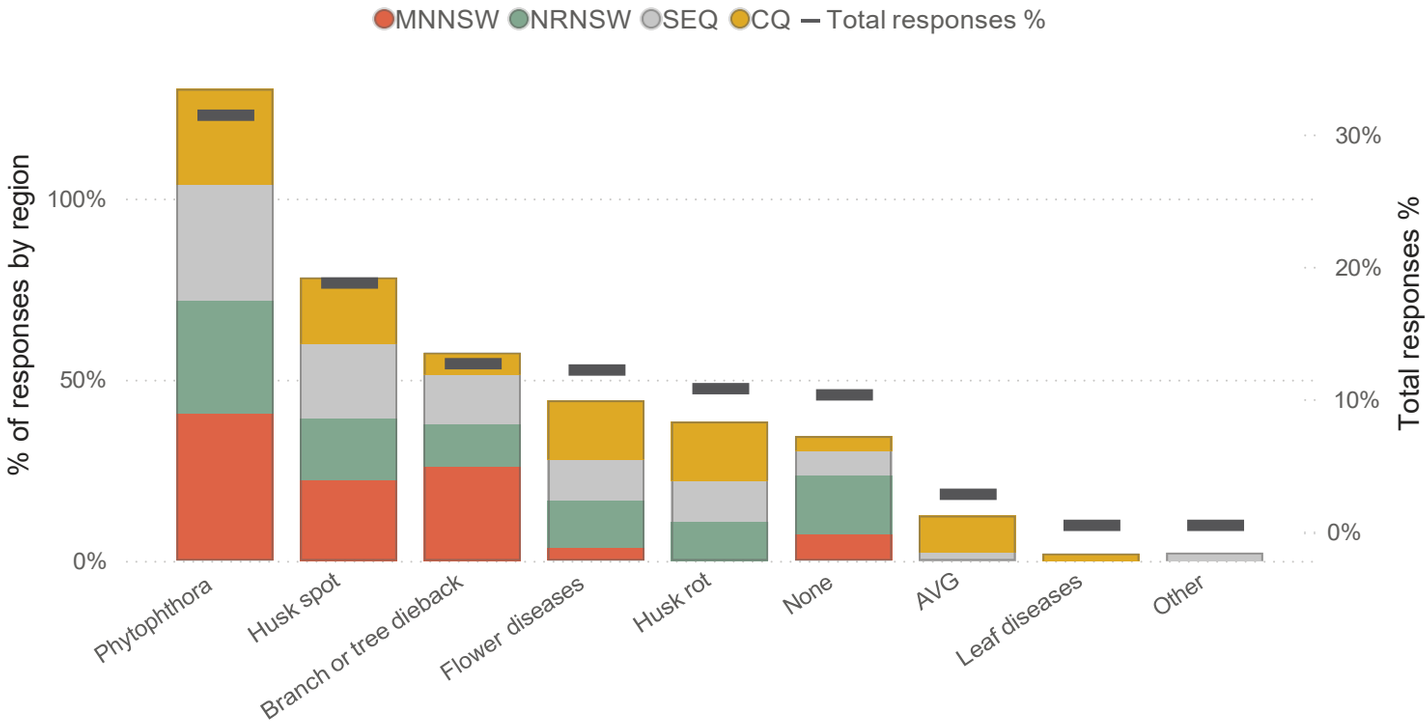
The charts below show the major pests and diseases limiting production in each major region during the season. These results are based on survey responses from participants, who were asked to rank the major limiting factors affecting production on their farm, based on their observations throughout the season.

It is important to note that not all benchmarking participants chose to share these observations. The coloured bars and left axes show the percentage of survey responses in each region for each of the limitations shown. These percentages are relative to the total number of responses, which are shown on the right axes.

Limiting pests



Limiting diseases



Price vs productivity trends

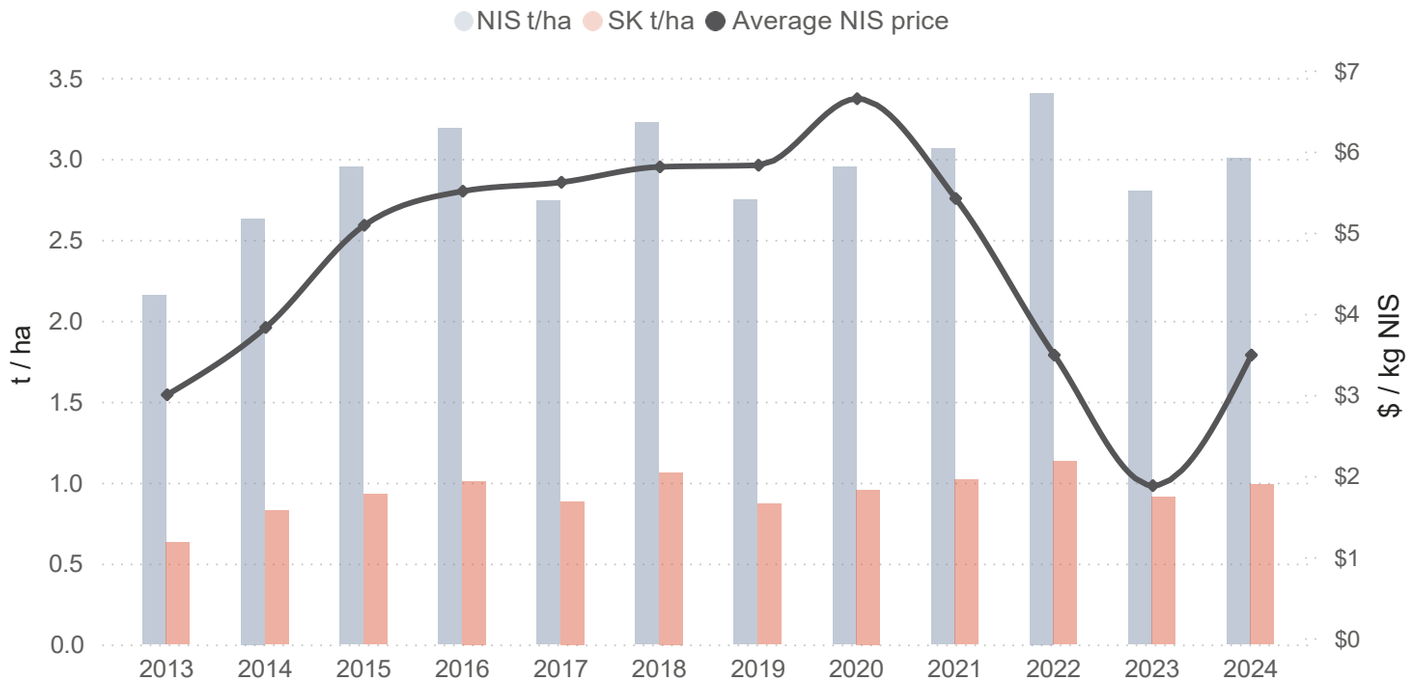
The table and chart below show trends in productivity and price for mature farms in the benchmark sample that have provided yield and quality data since 2013. Mature farms are those with a weighted average tree age of 10 or more years. An average of 241 mature farms per season provided data during this period for a total of 2889 farm-years.

All averages shown are weighted by either production or bearing hectares. The NIS prices shown are based on the average paid per kilogram of nut-in-shell at average seasonal saleable kernel recovery. These figures are published by the Australian Macadamia Nut Handlers Association (AMHA).

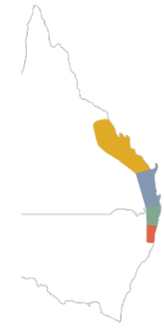
Seasonal price and productivity averages

Year	NIS t/ha	SK t/ha	SKR %	NIS price	Farms
2013	2.2	0.6	31.3	$3.00	218
2014	2.6	0.8	33.7	$3.83	224
2015	3.0	0.9	33.7	$5.09	237
2016	3.2	1.0	33.9	$5.51	245
2017	2.7	0.9	34.5	$5.62	262
2018	3.2	1.1	35.3	$5.81	266
2019	2.7	0.9	33.9	$5.83	259
2020	2.9	1.0	34.7	$6.65	267
2021	3.1	1.0	35.6	$5.42	255
2022	3.4	1.1	35.6	$3.49	255
2023	2.8	0.9	34.9	$1.88	204
2024	3.0	1.0	35.2	$3.49	197
Average / total	**2.9**	**0.9**	**34.6**	**$4.75**	**2889**

Seasonal price and productivity averages



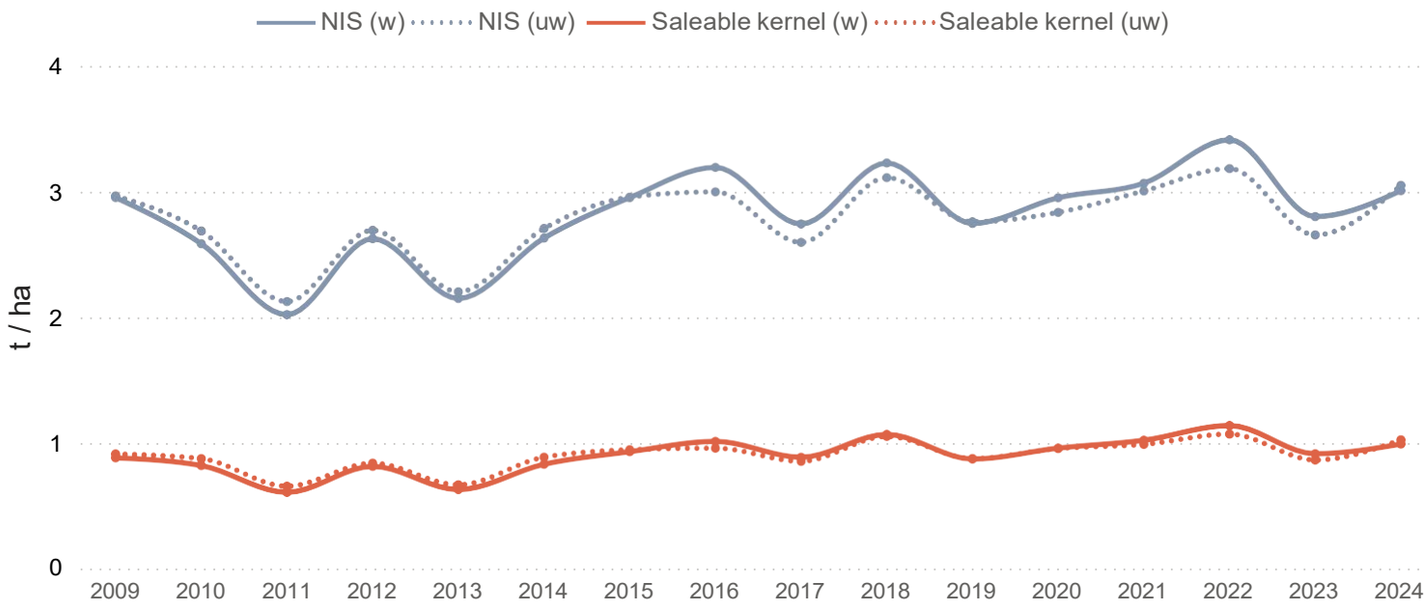
Productivity trends for mature farms



The chart below shows seasonal trends in average nut-in-shell and saleable kernel productivity for mature farms in the benchmark sample. Mature farms are those with a weighted average tree age of 10 or more years. Averages shown as solid lines are weighted by bearing hectares, while the dotted lines show corresponding unweighted averages.

Productivity trends per bearing hectare

Mature farms only



The table below shows seasonal weighted average nut-in-shell and saleable kernel productivity for each major production region in the benchmark sample.

Regional nut-in-shell and saleable kernel averages

Tonnes per bearing hectare (mature farms only)

Region	CQ		Far NNSW		Mid NNSW		SEQ	
Year	NIS	SK	NIS	SK	NIS	SK	NIS	SK
2009	3.1	0.9	3.1	0.9	1.4	0.5	3.1	0.9
2010	2.4	0.8	2.6	0.8	3.2	1.1	2.7	0.8
2011	2.0	0.6	1.7	0.5	1.7	0.6	3.0	0.9
2012	2.7	0.9	2.5	0.8	2.1	0.7	2.9	0.9
2013	2.2	0.7	2.2	0.6	2.2	0.8	1.8	0.5
2014	2.4	0.7	2.9	0.9	2.6	1.0	2.3	0.7
2015	3.3	1.1	3.0	0.9	1.7	0.6	2.6	0.8
2016	3.6	1.2	2.7	0.8	3.1	1.1	3.4	1.0
2017	3.0	1.0	2.6	0.8	2.1	0.8	2.4	0.7
2018	3.7	1.2	2.5	0.8	3.1	1.1	3.4	1.1
2019	2.9	0.9	2.6	0.8	2.1	0.7	2.8	0.9
2020	3.3	1.1	2.6	0.9	2.4	0.9	2.5	0.8
2021	3.3	1.1	2.5	0.8	2.5	0.9	3.4	1.1
2022	4.0	1.3	2.4	0.8	2.4	0.8	3.7	1.2
2023	2.9	1.0	2.2	0.7	2.1	0.7	3.5	1.1
2024	3.4	1.1	2.7	0.9	2.2	0.8	2.3	0.7
Avg.	**3.2**	**1.0**	**2.6**	**0.8**	**2.3**	**0.8**	**2.8**	**0.9**

Productivity by tree age

The table and chart below show long-term average nut-in-shell (NIS) and saleable kernel (SK) productivity per bearing hectare for bearing farms of various age groups within the benchmark sample since 2009. Farms must have some trees aged five years or older to be considered bearing in any given year during that period.

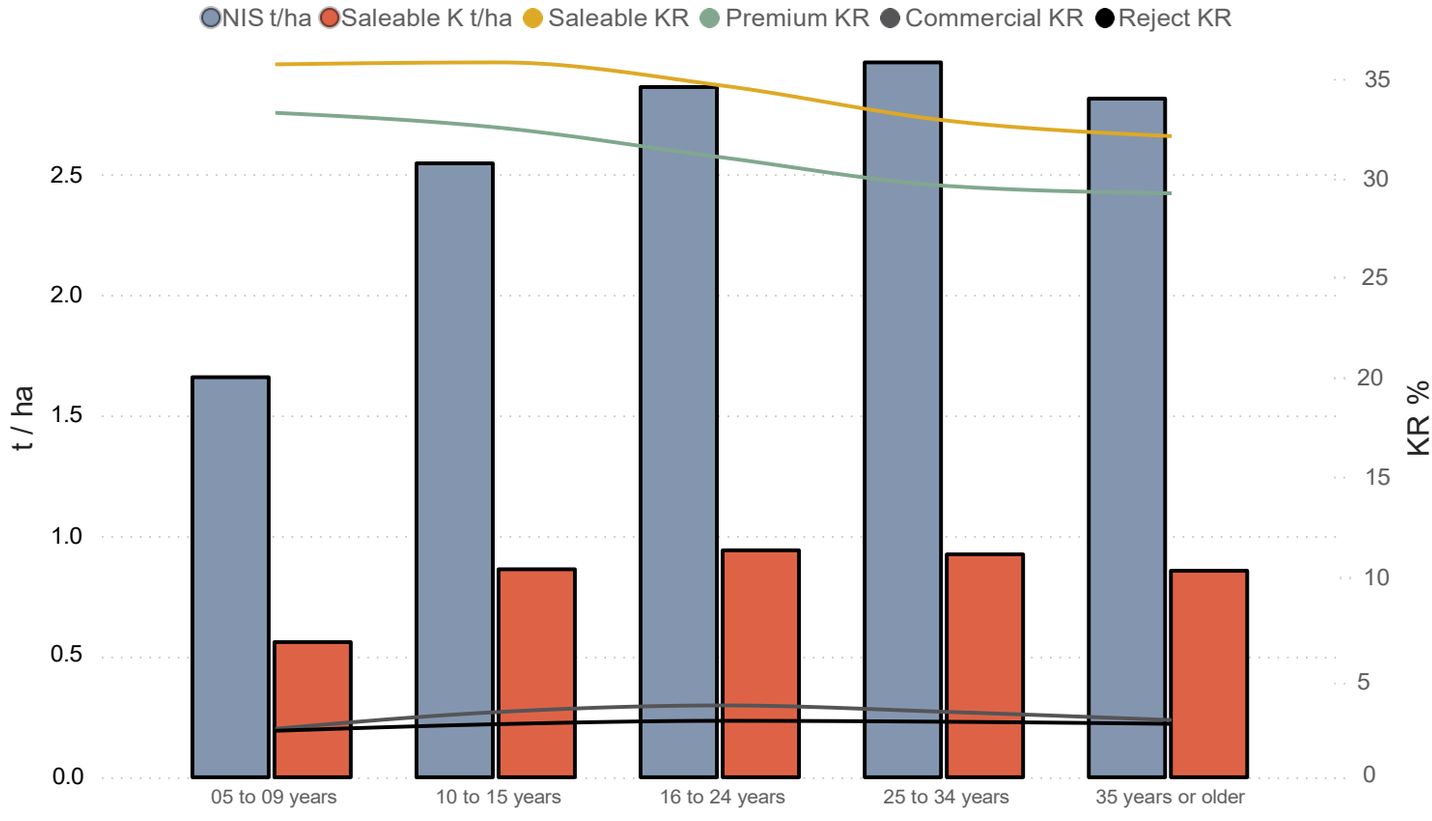
Average saleable, premium, commercial and reject kernel recovery are also shown for each age group. The table also shows the number of farm-years (farms x seasons) in each of those age groups. All averages shown are unweighted.

Average productivity and kernel recovery since 2009

Age group	Average age	Average ha	NIS t/ha	SK t/ha	Saleable KR	Premium KR	Commercial KR	Reject KR	Farm-years
05 to 09 years	7	57.2	1.7	0.56	35.7	33.3	2.4	2.3	376
10 to 15 years	13	47.2	2.5	0.86	35.8	32.6	3.3	2.7	795
16 to 24 years	20	33.1	2.9	0.94	34.7	31.1	3.6	2.8	1463
25 to 34 years	29	29.5	3.0	0.92	32.9	29.6	3.3	2.8	1028
35 years or older	38	38.4	2.8	0.86	32.1	29.3	2.9	2.7	247
Average/total	**21**	**37.7**	**2.7**	**0.88**	**34.4**	**31.1**	**3.3**	**2.7**	**3909**

While an apparent decline in average productivity is evident for farms aged 35 years or more, it is important to note that this trend varies from farm to farm and also across regions, and there are farms in this age group that have not observed yield decline. Many factors other than tree age can potentially impact productivity in older farms, including excessive tree height, crowded canopies, low light interception, and complications from lack of ground cover such as erosion and exposed roots.

Long-term productivity by tree age



Kernel recovery trends

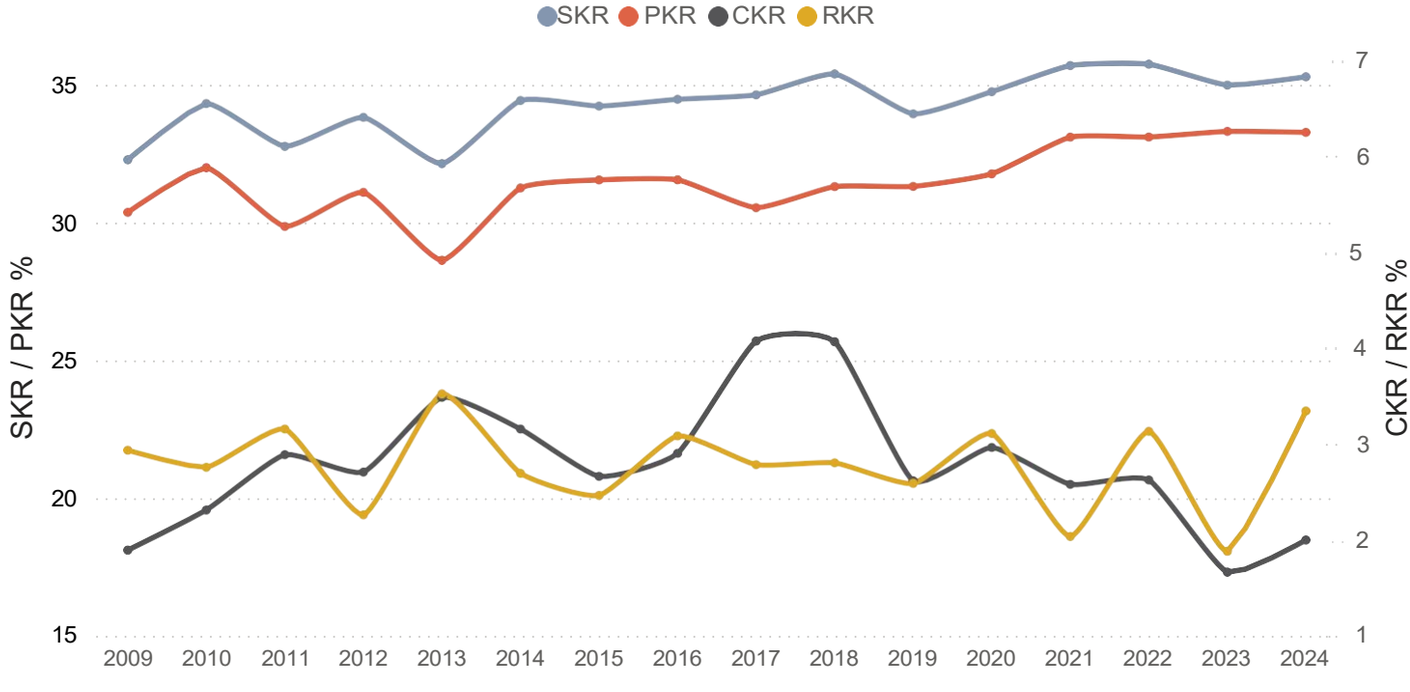
The table and chart below show seasonal kernel recovery trends for all farms in the benchmark sample. These include saleable (SKR), premium (PKR), commercial (CKR) and reject kernel recovery (RKR). All averages shown are weighted by bearing hectares, meaning larger farms with more production exert more influence on the mean than small farms. This provides a better indication of average kernel recovery as a whole sample.

Kernel recovery trends

Year	Saleable KR%	Premium KR%	Commercial KR%	Reject KR%	Total KR%	Bearing farms
2009	32.3	30.4	1.9	2.9	35.7	178
2010	34.3	32.0	2.3	2.8	37.3	184
2011	32.8	29.9	2.9	3.2	36.0	192
2012	33.8	31.1	2.7	2.3	36.0	243
2013	32.1	28.7	3.5	3.5	35.6	262
2014	34.4	31.3	3.2	2.7	37.4	267
2015	34.2	31.6	2.7	2.5	36.6	271
2016	34.5	31.6	2.9	3.1	36.9	271
2017	34.6	30.6	4.1	2.8	37.3	274
2018	35.4	31.3	4.1	2.8	38.4	275
2019	33.9	31.3	2.6	2.6	36.1	265
2020	34.7	31.8	3.0	3.1	38.7	273
2021	35.7	33.1	2.6	2.0	36.9	263
2022	35.7	33.1	2.6	3.1	38.6	266
2023	35.0	33.3	1.7	1.9	36.6	216
2024	35.3	33.3	2.0	3.3	38.7	228
Average	**34.5**	**31.7**	**2.8**	**2.8**	**37.1**	

Average premium kernel recovery in 2024 was consistent with the previous season, the highest average recorded since benchmarking began. Averages for saleable, commercial and reject kernel recovery were all higher in 2024 than the previous season. Prolonged periods of wet weather impacted spray schedules in some regions and most regions reported high insect pressure, such as late season Fruit Spotting Bug.

Kernel recovery trends

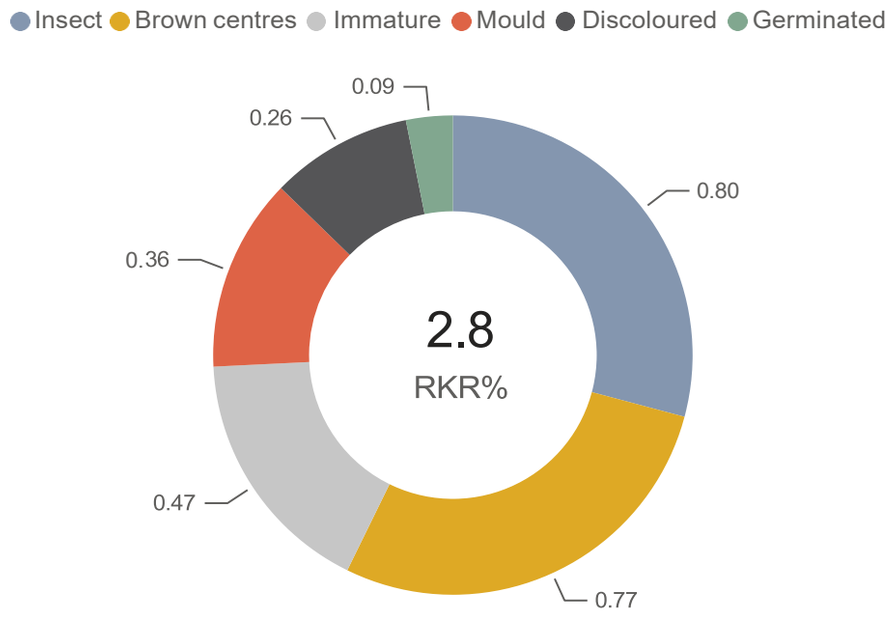


Factory reject trends

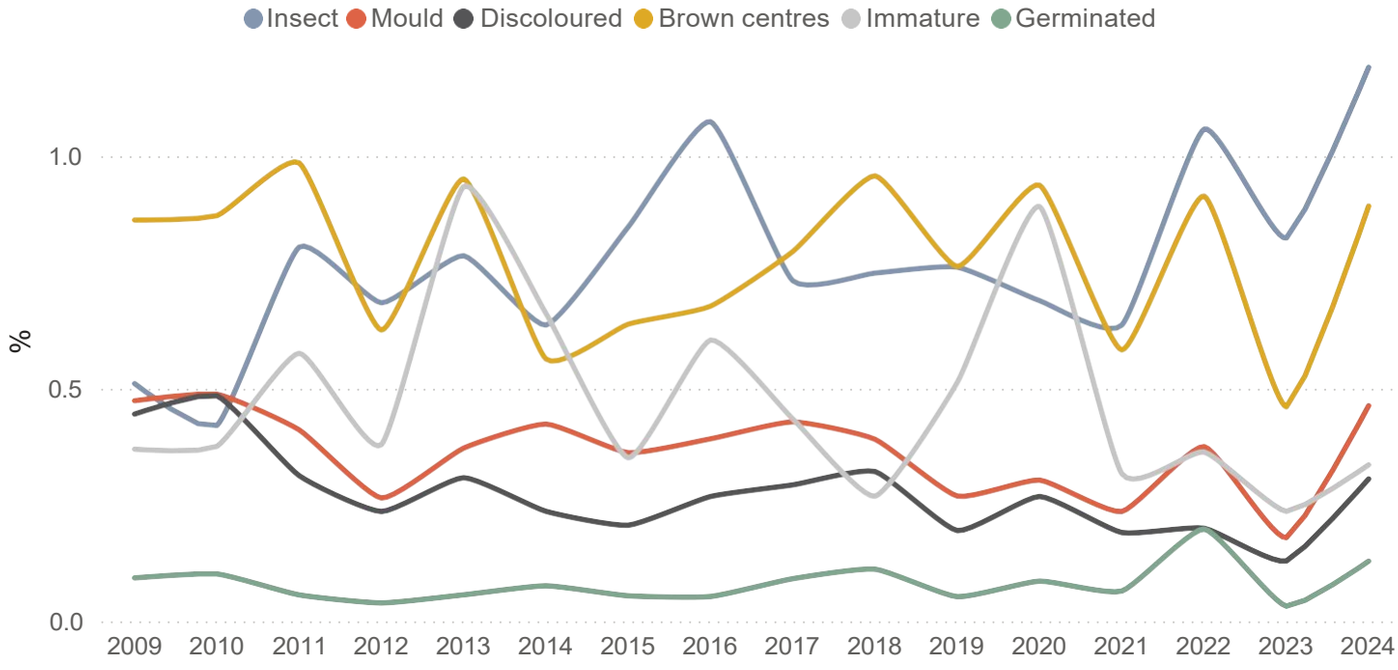
The charts below show seasonal factory reject trends for bearing farms in the benchmark sample. The top chart shows a breakdown of long-term average factory rejects for all seasons since 2009. The bottom chart shows seasonal trends for each major factory reject category. Averages shown are weighted by nut-in-shell production, so farms with higher production exert more influence on the mean. This provides a more representative view of typical rejects across the whole benchmark sample. Major factory reject categories shown include insect damage, mould, discolouration, brown centres (internal discolouration), immaturity (shrivelled kernel) and germination (discoloured crest).

Rejects across all major categories were higher on average in 2024 compared with the previous season. Insect damage and brown centres accounted for most factory reject losses in 2024, as they do in most seasons. Elevated levels of insect damage were observed in most regions, other than Northern Rivers NSW where they declined slightly following a record-high average in 2023.

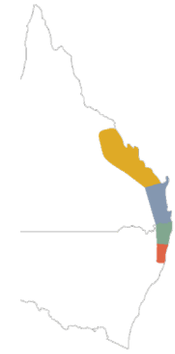
Long-term factory rejects by category



Seasonal factory rejects by category



Operating cost trends



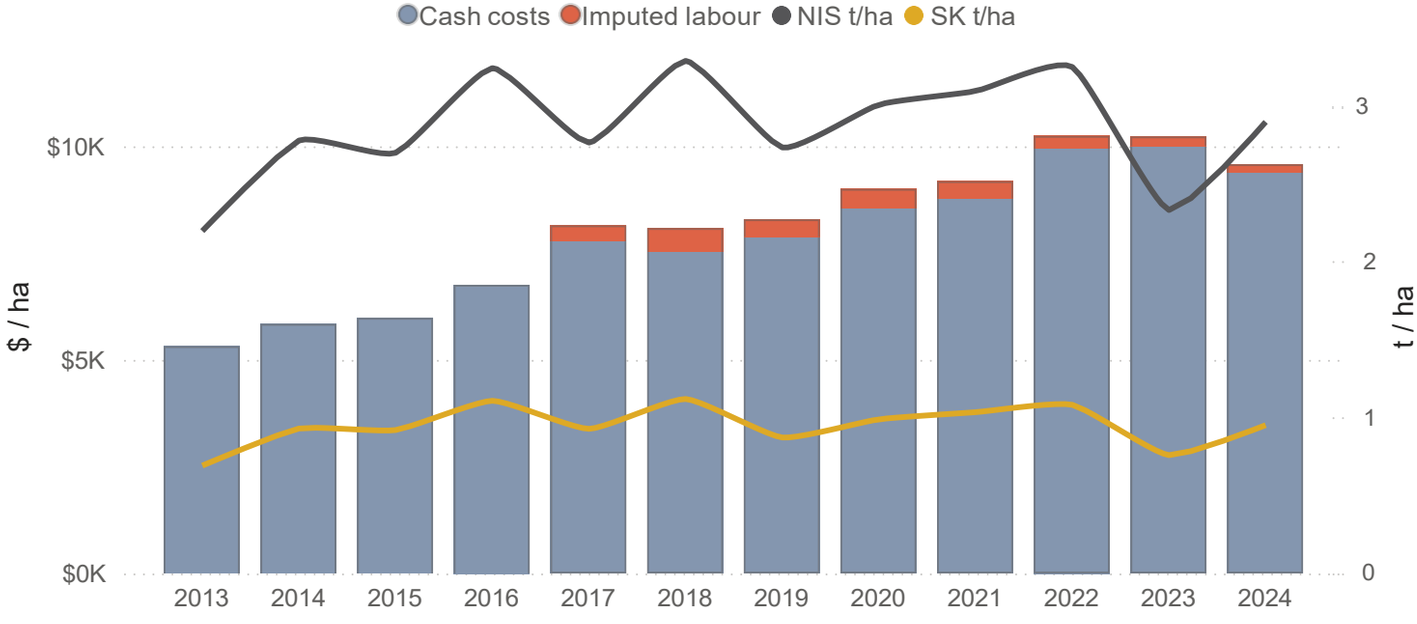
The tables and chart below show average cash costs and average total operating costs for bearing farms in the benchmark sample that provided cost data. All averages are weighted by planted hectares. Each table includes average costs per hectare planted, the relative standard deviation (RSD) of costs per hectare planted, costs per tonne of nut-in-shell, and the equivalent costs per kilogram of nut-in-shell.

Cash operating cost data has been collected since 2013. Unpaid labour hours have been collected since 2017 and imputed at the Horticulture Award rate of $30 per hour. Imputed labour estimates are added to cash costs to estimate total operating costs.

Cash operating costs						Total operating costs including imputed labour from 2017			
Year	$/ha	RSD	$/t NIS	$/kg NIS	Farms	$/ha	RSD	$/t NIS	$/kg NIS
2013	$5,322	43%	$2,658	$2.66	47				
2014	$5,844	38%	$2,190	$2.19	47				
2015	$5,985	41%	$2,300	$2.30	40				
2016	$6,758	44%	$2,093	$2.09	53				
2017	$7,765	37%	$2,821	$2.82	71	$8,065	42%	$2,930	$2.93
2018	$7,528	41%	$2,488	$2.49	87	$8,086	52%	$2,672	$2.67
2019	$7,876	59%	$3,159	$3.16	94	$8,292	61%	$3,326	$3.33
2020	$8,540	51%	$3,122	$3.12	87	$9,004	56%	$3,291	$3.29
2021	$8,774	46%	$3,102	$3.10	86	$9,183	52%	$3,247	$3.25
2022	$9,944	42%	$3,255	$3.25	85	$10,244	43%	$3,353	$3.35
2023	$10,003	38%	$4,482	$4.48	75	$10,232	37%	$4,585	$4.58
2024	$9,378	45%	$3,369	$3.37	84	$9,582	45%	$3,442	$3.44
Average	**$8,228**	**47%**	**$3,028**	**$3.03**	**71**	**$9,171**	**49%**	**$3,344**	**$3.34**

Average operating costs generally increased in most seasons from 2013 to 2022. Average costs for the 2023 season were similar to 2022, followed by a slight reduction in 2024. Anecdotal feedback from growers suggests this trend was in response to reduced margins associated with lower seasonal average nut-in-shell prices in 2022 and 2023.

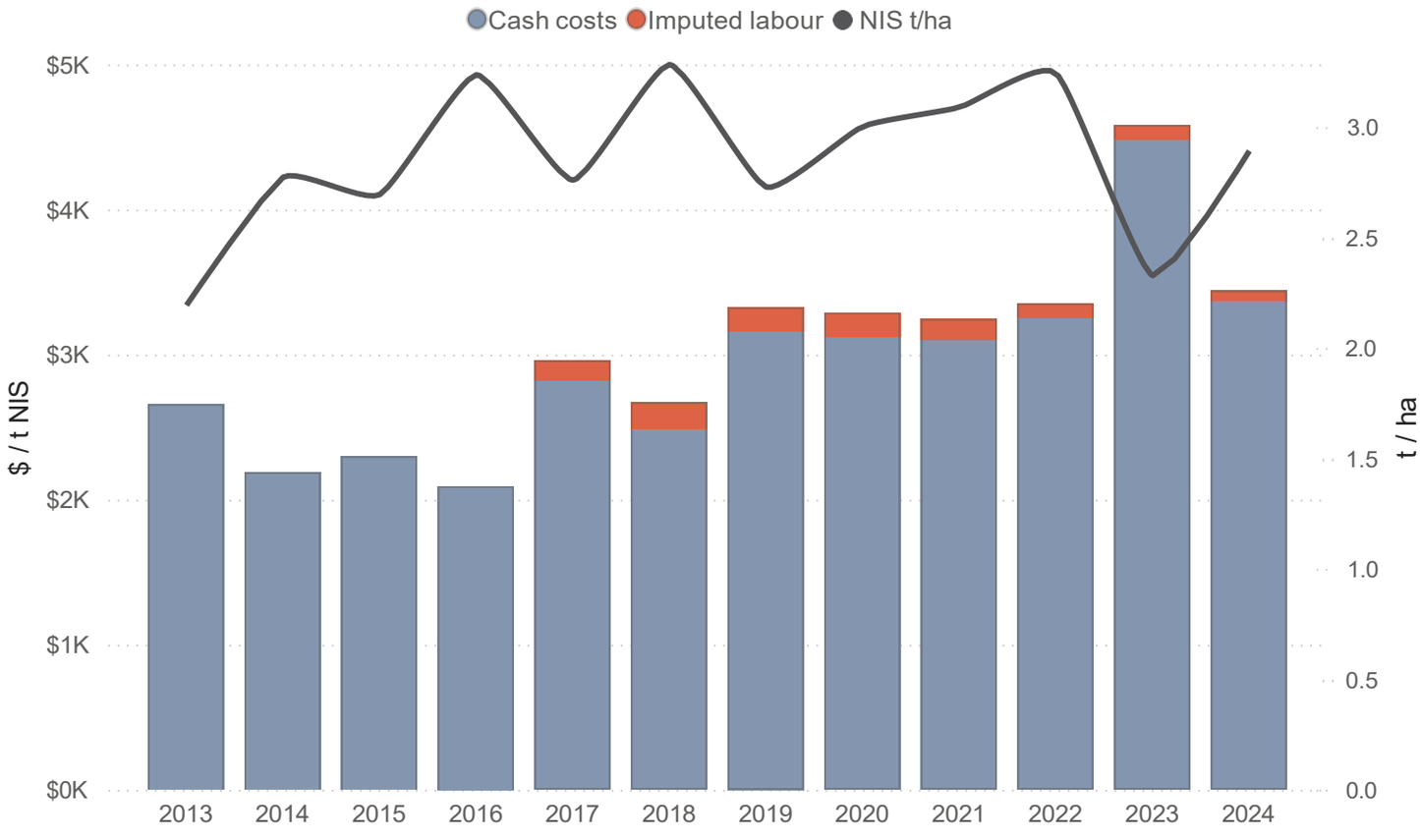
Seasonal average costs per hectare planted



Expenditure trends per tonne of nut-in-shell

The chart below shows average seasonal expenditure per tonne of nut-in-shell for bearing farms in the benchmark sample that provided cost data since 2013. Averages shown are weighted by nut-in-shell production. Data relating to unpaid labour hours is also available from 2017 and imputed at the horticultural award rate of $30 per hour to estimate equivalent dollar values.

Seasonal average costs per tonne of nut-in-shell



Average costs per tonne of nut-in-shell (since 2017)

Cash	Imputed labour	Total	Std. deviation (total)	Farm-years
$3,028	$105	$3,130	$7,044	857

Operating costs per tonne of nut-in-shell remained relatively stable between 2017 and 2022. This was partly due to rising average productivity, which offset increases in costs per hectare. Costs per tonne of nut-in-shell increased significantly in 2023, primarily due to a 28% drop in nut-in-shell productivity for farms providing cost data that season.

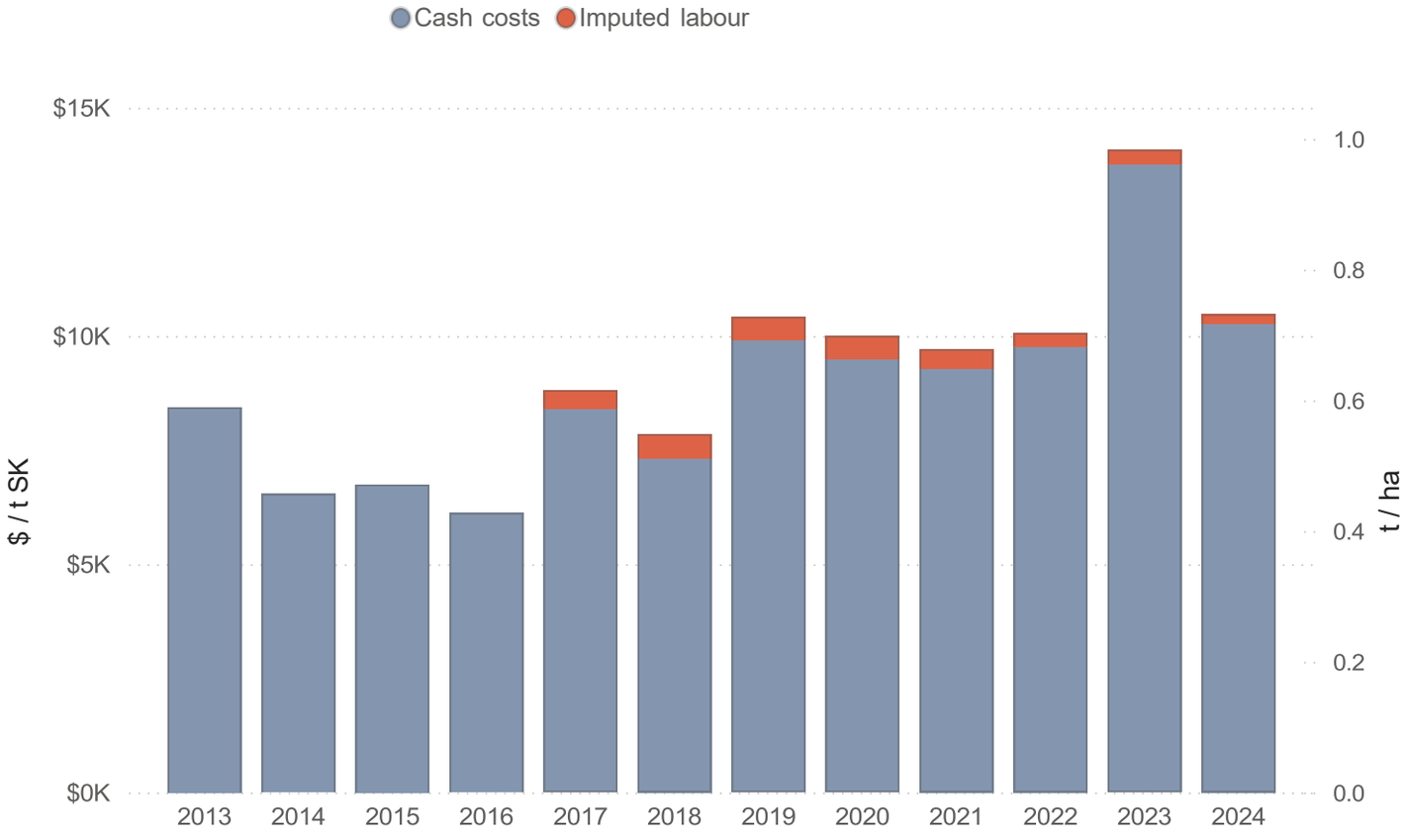
It is important to note that the number of farms contributing cost data decreased by almost 12% from 2022 to 2023, which also potentially accounted for some of the variation in average expenditure. In 2024 average costs returned to levels similar to previous seasons, partly due to increased average productivity that season. The number of farms contributing cost data also increased in 2024 to levels consistent with other seasons prior to 2023.

Expenditure trends per tonne of saleable kernel

The chart below shows average seasonal expenditure per tonne of saleable kernel for bearing farms in the benchmark sample that provided cost data since 2013. Averages shown are weighted by saleable kernel production. Data relating to unpaid labour hours is also available from 2017 and imputed at the horticultural award rate of $30 per hour to estimate equivalent dollar values.

Seasonal average costs per tonne of saleable kernel

Bearing farms only, weighted by SK production



Average costs per tonne of saleable kernel (since 2017)

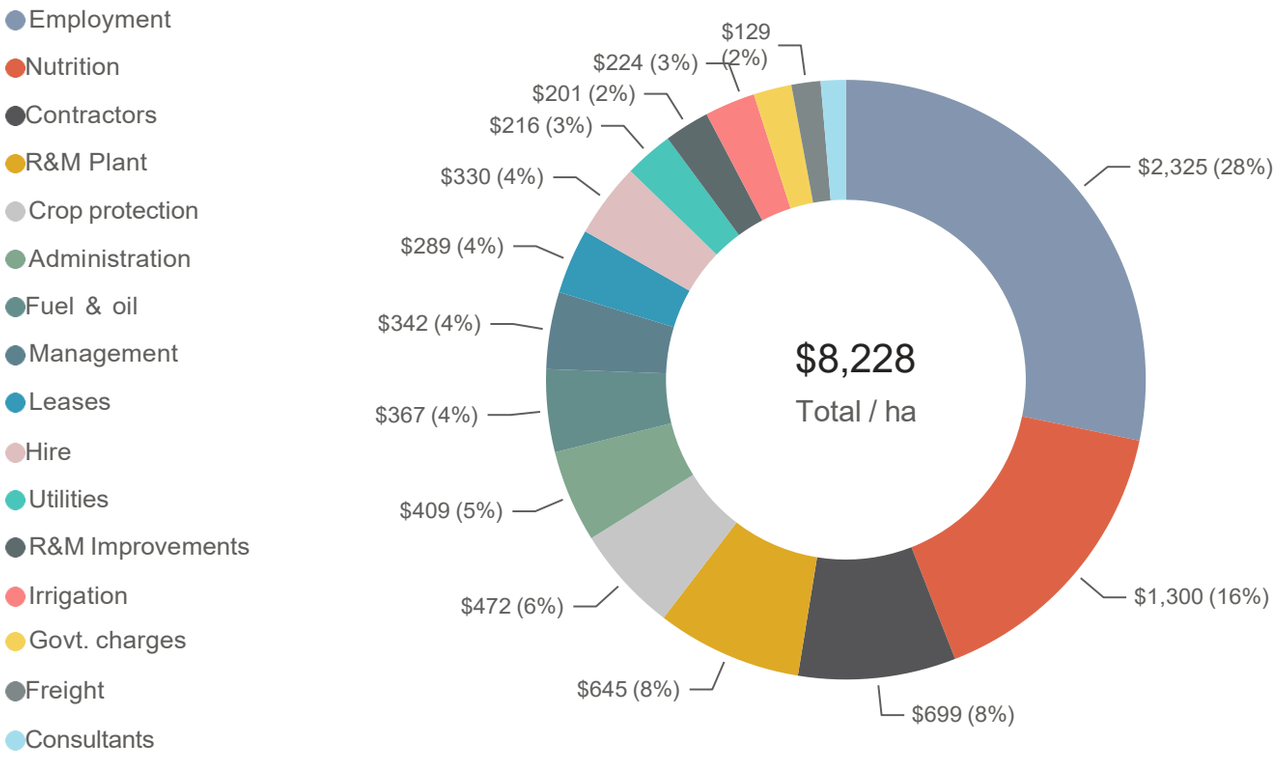
Cash	Imputed labour	Total	Std. deviation (total)	Farm-years
$9,132	$317	$9,442	$22,772	857

Although average costs per hectare have generally increased each season, costs per tonne of nut-in-shell remained more stable from 2017 to 2022, partly due to rising average productivity. Costs per tonne of saleable kernel increased significantly in 2023, primarily due to a 30% drop in productivity for farms that provided cost data that season. It is important to note that the number of farms contributing cost data decreased by almost 12% from 2022 to 2023, which also potentially accounted for some of the variation average expenditure. In 2024 average costs per tonne of saleable kernel returned to levels similar to previous seasons, partly due to increased average productivity that season. The number of farms contributing cost data also increased in 2024 to levels consistent with other seasons prior to 2023.

Cash operating expenses per planted hectare

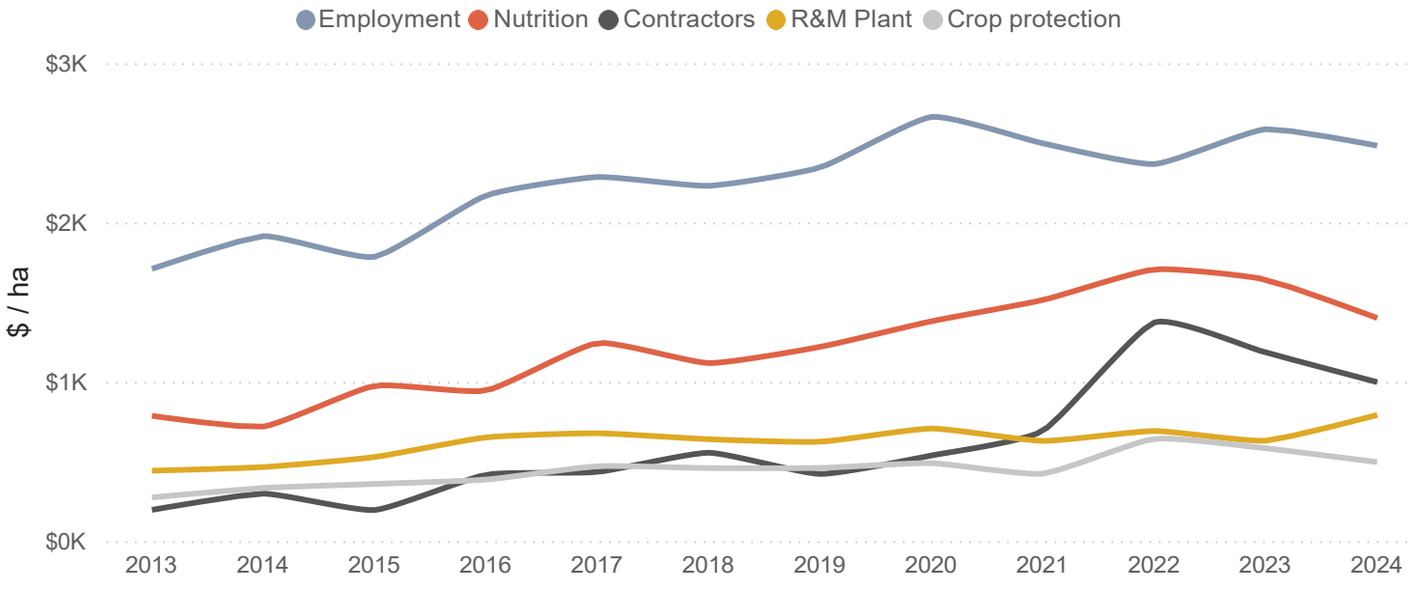
The chart below shows a breakdown of long-term average expenditure per planted hectare for bearing farms in the benchmark sample since 2013. Labour is the most significant operating expense, averaging 28% of total cash expenditure, followed by nutrition (16%) contractors (8%) and repairs and maintenance of plant (8%).

Long-term average operating expenses



The chart below shows seasonal trends for the top 5 expense categories. These five categories collectively account for more than two-thirds of total cash costs per planted hectare. The largest increases in 5-year averages for these categories during this period included contractors (211%), nutrition (64%), crop protection (45%), employment (28%) and R&M plant (25%).

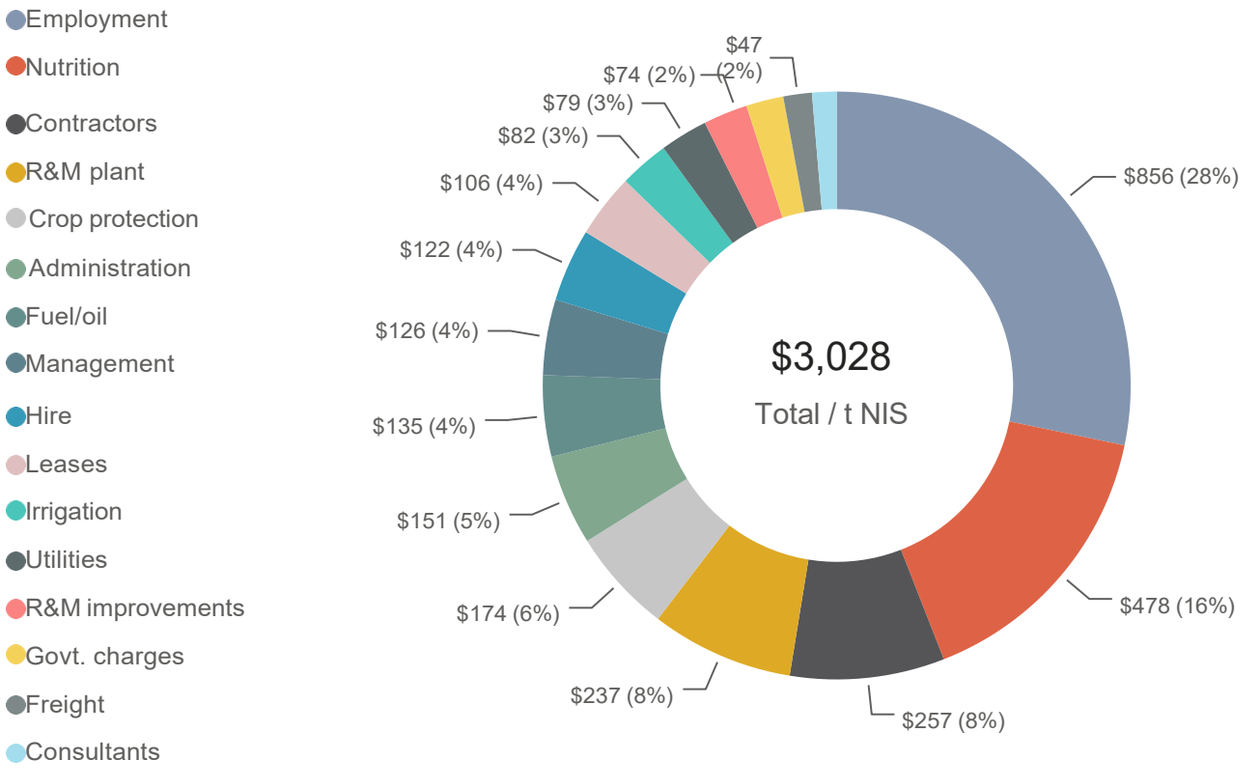
Top five operating expenses



Cash operating expenses per tonne of nut-in-shell

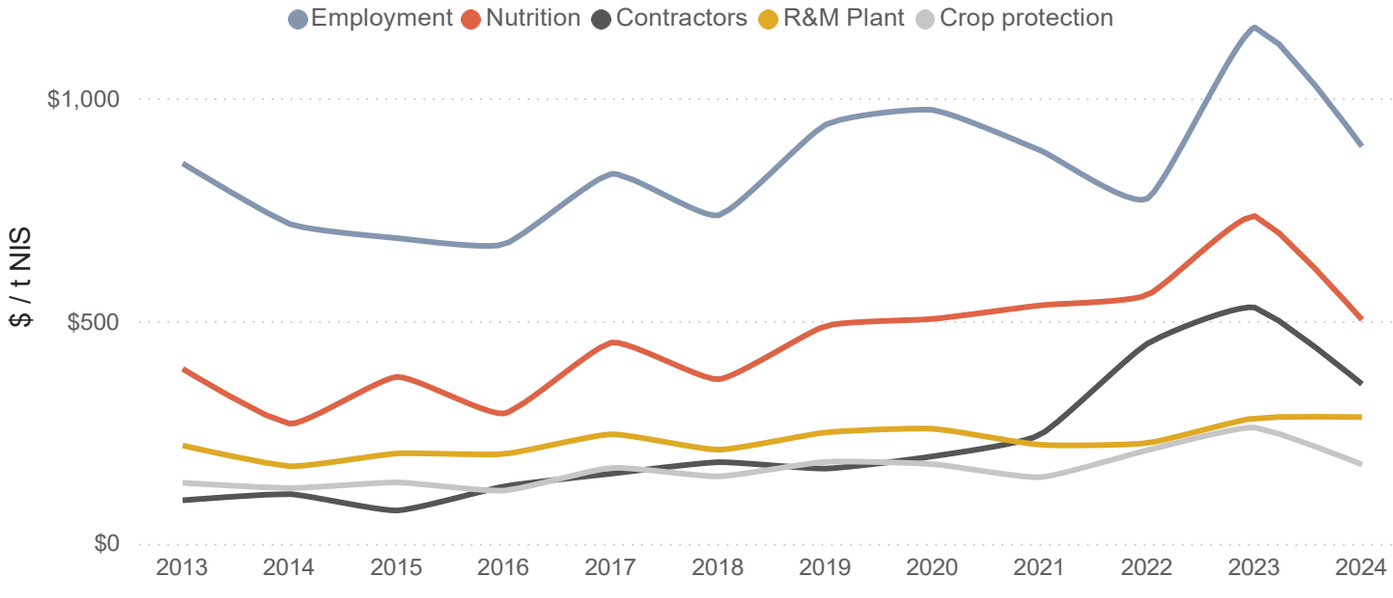
The chart below shows a breakdown of long-term average expenditure per tonne of nut-in-shell for bearing farms in the benchmark sample since 2013. Labour is the most significant operating expense, averaging 28% of total cash expenditure. This equates to approximately $0.86 per kilogram of nut-in-shell produced.

Long-term average operating expenses



The chart below shows seasonal trends for the top 5 expense categories. These five categories collectively account for more than two-thirds of total cash costs per tonne of nut-in-shell. Increases in costs per tonne over time are consistent with those of costs per planted hectare, although yearly results are more variable due to seasonal variation in productivity.

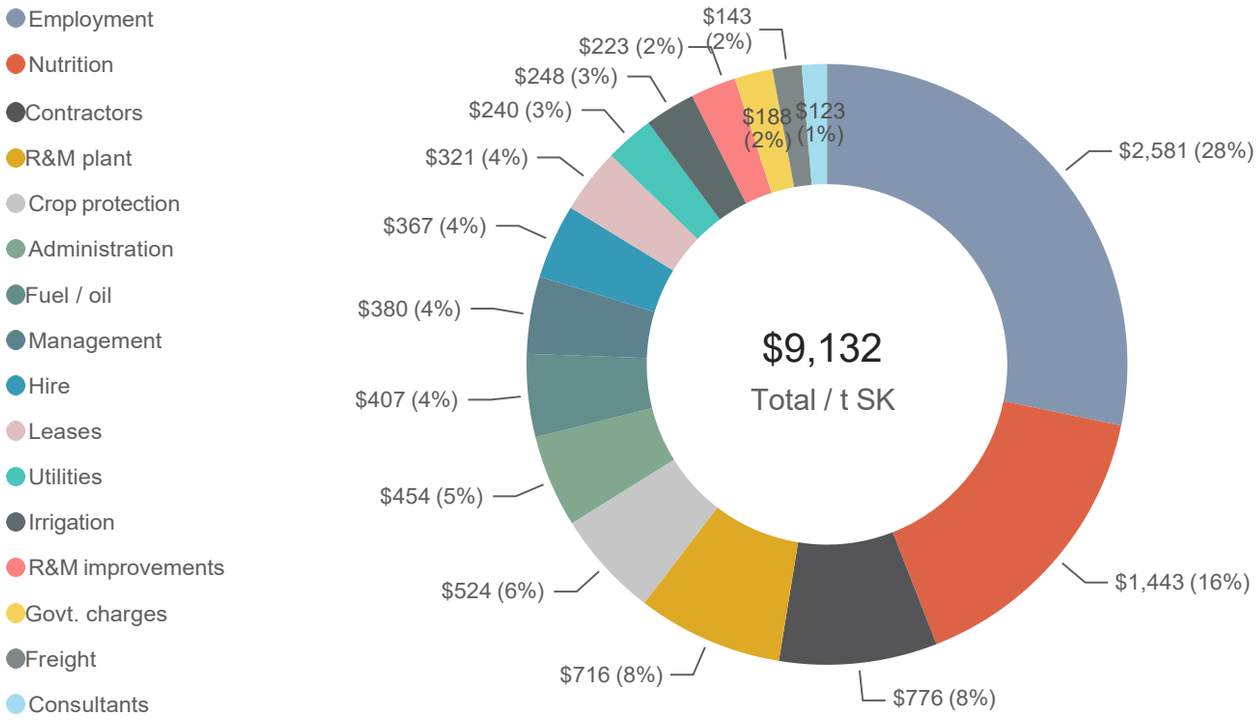
Top five operating expenses



Cash operating expenses per tonne of saleable kernel

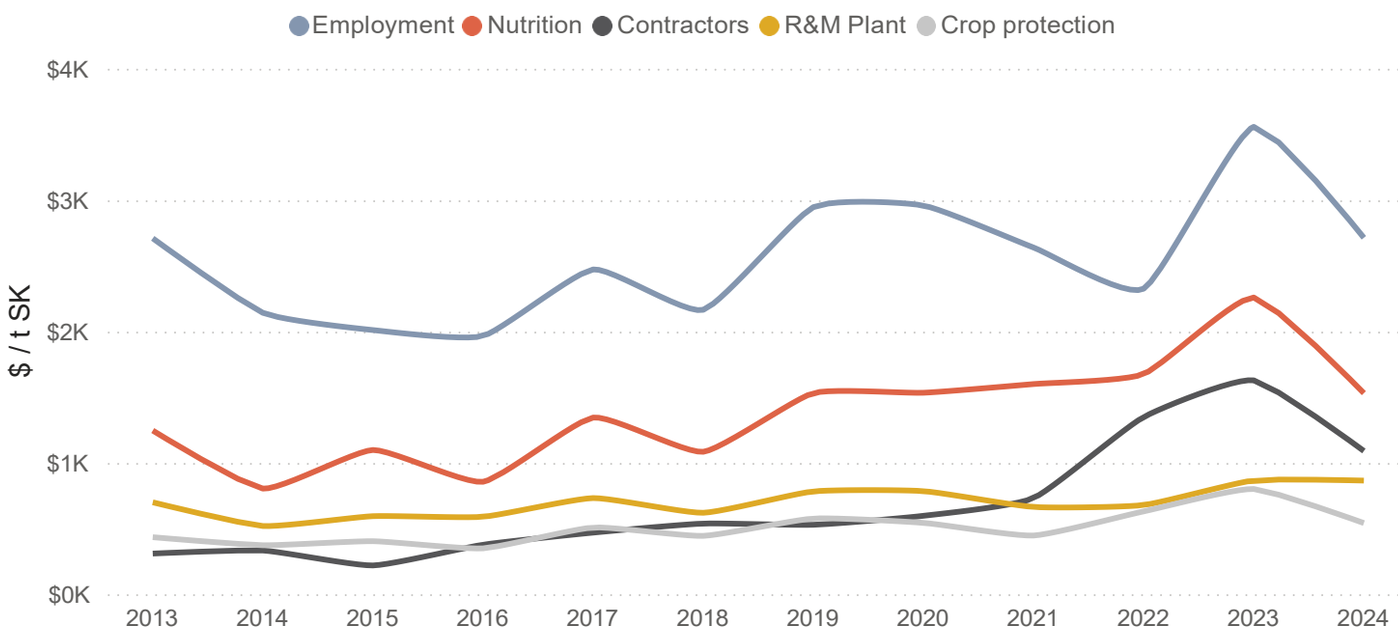
The chart below shows a breakdown of long-term average expenditure per tonne of saleable kernel for bearing farms in the benchmark sample since 2013. Labour is the most significant operating expense, averaging 28% of total cash expenditure. This equates to approximately $2.58 per kilogram of saleable kernel produced.

Long-term average operating expenses



The chart below shows seasonal trends for the top 5 expense categories. These five categories collectively account for more than two-thirds of total cash costs per tonne of saleable kernel. Increases in costs per tonne over time are consistent with those of costs per planted hectare, although yearly results are more variable due to seasonal variation in productivity.

Top five operating expenses



Seasonal profitability trends

The chart below shows trends in revenue, costs and gross margin for mature farms in the benchmark sample that provided cost data over the last five seasons (2020-2024). An average of 78 mature farms provided data each season during this five-year period for a total of 388 farm-years.

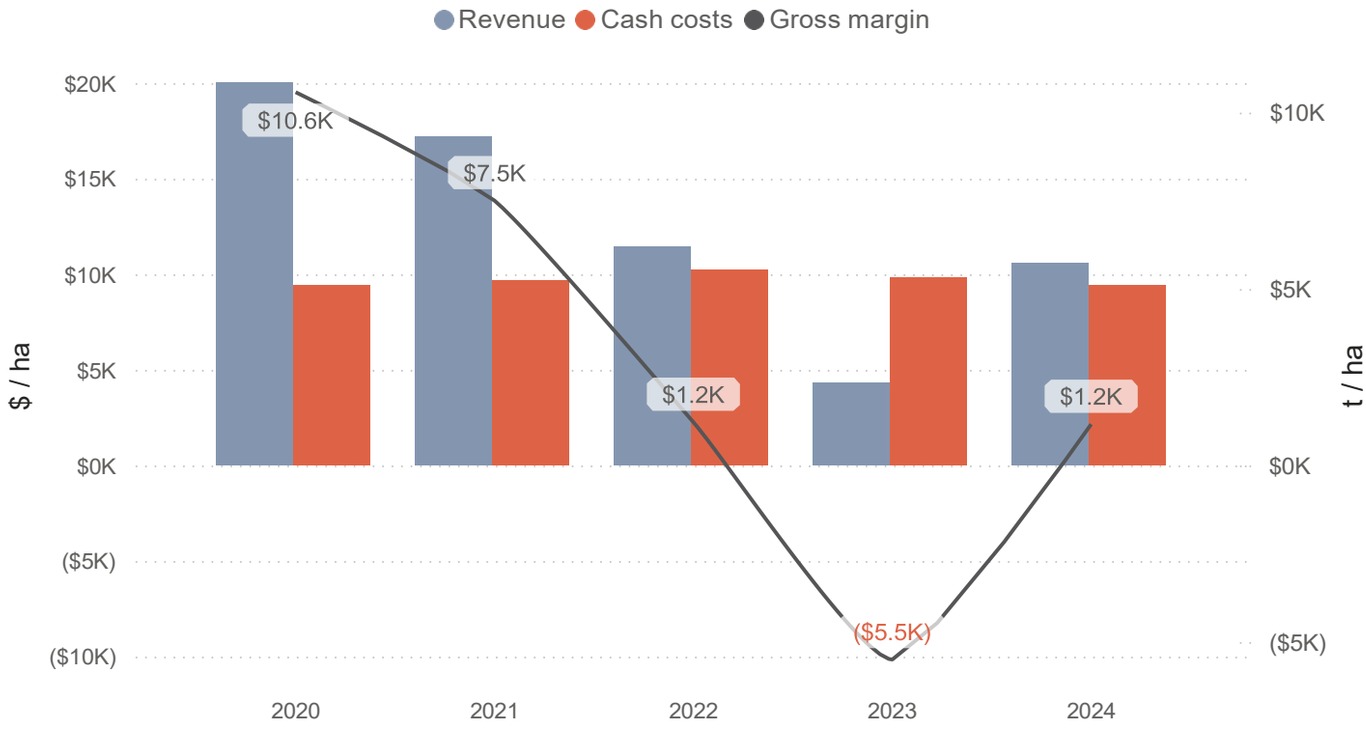
Averages shown are weighted by either production or bearing hectares. Gross margins are derived from revenue minus operating cash costs. In this instance operating costs are based only on cash costs. The nut-in-shell price used for estimating revenue each season is based on seasonal industry average base price at 33% saleable kernel recovery and adjusted according to the actual weighted average kernel recovery for each participating farm.

Declining nut-in-shell price has been the dominant factor impacting gross margins since 2020. Average costs declined slightly in 2023 and 2024 following successive seasonal increases over previous years.

Revenue, costs and gross margin by season

Year	Revenue per ha	Revenue per t NIS	Cash costs per ha	Gross margin per ha	Gross margin per t NIS	NIS t/ha	Farms
2020	$20,008	$6,650	$9,434	$10,574	$3,515	3.0	86
2021	$17,188	$5,420	$9,686	$7,503	$2,366	3.1	83
2022	$11,431	$3,490	$10,207	$1,224	$374	3.1	81
2023	$4,340	$1,880	$9,841	($5,501)	($2,383)	2.4	68
2024	$10,573	$3,490	$9,407	$1,166	$385	3.2	70
Total	**$12,529**	**$4,219**	**$9,725**	**$2,804**	**$944**	**3.0**	**388**

Revenue, costs and gross margin by season



Productivity vs expenditure

The table and chart below show revenue, cash operating costs and gross margins for groups of mature participating farms based on their long-term average NIS productivity per hectare over the last 5 seasons. Mature farms are those with a weighted average tree age of 10 years or more.

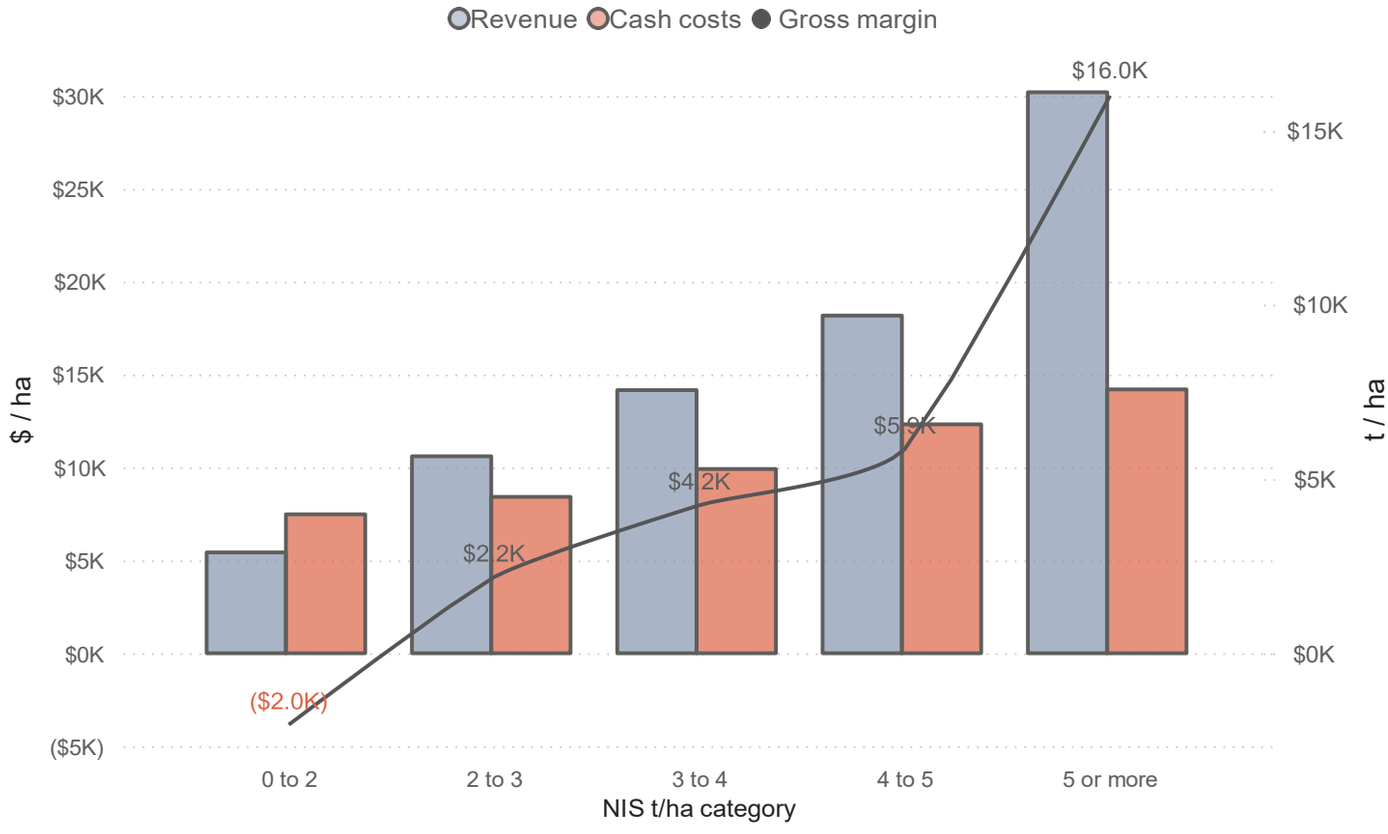
Results exclude farms where annual operating expenditure was marked as either below or above average.

Revenue, costs and gross margin by productivity category

NIS productivity category	Revenue per ha	Revenue per t NIS	Cash costs per ha	Gross margin per ha	Gross margin per t NIS	Average NIS t/ha	Farm-years
0 to 2	$5,427	$4,053	$7,477	($2,050)	($1,531)	1.2	61
2 to 3	$10,602	$4,219	$8,417	$2,185	$870	2.5	69
3 to 4	$14,162	$4,119	$9,917	$4,246	$1,235	3.5	60
4 to 5	$18,174	$4,168	$12,322	$5,853	$1,342	4.5	44
5 or more	$30,195	$5,574	$14,201	$15,994	$2,952	5.5	20
Average	**$12,582**	**$4,267**	**$9,596**	**$2,985**	**$1,012**	**3.0**	**254**

Revenue, costs and gross margin by productivity category

Weighted 5-year averages for mature farms (2020-2024)



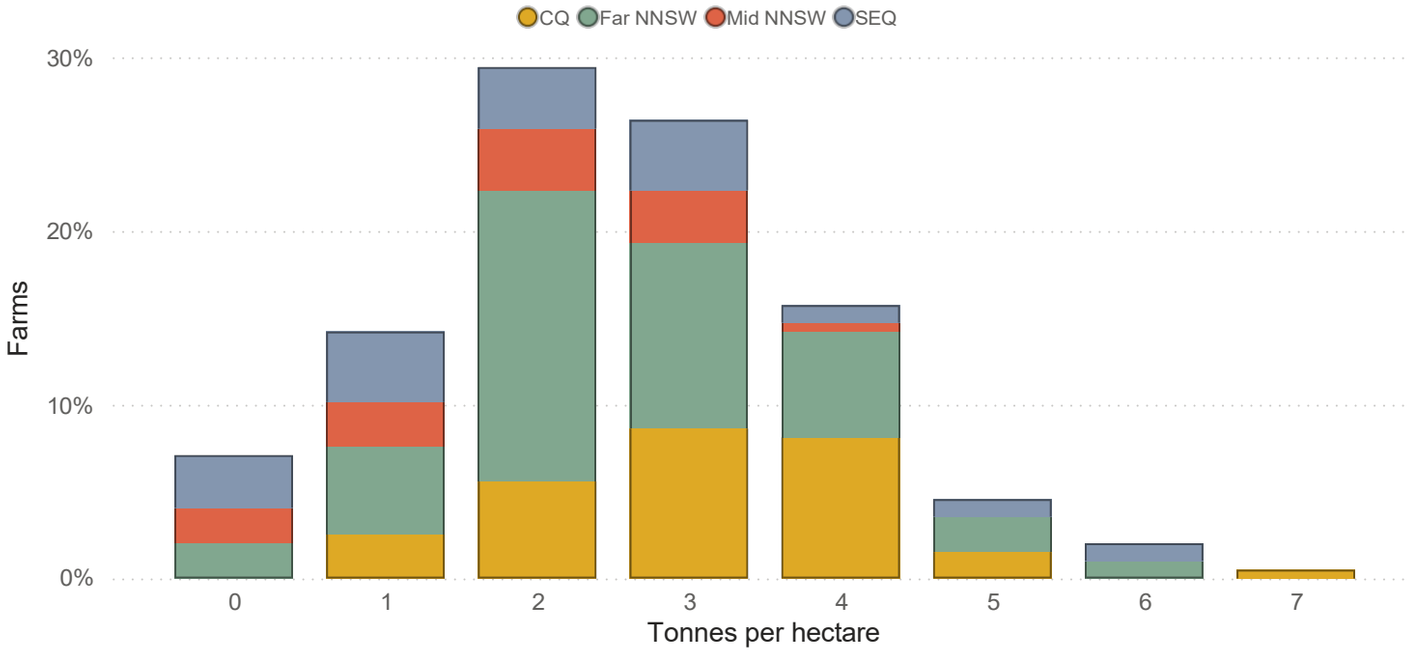
Nut-in-shell productivity distribution

The charts below show the distribution of nut-in-shell productivity per hectare for mature farms in the benchmark sample in each major production region. Mature farms are those with a weighted average tree age of 10 or more years.

The top chart shows results for the 2024 season, while the bottom chart shows long-term averages for the previous 5 seasons.

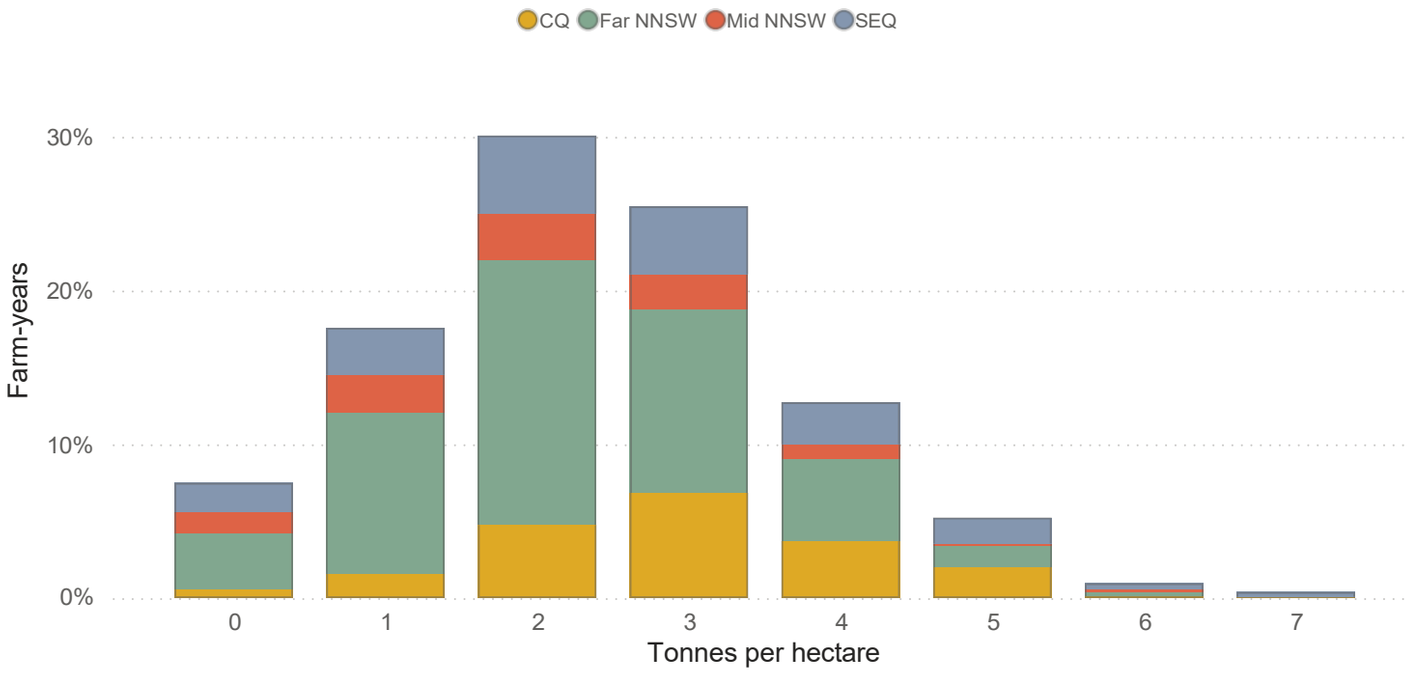
Nut-in-shell productivity distribution for the 2024 season

Mature farms only



Nut-in-shell productivity distribution 2019-2023

Mature farms only



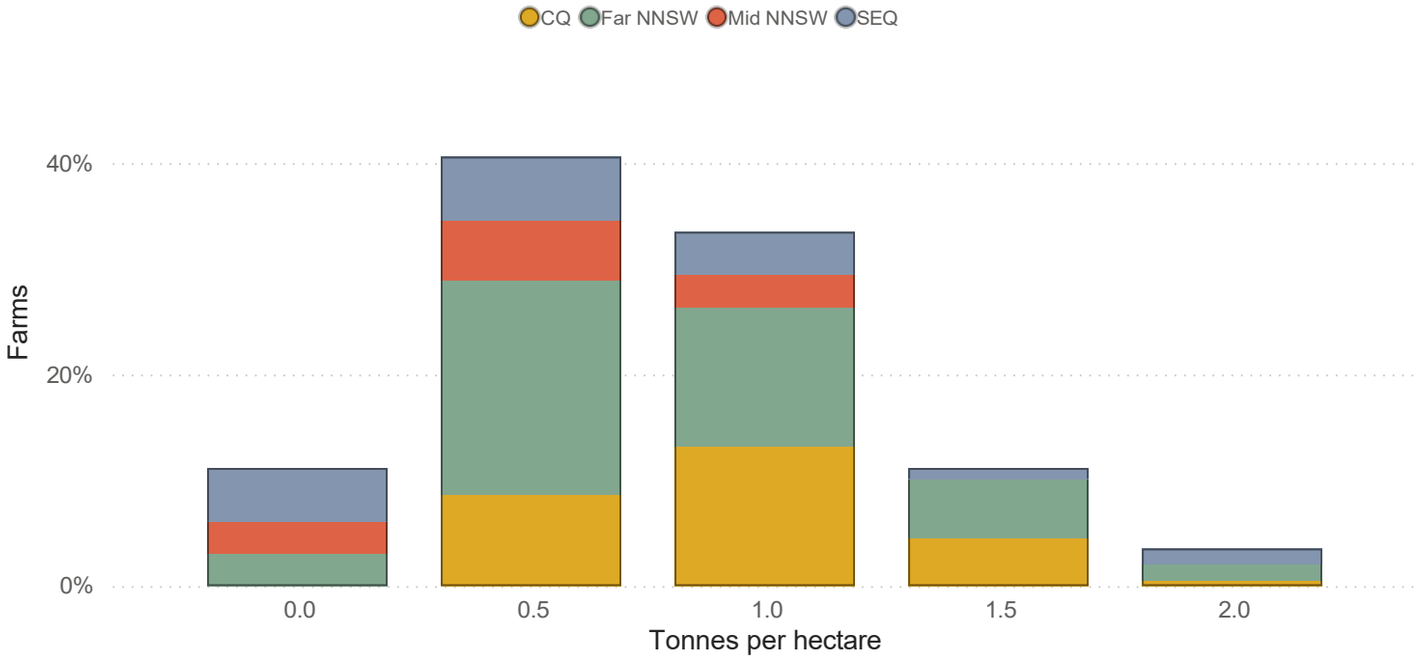
Saleable kernel productivity distribution

The charts below show the distribution of saleable kernel productivity per hectare for mature farms in each major production region. Mature farms are those with a weighted average tree age of 10 or more years.

The top chart shows results for the 2024 season, while the bottom chart shows long-term averages for the previous five seasons.

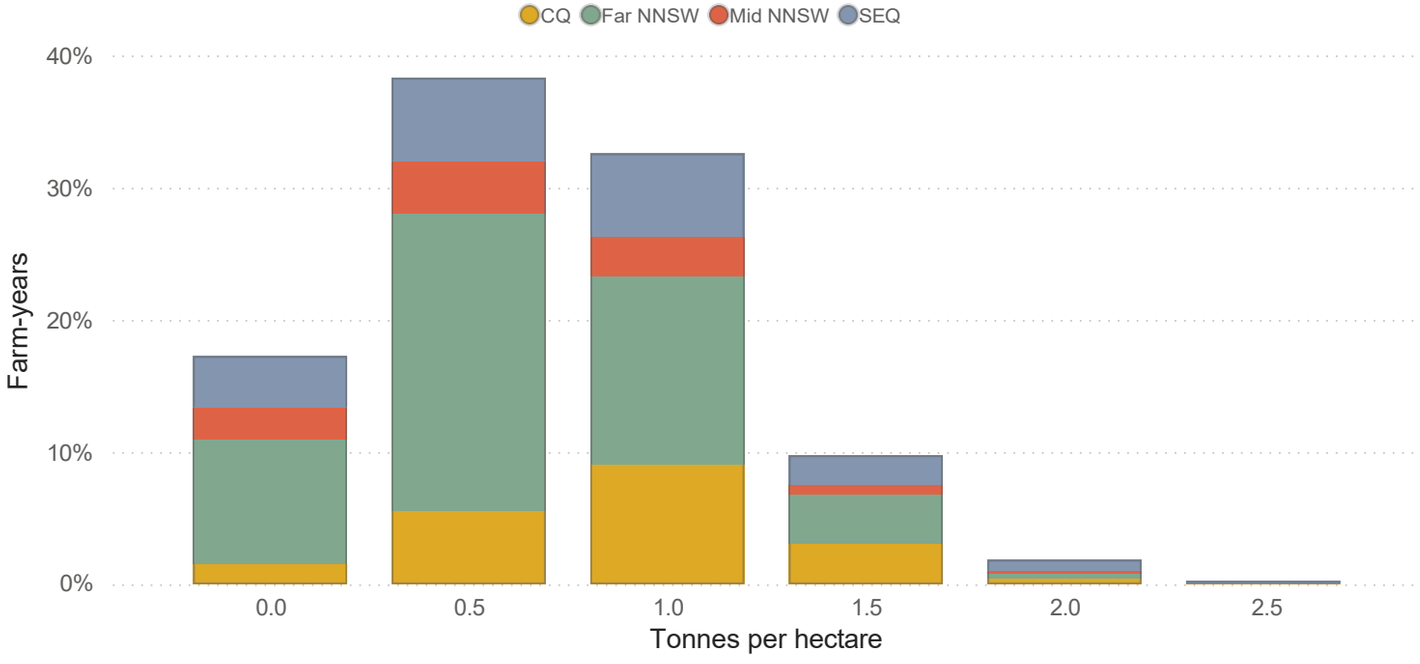
Saleable kernel productivity distribution for the 2024 season

Mature farms only

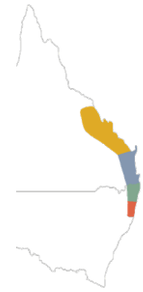


Saleable kernel productivity distribution 2019 to 2023

Mature farms only



Productivity distribution by tree age

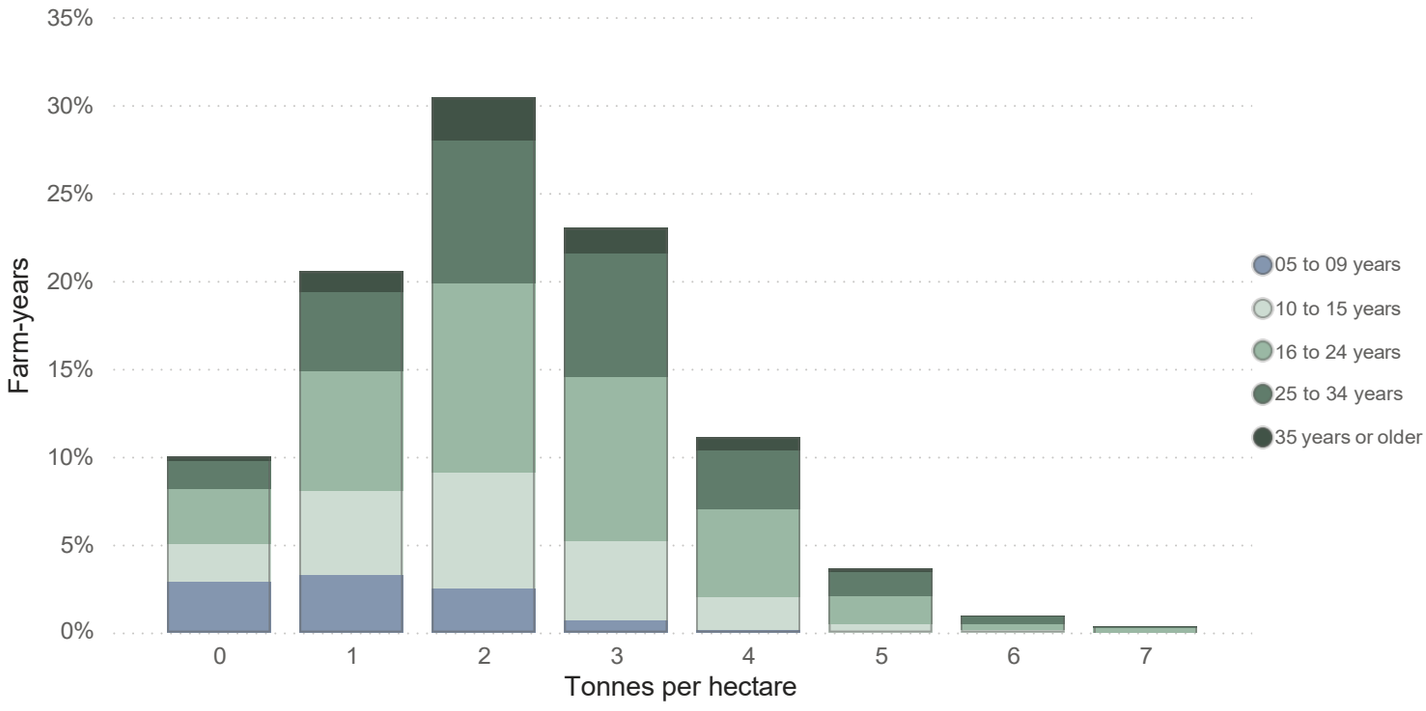


The charts below show the distribution of long-term productivity by tree age for bearing farms in the sample for all seasons since 2009 when benchmarking commenced. Farms must have some trees aged five years or older to be considered bearing.

The top chart shows nut-in-shell productivity, and the bottom chart shows saleable kernel productivity. Each bar shows the percentage of farms in the sample exceeding the indicated productivity category.

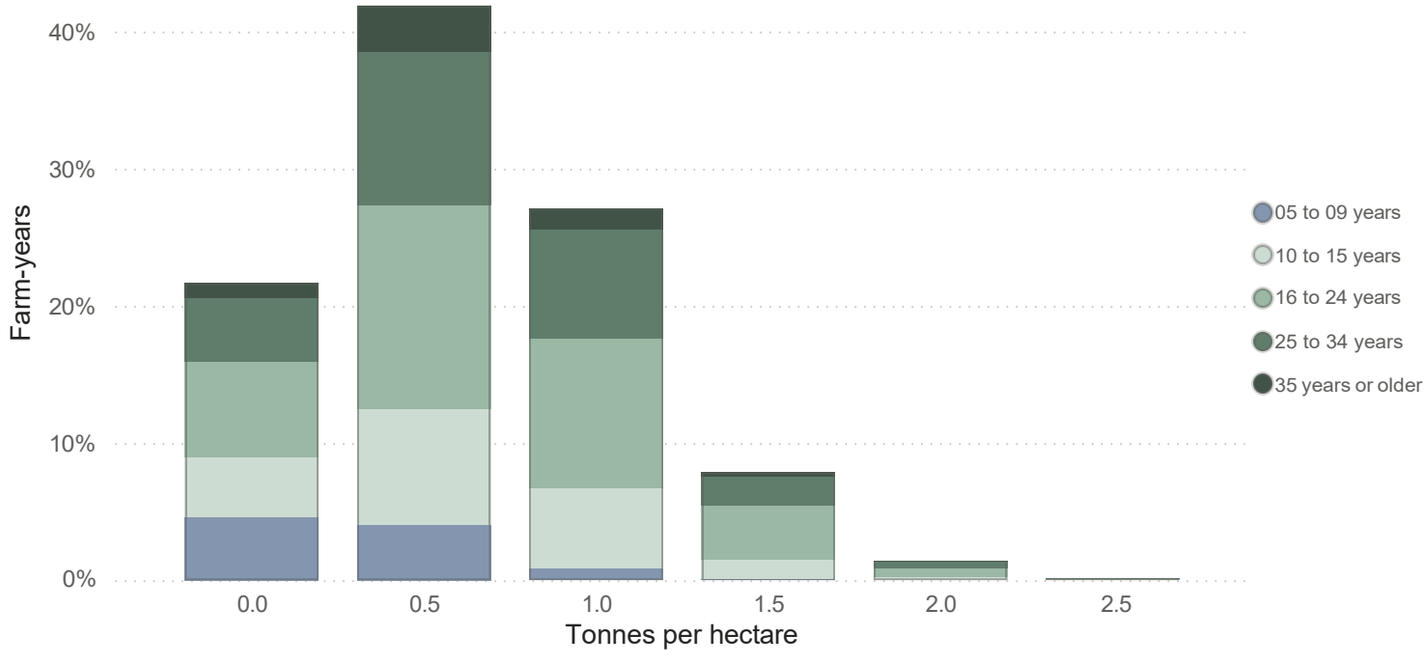
Long-term average nut-in-shell productivity by tree age

Mature farms only



Long-term average saleable kernel productivity by tree age

Mature farms only



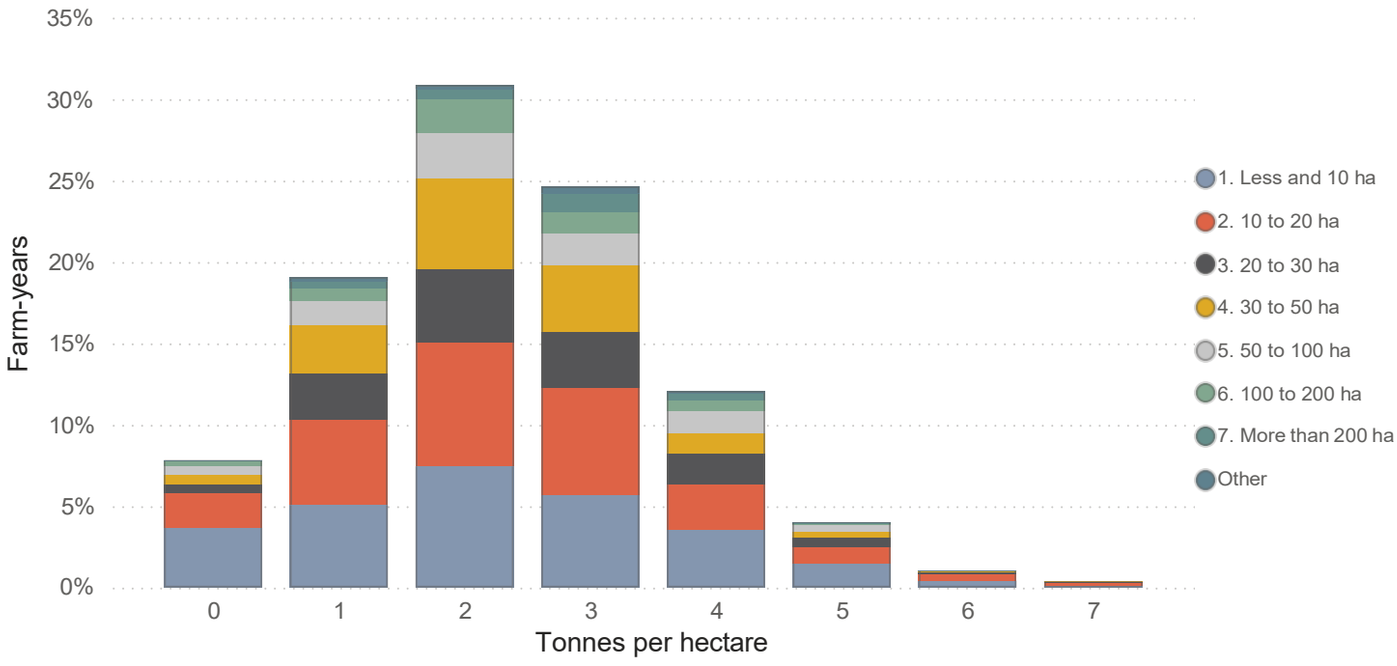
Productivity distribution by farm size

The charts below show the distribution of long-term productivity by farm size for mature bearing farms in the benchmark sample since 2009. Farms must have some trees aged five years or older to be considered bearing.

The top chart shows nut-in-shell productivity, and the bottom chart shows saleable kernel productivity. Each bar shows the percentage of farms in the sample exceeding the indicated productivity category.

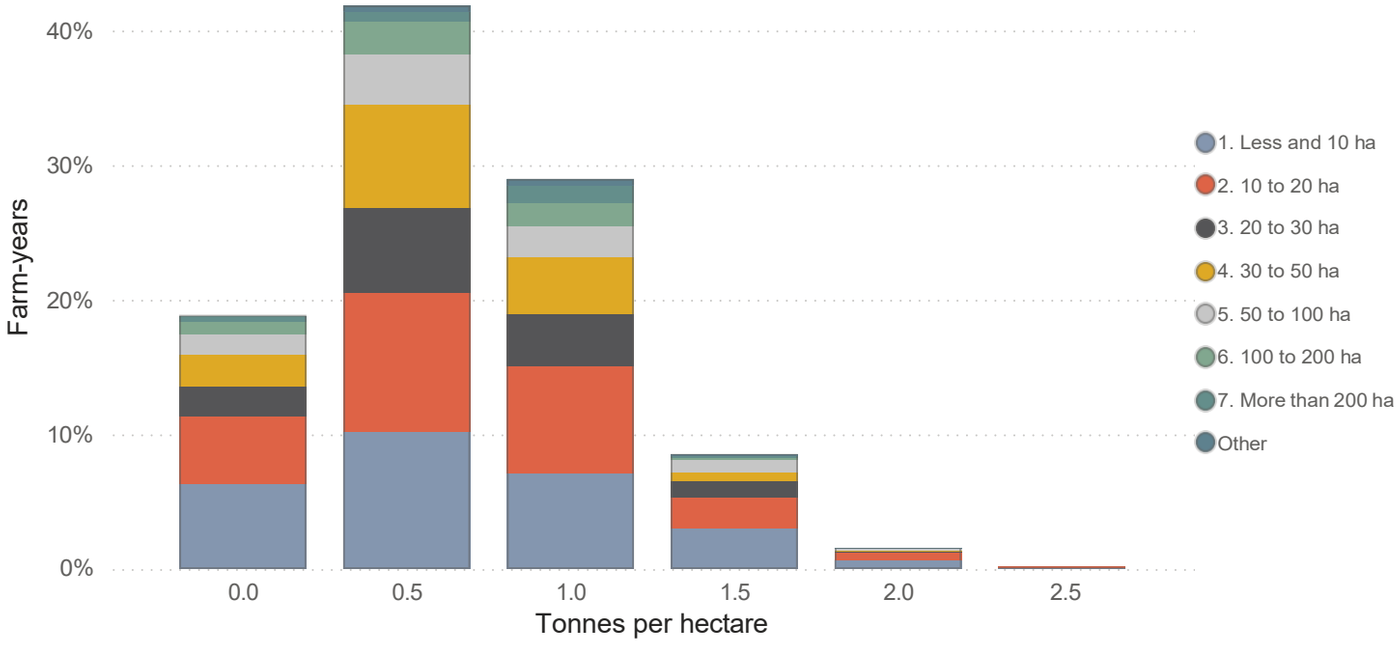
Long term nut-in-shell productivity by farm size

Mature farms only

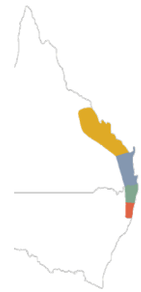


Long term saleable kernel productivity by farm size

Mature farms only



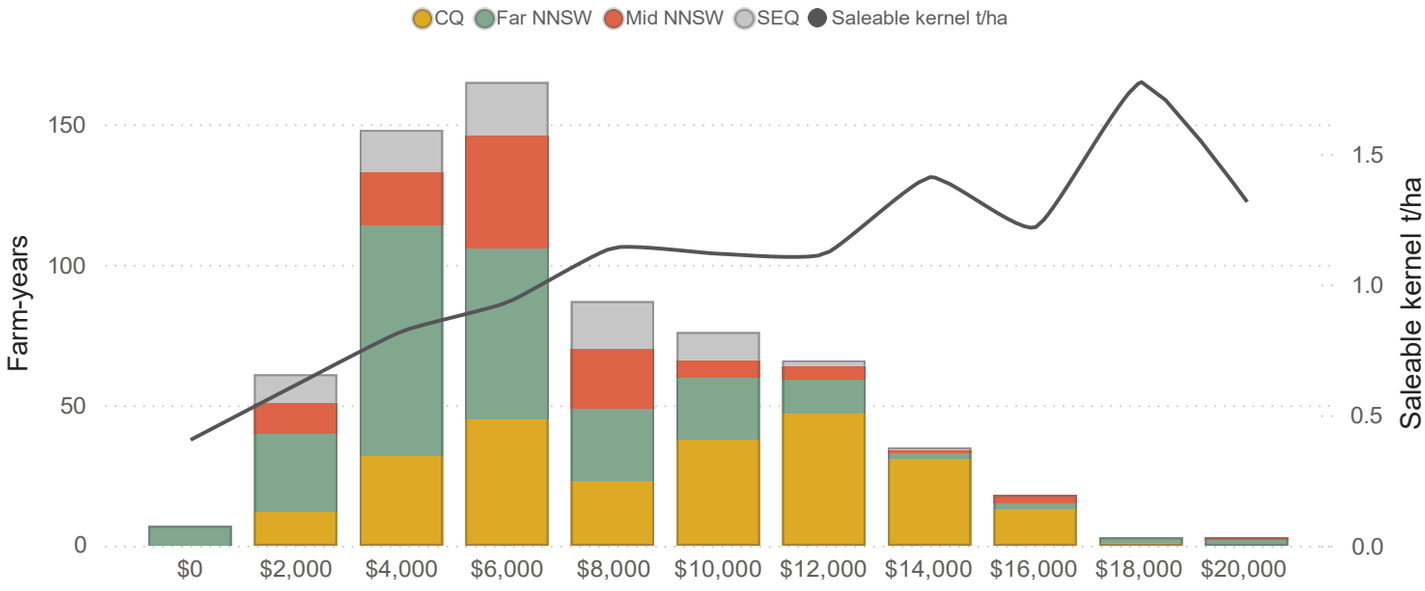
Cost distribution by region



The charts below show the distribution of long-term average cash operating costs for mature farms in each of the major production regions. Each bar shows the number of farms whose expenditure over multiple seasons (referred to as farm-years) falls within a specific range. In each case that range is from the value shown below each bar up to, but excluding, the value of the adjoining bar to its right. This is based on available seasonal cost data collected since 2013. The top chart shows costs per planted hectare and the bottom chart shows costs per tonne of saleable kernel produced. The corresponding saleable kernel productivity is shown for each cost group to provide insight into any apparent relationships between expenditure and productivity.

Distribution of long-term cash costs per planted hectare

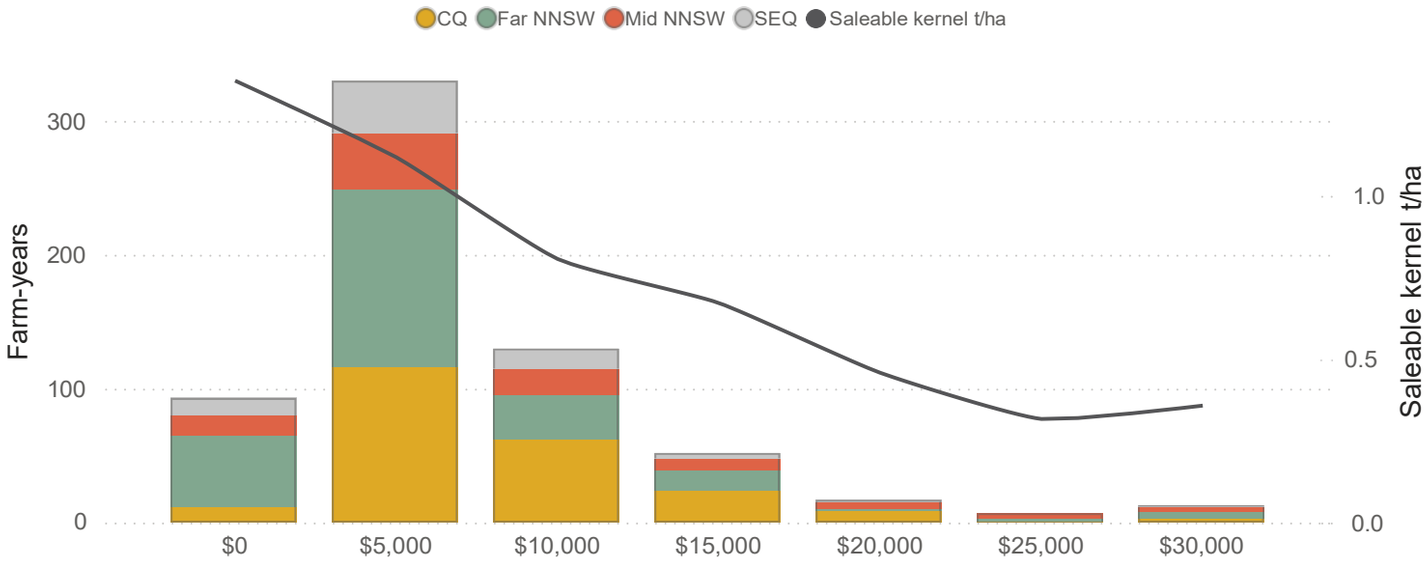
Mature farms only



These charts exclude non-bearing farms and those undertaking orchard rejuvenation, as these may skew averages. In the chart below, note also that expenditure has been capped at less than $34,000 per tonne of saleable kernel to exclude specific instances where high seasonal expenditure, combined with low productivity, skewed results. Data for a total of 19 farm-years were excluded on this basis.

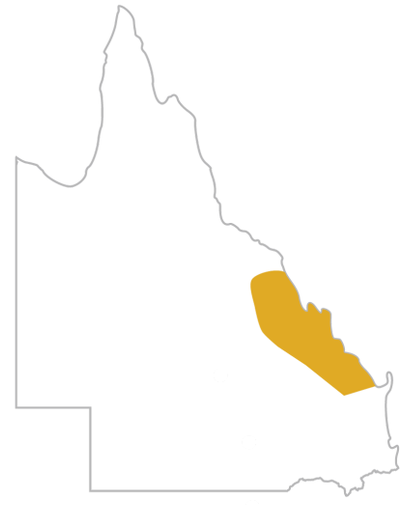
Distribution of long-term cash costs per tonne of saleable kernel

Mature farms only (capped at <$34K / tonne SK)



Central Queensland (CQ) region

The Central Queensland (CQ) region includes significant production areas in and around Bundaberg, Childers and Maryborough. It also includes currently outlying production areas such as Rockhampton.



Plantings in 2024

Total farms	Bearing farms
111	81
Tree age (all)	**Tree age (bearing)**
11	15
Avg. planted hectares	**Avg. bearing hectares**
110	64

Planting data shown is from the 2024 season, while long-term productivity and cost averages are for bearing farms only over the last five seasons (2020-2024).

Averages are weighted by planted area to best illustrate results for the whole region.

An average of 91 farms (64 bearing) in the CQ region have participated in benchmarking over the last five seasons. A total of 111 farms provided data for the 2024 season, representing 40% of all farms in the benchmark sample.

The CQ region has the youngest average tree age of the four major production regions in Australia, at just 11 years. Approximately 42% of this region's plantings in the benchmark sample are less than five years of age, and therefore not yet considered bearing. In 2024 the average age of bearing farms in the region was 15 years.

Productivity 2020-2024

NIS t/ha	SK t/ha
3.3	1.1
Saleable KR%	**Premium KR%**
35.5	33.6
Commercial KR%	**Reject KR%**
2.0	3.0

In 2024 the average size of participating farms in the CQ region was 110 planted hectares and 64 bearing hectares, the largest of all regions in the benchmark sample.

Average long-term productivity per bearing hectare and average kernel recovery are shown for all bearing farms in the region for the last five seasons. These averages are based on 322 farm-years.

There was a sharp decline in productivity in this region in 2023 compared with the previous season, with mature farms down 28%. Average productivity subsequently increased in the 2024 season to be closer to long-term average levels. Despite large seasonal variation, there has been a general trend of increasing productivity in this region over the long-term.

Costs 2020-2024

Cash $/ha	Total $/ha
$10,284	$10,295
Cash $/T NIS	**Total $/T NIS**
$3,627	$3,631
Cash $/T SK	**Total $/T SK**
$10,891	$10,903

Average operating costs are shown for the last five seasons (175 farm-years).

Costs have generally risen in most seasons since collection commenced in 2013. Average costs for this region can vary significantly between seasons and farms. The standard deviation in cash costs per hectare over the last five seasons was approximately $3833 per hectare, or 37% of the mean.

Average costs per hectare in CQ are generally higher than other regions, although average costs per tonne of saleable kernel are consistent with other regions due to the relatively higher average productivity in the CQ region. The SEQ region has lower cash costs per tonne of saleable kernel compared to the CQ region, due to a combination of lower expenditure per hectare, slightly higher average productivity per hectare and higher use of unpaid labour, particularly on owner-operated farms.

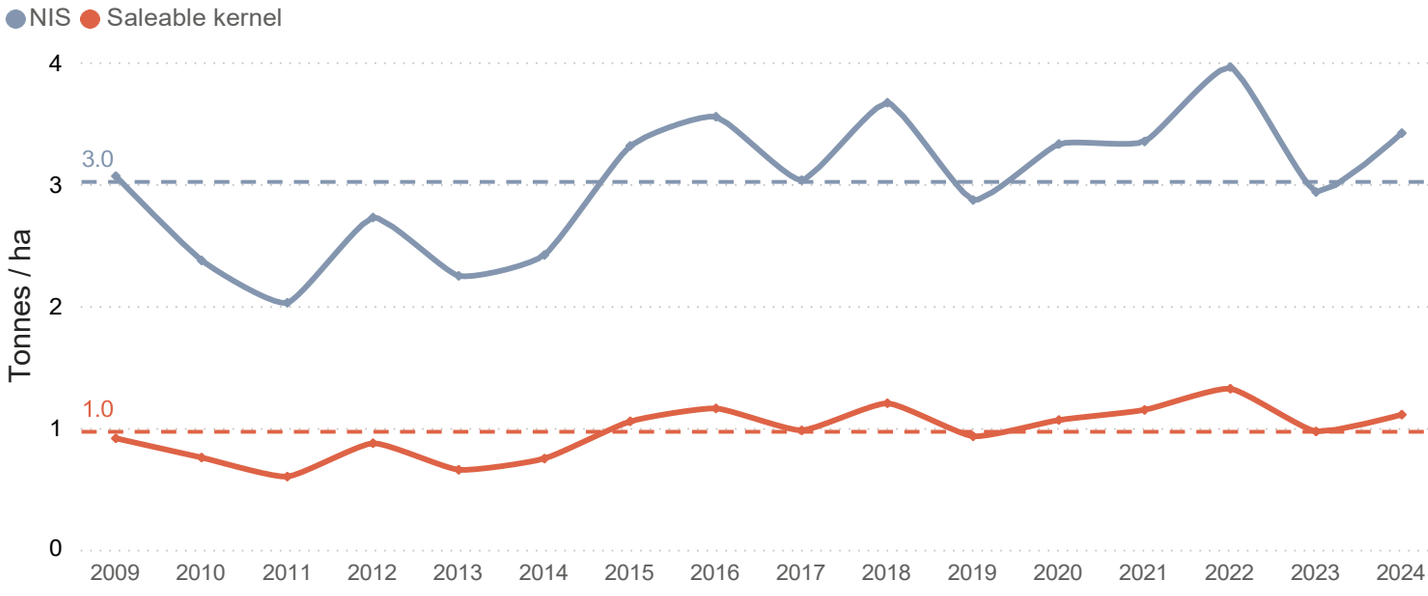
Seasonal productivity and kernel recovery trends in Central Queensland

The charts below show seasonal trends in average productivity and kernel recovery for farms in the Central Queensland region. The top chart shows average nut-in-shell and saleable kernel productivity for mature farms in the benchmark sample, weighted by production. Mature farms are those with a weighted average tree age of 10 or more years. The bottom chart shows average saleable, premium, commercial and reject kernel recovery for all farms in the region.

In 2024 average productivity for farms in the CQ region was above the long-term average, following lower-than-average productivity in 2023. Average premium and saleable kernel recovery were slightly lower in 2024 compared with 2023, while commercial and reject kernel recovery were both higher compared with the previous season.

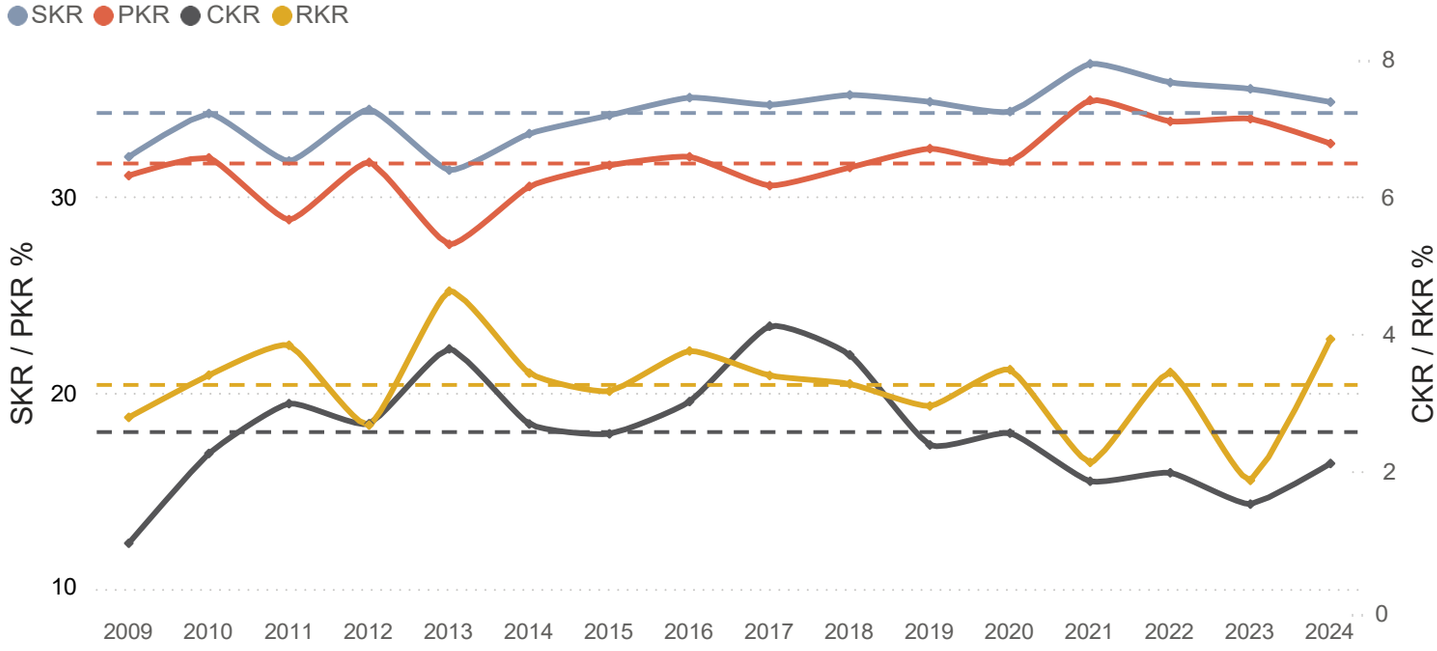
Productivity trends

Mature farms only, weighted by bearing hectares



Kernel recovery trends

Weighted by bearing hectares



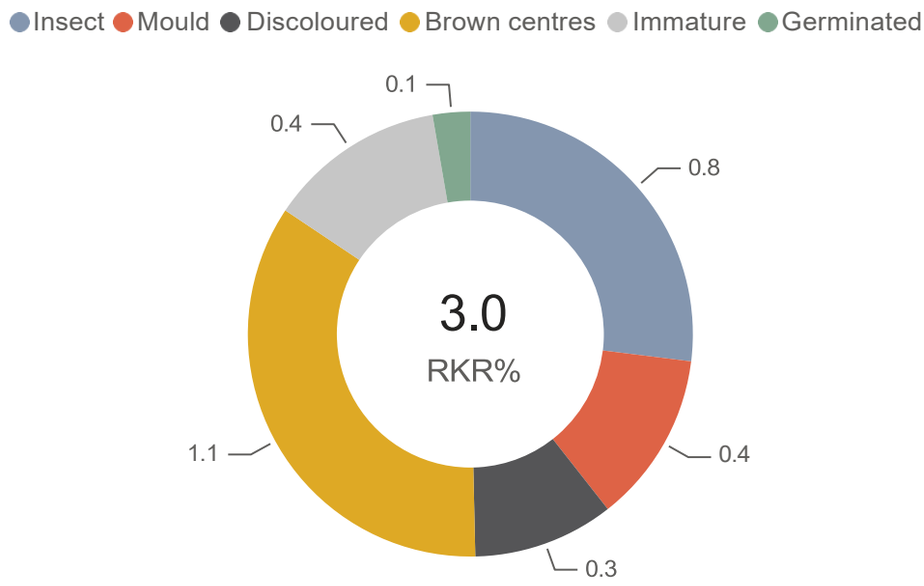
Seasonal reject trends in Central Queensland

The charts below show seasonal factory reject trends for farms in the benchmark sample within the Central Queensland region. All major factory reject categories are shown including insect damage, mould, discolouration, brown centres (internal discolouration), immaturity (shrivelled kernel) and germination (discoloured crest).

The top chart shows a breakdown of long-term average factory rejects since 2009, weighted by NIS production. The bottom chart shows seasonal factory reject trends, also weighted by NIS production.

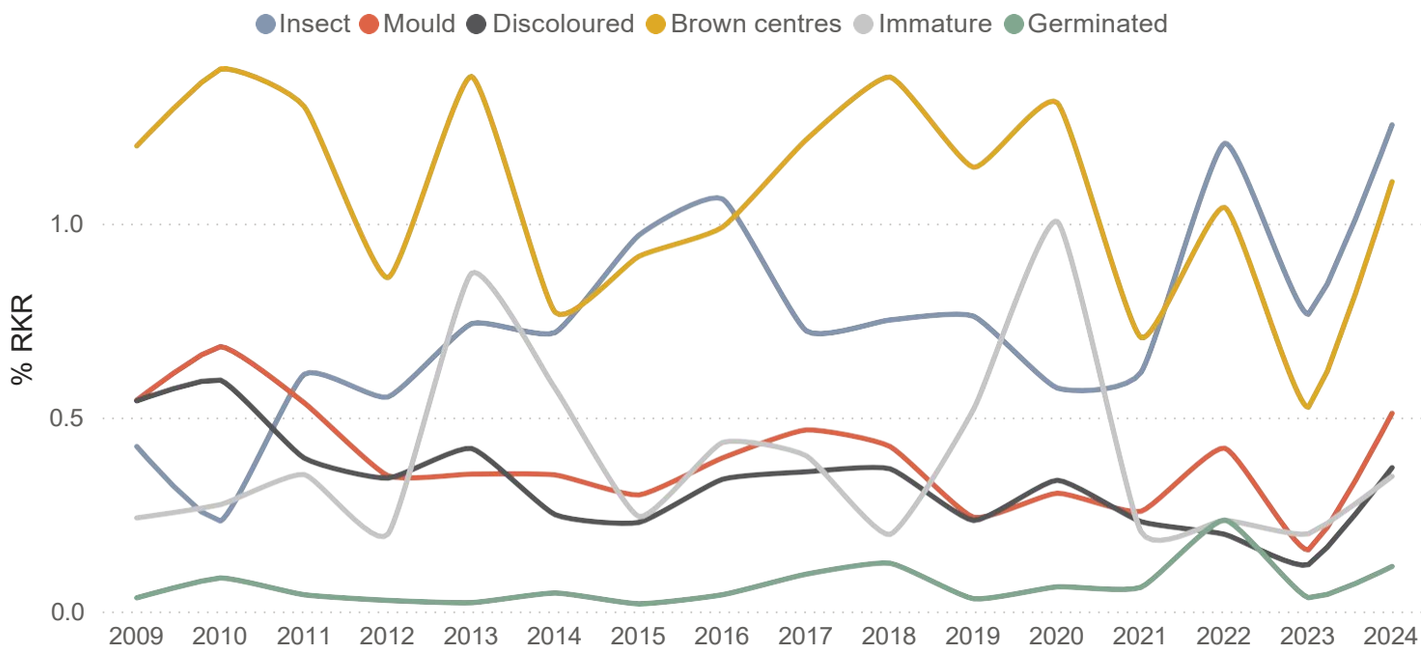
Rejects in all categories were higher in 2024 compared with 2023. While brown centres has historically been the most significant cause of factory rejects in CQ in most seasons, average insect damage levels have been higher than brown centres since 2022.

Long-term average factory rejects by category



Factory reject trends

Bearing farms, weighted by NIS production



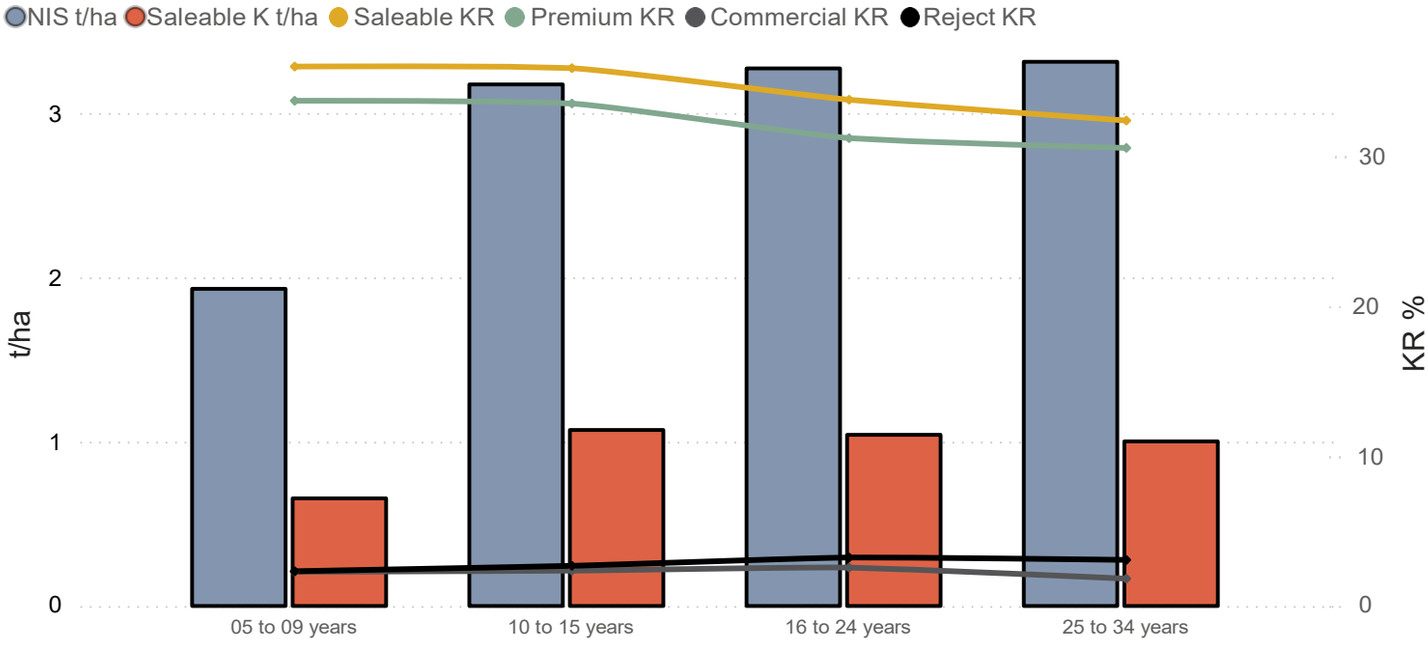
Long-term trends by tree age in Central Queensland

The charts below show long-term trends in productivity, kernel recovery and factory rejects for farms in the benchmark sample in the Central Queensland region since 2009.

The top chart shows the unweighted average productivity and kernel recovery for farms within various average tree age categories ranging from 5-9 years through to 35+ years. The bottom chart shows a breakdown of unweighted average factory reject categories for each of those tree age groups. Note that results for farms aged 35 years or more are not shown due to insufficient data.

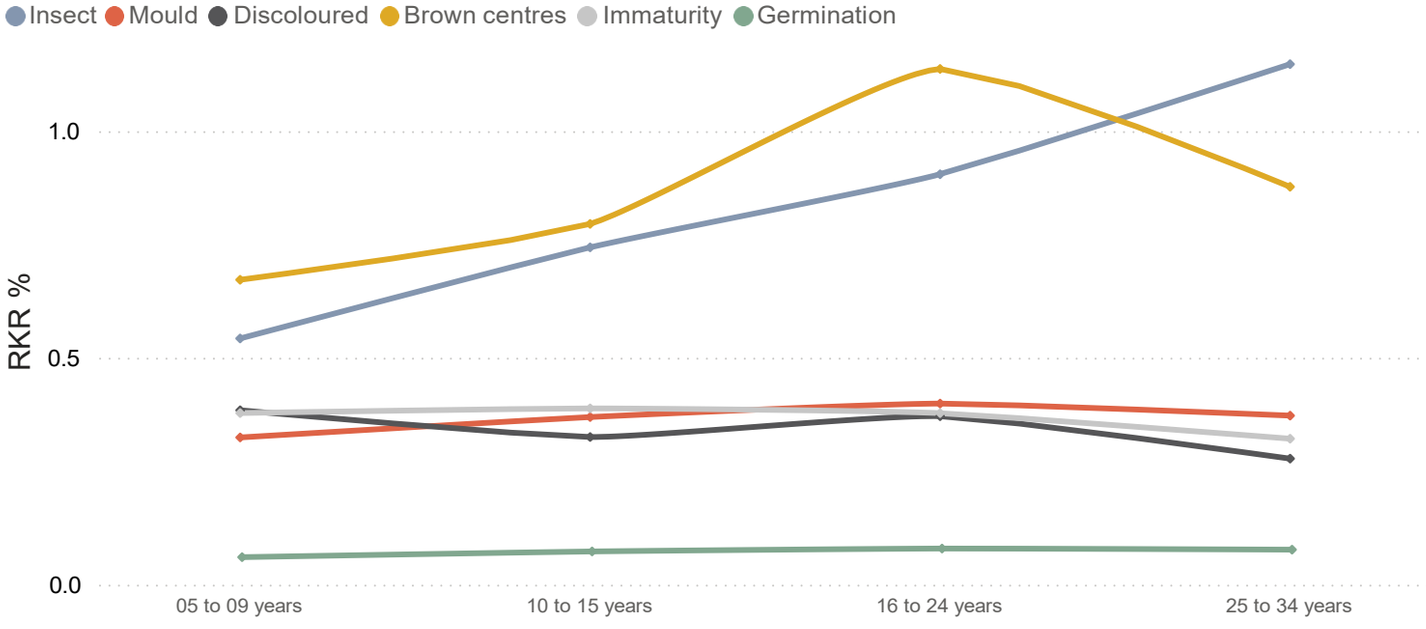
Productivity and kernel recovery by tree age

Unweighted averages for bearing farms



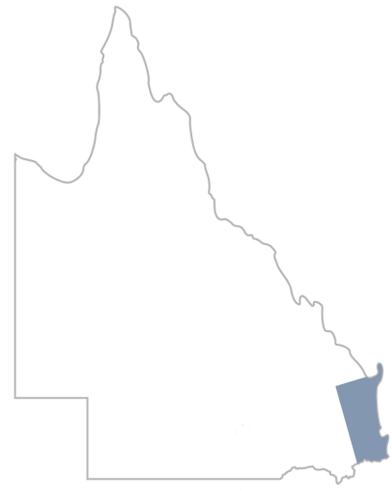
Factory rejects by tree age

Unweighted averages for bearing farms



South-east Queensland (SEQ) region

The South-east Queensland (SEQ) region includes the two main production areas of Glass House Mountains and Gympie. Approximately one third of the farms in this region are not irrigated, most of which are in the Glass House Mountains area.



Plantings in 2024

Total farms	Bearing farms
38	36
Tree age (all)	**Tree age (bearing)**
26	26
Avg. planted hectares	**Avg. bearing hectares**
43	43

Planting data shown is from the 2024 season, while long-term productivity and cost averages are for bearing farms only over the last five seasons (2020-2024).

Averages are weighted by planted area to best illustrate results for the whole region.

An average of 48 farms in the SEQ region have participated in benchmarking each season since 2009 and 47 farms per season over the last five years. A total of 38 farms provided data for the 2024 season, including 20 farms from Gympie and 18 farms from Glass House Mountains. These farms represent almost 14% of all the farms in the benchmark sample.

Almost 99% of this region's plantings in the benchmark sample are of bearing age. In 2024 the average age of bearing farms in the region was 26 years and the average farm size was 43 hectares.

Productivity 2020-2024

NIS t/ha	SK t/ha
3.0	1.0
Saleable KR%	**Premium KR%**
34.5	32.3
Commercial KR%	**Reject KR%**
2.1	2.1

Average long-term productivity per bearing hectare and average kernel recovery are shown for all bearing farms in the region for the last five seasons. These averages are based on 228 farm-years.

Average productivity declined by 37% in the SEQ region in 2024 compared with the previous season. This was the lowest average recorded during the last five seasons. Despite this, the 5-year average yield per hectare (2020-2024) remains approximately 30% higher than the 5-year average from a decade ago (2010- 2014).

Costs 2020-2024

Cash $/ha	Total $/ha
$8,676	$9,447
Cash $/T NIS	**Total $/T NIS**
$2,800	$3,049
Cash $/T SK	**Total $/T SK**
$8,451	$9,202

Average operating costs are shown for the last five seasons (39 farm-years).

Between 2013 and 2020 average cash costs increased each season, reaching almost $11,500 per hectare in 2020 with a standard deviation of 48%. Average cash costs were lower from 2021 to 2023 and dropped further in 2024 to $6865 per hectare. It should be noted that an average of just eight SEQ farms provided annual cost data over the last five seasons, so these trends should be considered with caution.

Average costs per hectare in SEQ are generally higher than NSW farms but slightly lower than farms in the CQ region. SEQ farms have a lower long-term average cost per tonne of saleable kernel than other regions.

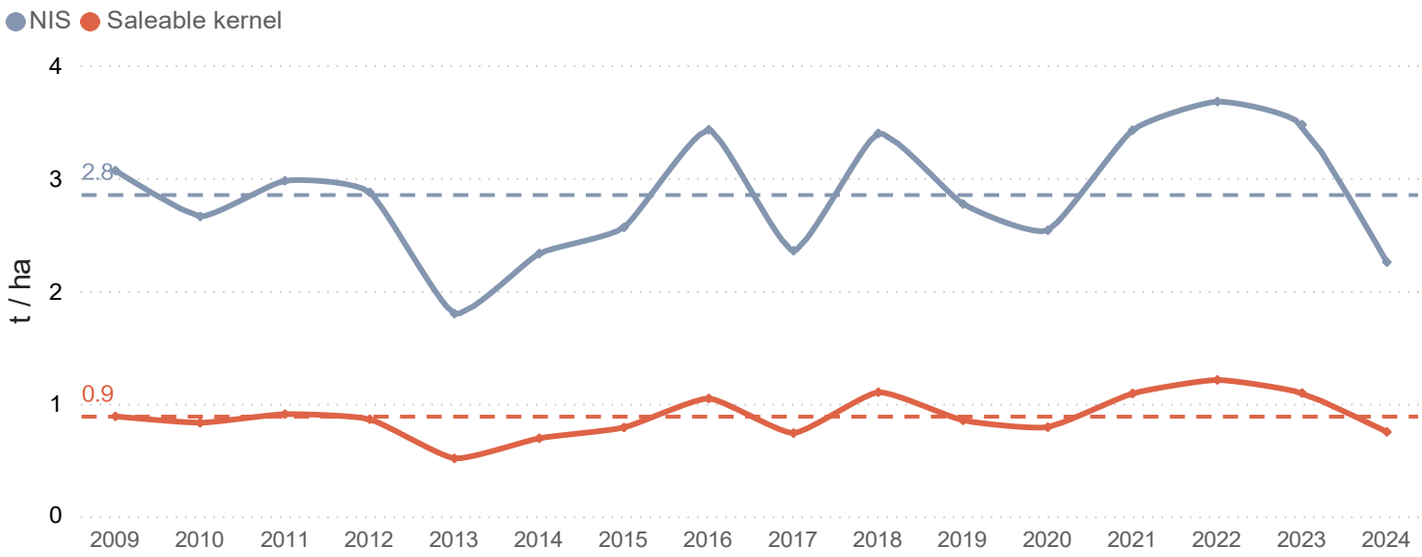
Seasonal productivity and kernel recovery trends in South-east Queensland

The charts below show seasonal trends in average productivity and kernel recovery for farms in the South-east Queensland region. The top chart shows average nut-in-shell and saleable kernel productivity for mature farms in the benchmark sample, weighted by production. Mature farms are those with a weighted average tree age of 10 or more years. The bottom chart shows average saleable, premium, commercial and reject kernel recovery for all farms in the region.

The SEQ region had the lowest average productivity of all major production regions in 2024. Some growers in SEQ reported challenging seasonal growing conditions, including hot dry weather during 2023 followed by significant wet periods in early 2024.

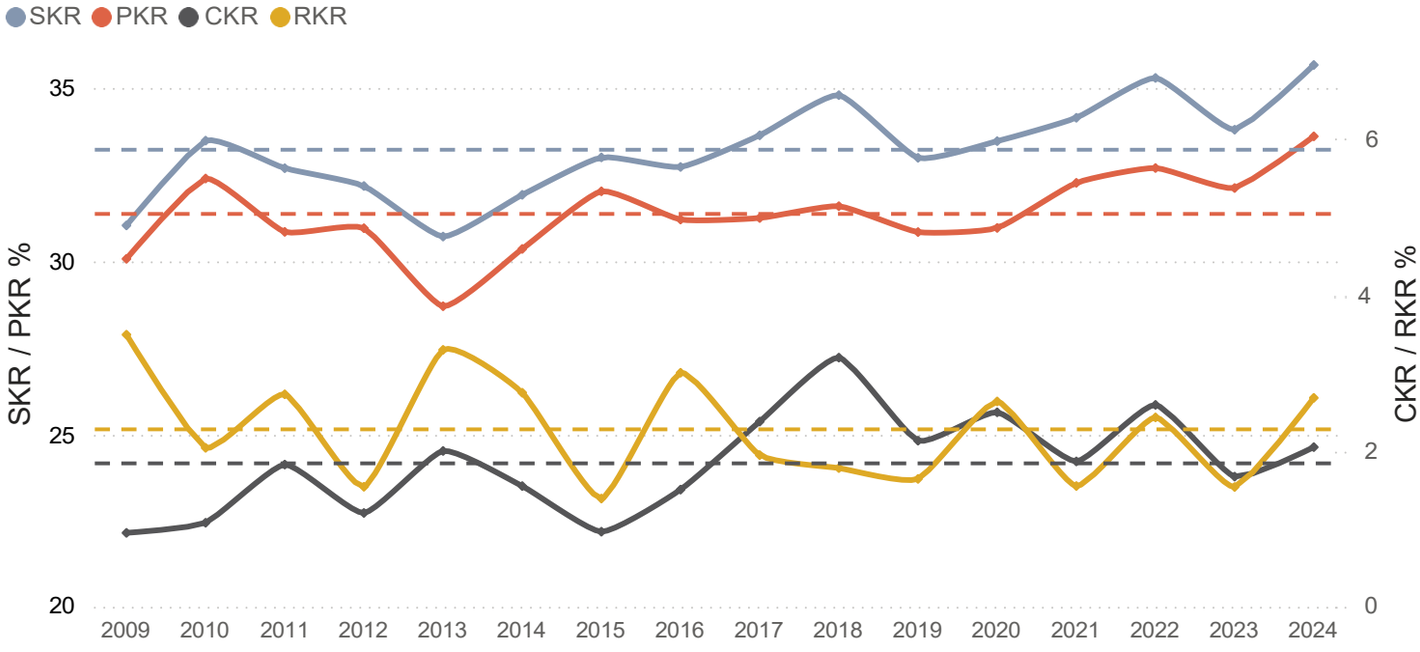
Productivity trends

Mature farms only, weighted by bearing hectares



Kernel recovery trends

Weighted by bearing hectares

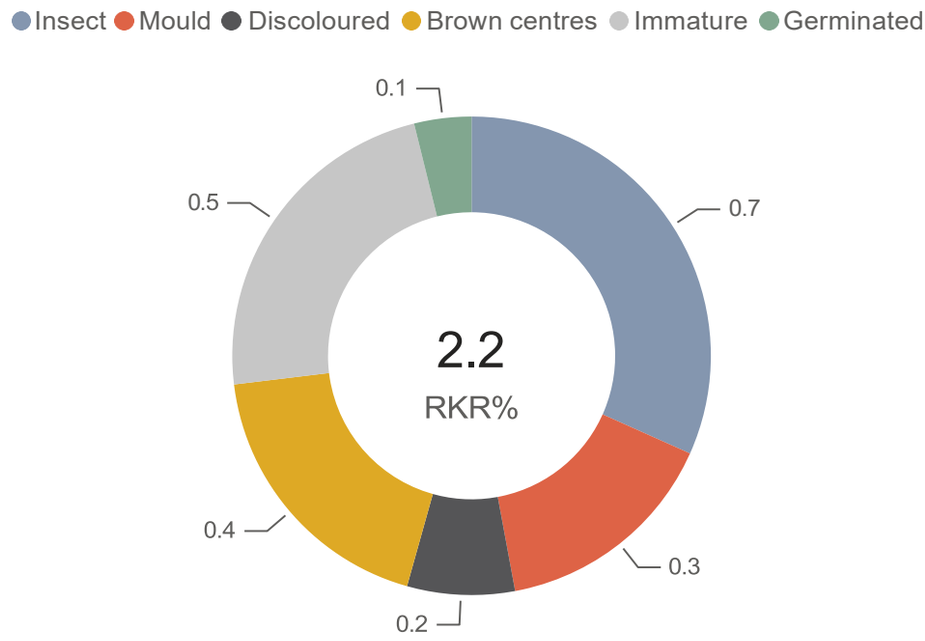


Seasonal reject trends in South-east Queensland

The charts below show seasonal factory reject trends for farms in the benchmark sample within the South-east Queensland region. All major factory reject categories are shown including insect damage, mould, discolouration, brown centres (internal discolouration), immaturity (shrivelled kernel) and germination (discoloured crest).

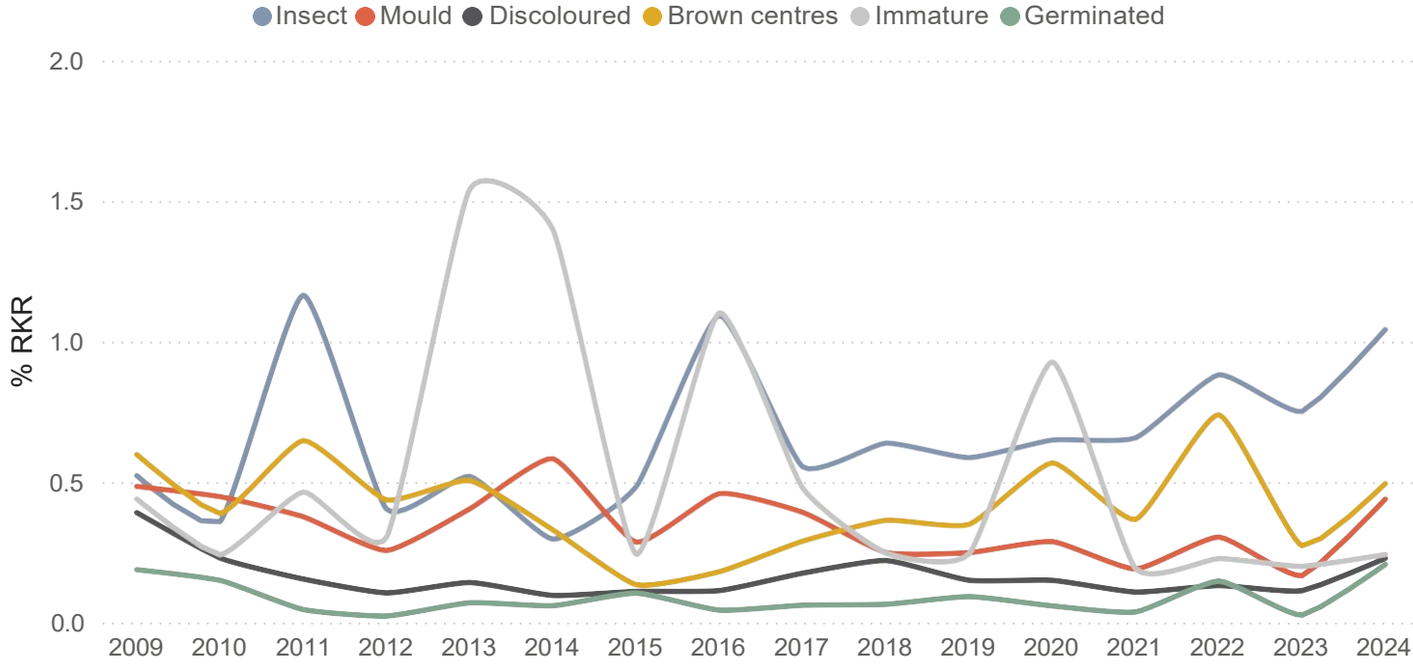
The top chart shows a breakdown of long-term average factory rejects since 2009, weighted by NIS production. The bottom chart shows seasonal factory reject trends, also weighted by NIS production. Insect damage remains the leading long-term cause of factory rejects for farms in this region.

Long-term average factory rejects by category



Factory reject trends

Bearing farms, weighted by NIS production



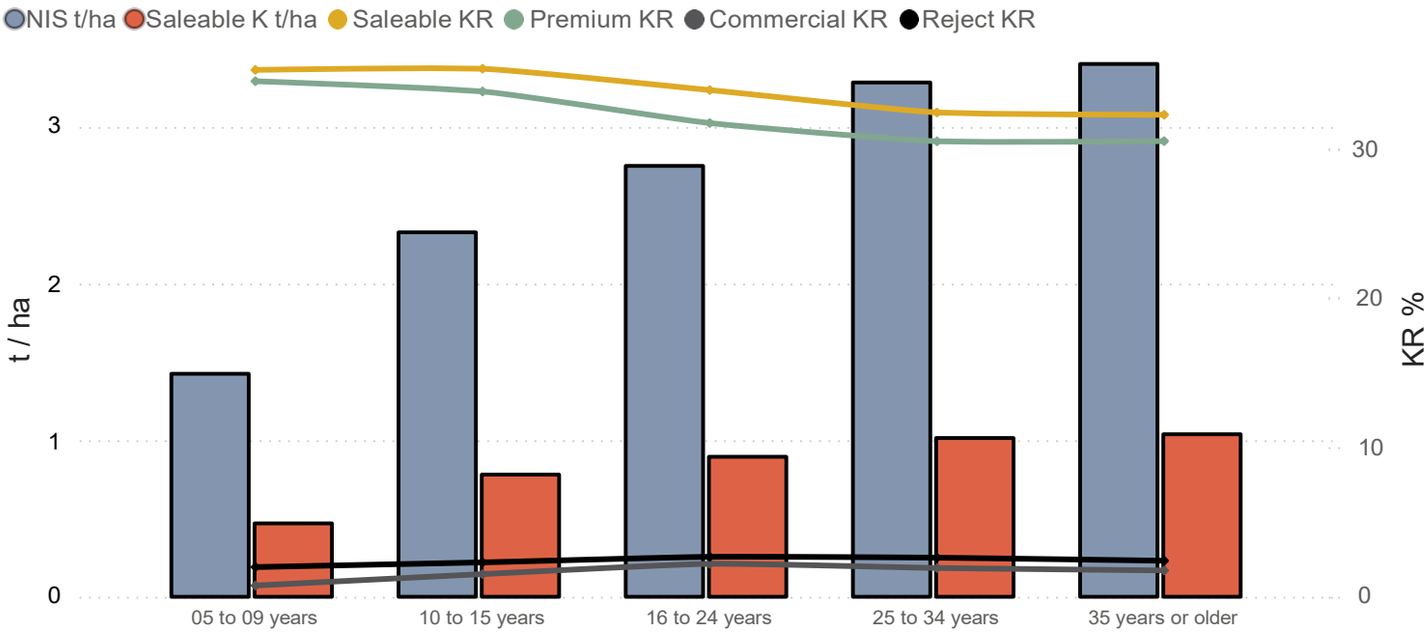
Long-term trends by tree age in South-east Queensland

The charts below show long-term trends in productivity, kernel recovery and factory rejects for farms in the benchmark sample in the South-east Queensland region since 2009.

The top chart shows the unweighted average productivity and kernel recovery for farms within various average tree age categories ranging from 5-9 years through to 35+ years. The bottom chart shows a breakdown of unweighted average factory reject categories for each of those tree age groups. It should be noted that there are relatively fewer farms in the 5-9 years and 35+ years categories than in other age categories.

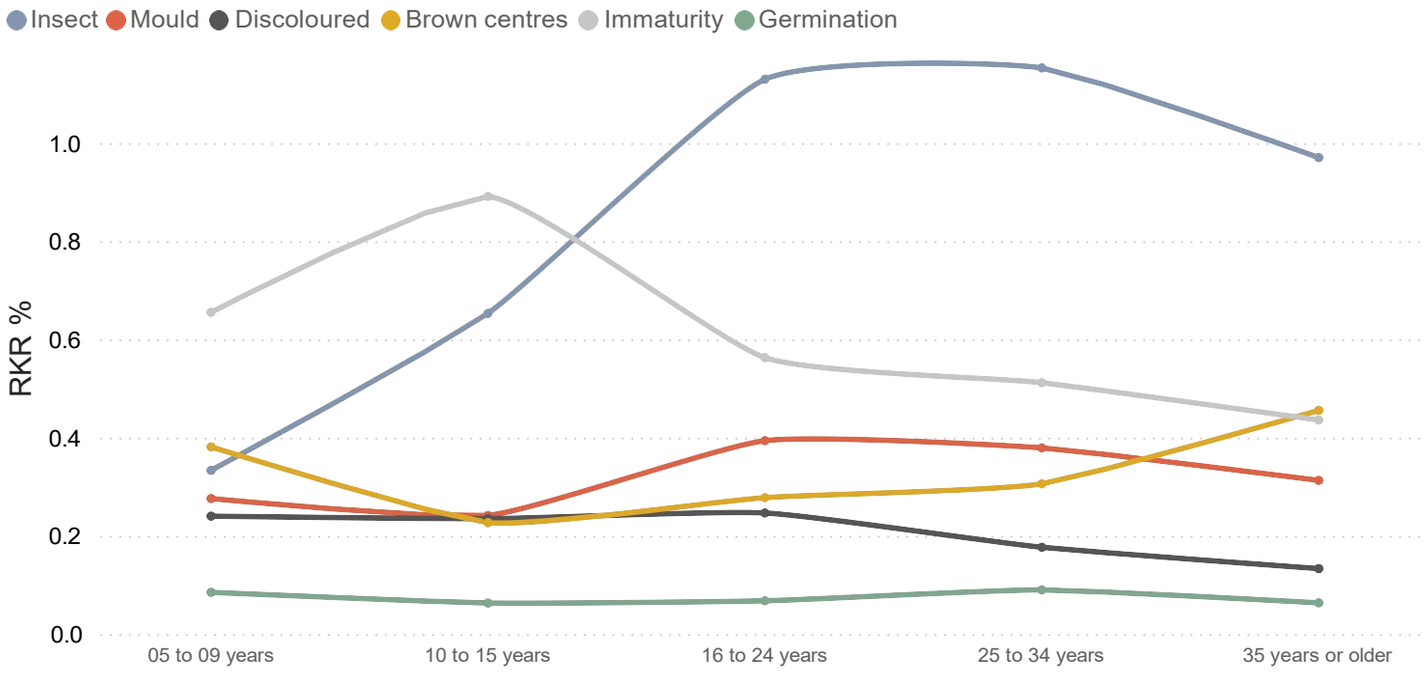
Productivity and kernel recovery by tree age

Unweighted averages for bearing farms



Factory rejects by tree age

Unweighted averages for bearing farms



Northern Rivers NSW (NRNSW) region

The Northern Rivers region stretches from the Queensland border down to the Maclean area in NSW. It includes significant production areas such as Alstonville, Bangalow, Clunes, Fernleigh, Knockrow, Newrybar, Rous, Tregeagle and Wollongbar. It also includes some farms further south around Maclean.

Plantings in 2024

Total farms	Bearing farms
101	91
Tree age (all)	**Tree age (bearing)**
25	27
Avg. planted hectares	**Avg. bearing hectares**
27	23

Planting data shown is from the 2024 season, while long-term productivity and cost averages are for bearing farms only over the last five seasons (2020-2024).

Averages are weighted by planted area to best illustrate results for the whole region.

An average of 128 farms in the NRNSW region have participated in benchmarking each season since 2009. There was a significant decline in 2023, with just 104 farms providing data for that season and a further reduction to 101 farms in 2024. Those farms represented 37% of all farms in the benchmark sample.

The NRNSW region is among the older production regions, with an average tree age of 25 years. In 2024 the average age of bearing farms in the region was 27 years. The average size of participating farms in the NRNSW region is 27 planted hectares and 23 bearing hectares.

Productivity 2020-2024

NIS t/ha	SK t/ha
2.5	0.8
Saleable KR%	**Premium KR%**
34.8	31.5
Commercial KR%	**Reject KR%**
3.2	2.5

Average long-term productivity per bearing hectare and average kernel recovery are shown for all bearing farms in the region for the last five seasons. These averages are based on 586 farm-years.

There was a general decline in seasonal average productivity in this region from 2020 to 2023, however productivity increased in 2024 to above the long-term average. A similar trend has been observed for saleable kernel productivity, although this has been somewhat more stable, primarily due to a general increase in saleable kernel recovery over the long term.

Costs 2020-2024

Cash $/ha	Total $/ha
$6,863	$7,766
Cash $/T NIS	**Total $/T NIS**
$3,026	$3,424
Cash $/T SK	**Total $/T SK**
$9,666	$10,938

Average operating costs are shown for the last five seasons (154 farm-years).

Average costs for this region have fluctuated between both farms and seasons, however they have generally risen by more than 30% since collection commenced in 2013. The standard deviation in cash costs per hectare over the last five seasons was approximately $3338 per hectare, or 49% of the mean.

Long-term average costs per hectare in NRNSW are generally lower than all other regions, although the standard deviation in those costs is comparable with or higher than other regions, suggesting higher overall variability between farms and seasons within this region.

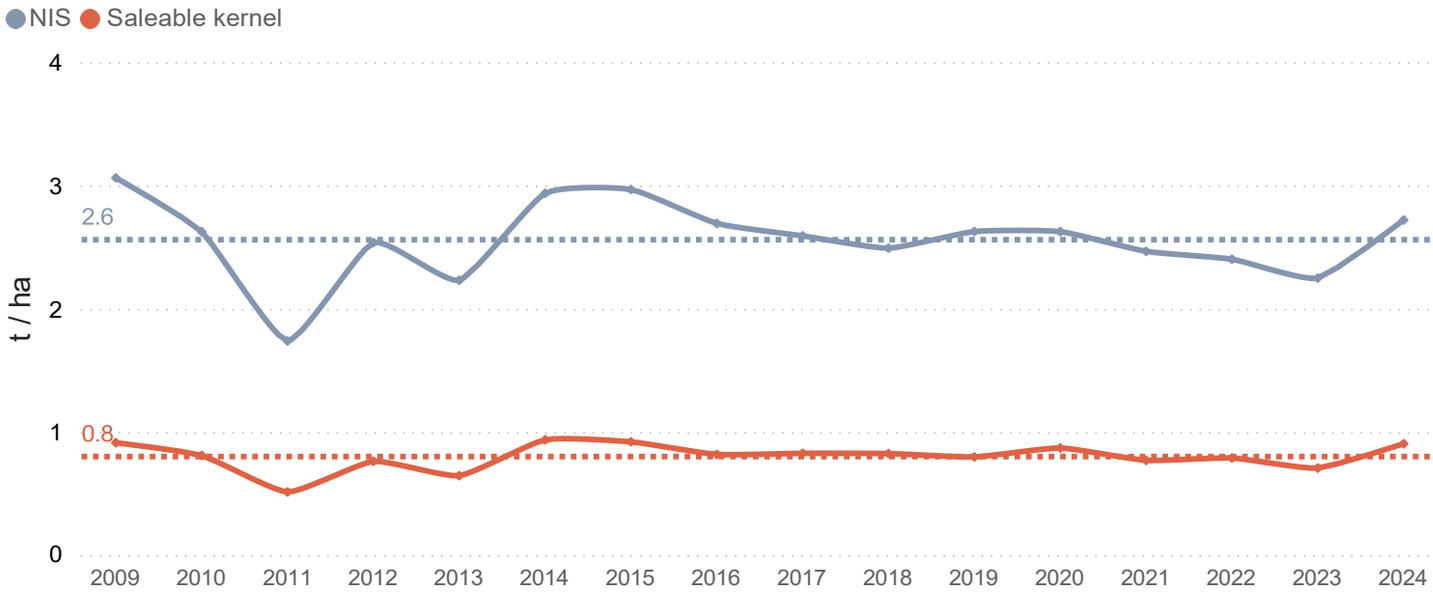
Seasonal productivity and kernel recovery trends in Northern Rivers NSW

The charts below show seasonal trends in average productivity and kernel recovery for farms in the Northern Rivers region of NSW. The top chart shows average nut-in-shell and saleable kernel productivity for mature farms in the benchmark sample, weighted by production. Mature farms are those with a weighted average tree age of 10 or more years. The bottom chart shows average saleable, premium, commercial and reject kernel recovery for all farms in the region.

Average yield was above the long-term average in 2024, following three previous seasons of successive decline. Saleable and premium kernel recovery reached record highs in 2024, while reject kernel recovery was consistent with the long-term average and only slightly higher than in 2023. Average commercial kernel recovery was down further in 2024, reaching its lowest level within this region since benchmarking began.

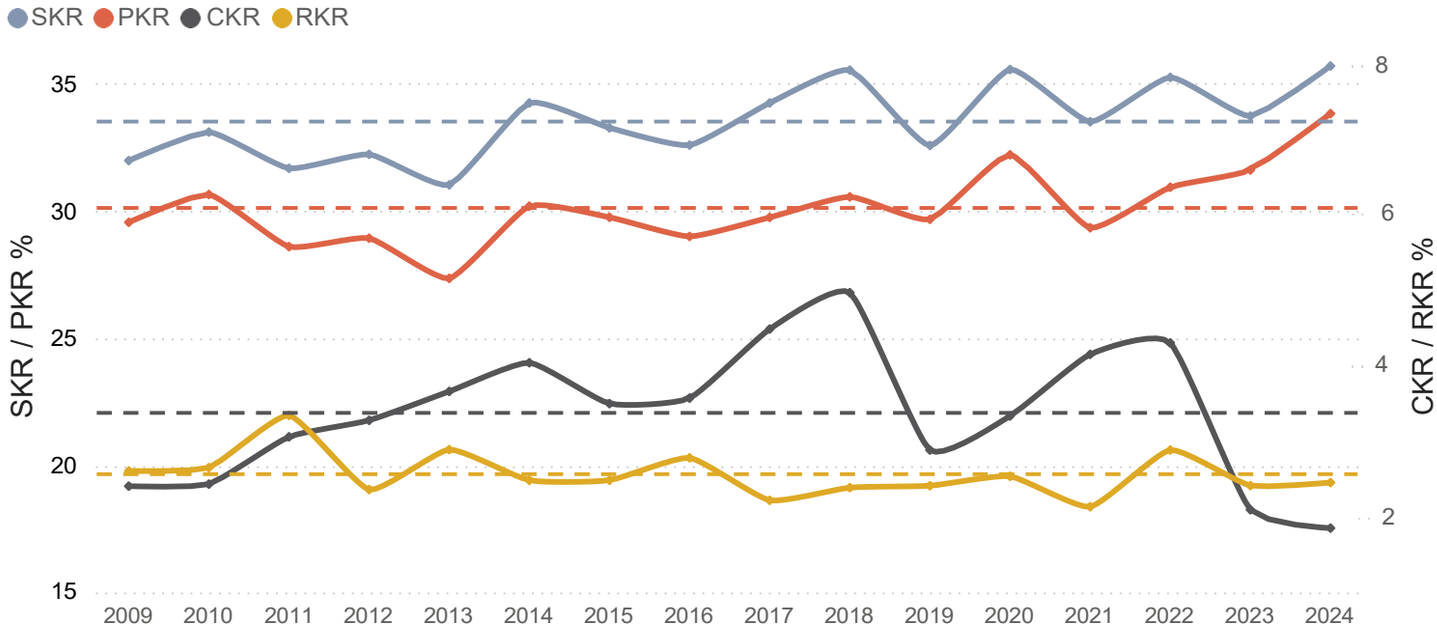
Productivity trends

Mature farms only, weighted by bearing hectares



Kernel recovery trends

Weighted by bearing hectares



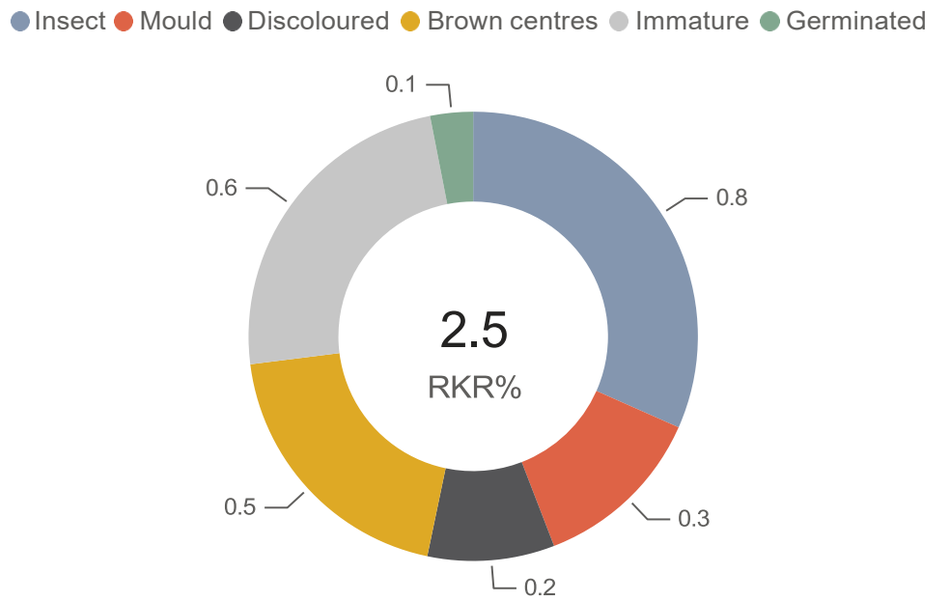
Seasonal reject trends in Northern Rivers NSW

The charts below show seasonal factory reject trends for farms in the benchmark sample within the Northern Rivers region of NSW. All major factory reject categories are shown including insect damage, mould, discolouration, brown centres (internal discolouration), immaturity (shrivelled kernel) and germination (discoloured crest).

The top chart shows a breakdown of long-term average factory rejects since 2009, weighted by NIS production. The bottom chart shows seasonal factory reject trends, also weighted by NIS production.

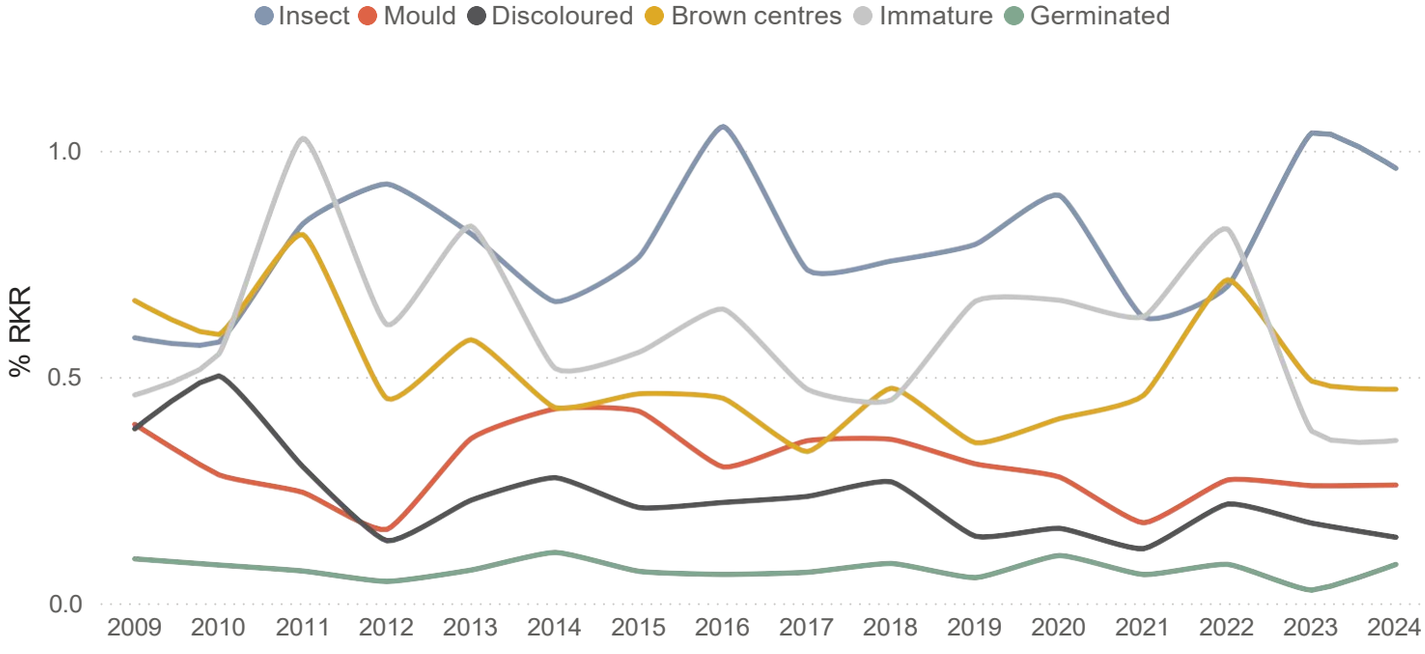
Seasonal averages for major reject categories in 2024 were mostly consistent with 2023 levels. Some growers indicated that late season Fruit Spotting Bug was a major cause of the relatively high average insect damage levels evident in the 2023 and 2024 seasons.

Long-term average factory rejects by category



Factory reject trends

Bearing farms, weighted by NIS production



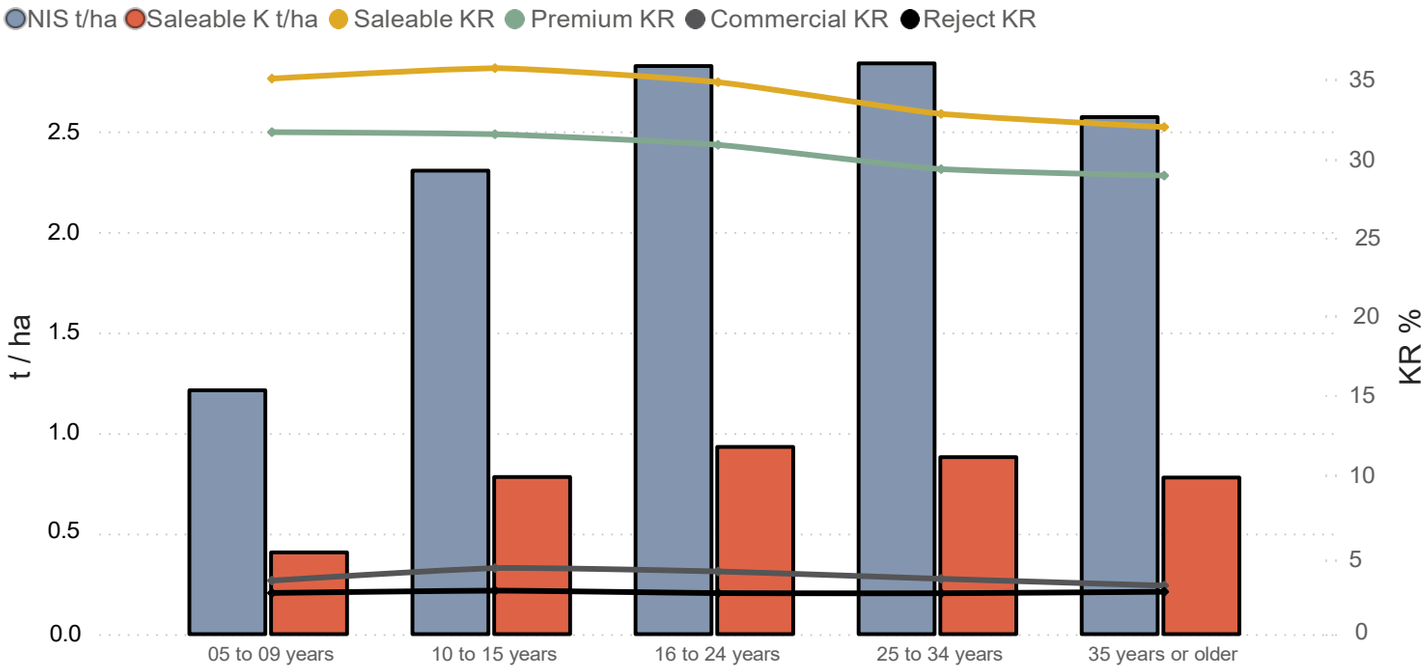
Long-term trends by tree age in Northern Rivers NSW

The charts below show long-term trends in productivity, kernel recovery and factory rejects for farms in the benchmark sample in the Northern Rivers region of NSW since 2009.

The top chart shows the unweighted average productivity and kernel recovery for farms within various average tree age categories ranging from 5-9 years through to 35+ years. The bottom chart shows a breakdown of unweighted average factory reject categories for each of those tree age groups. It should be noted that there are relatively fewer farms in the 5-9 years and 35+ years categories than in other age categories.

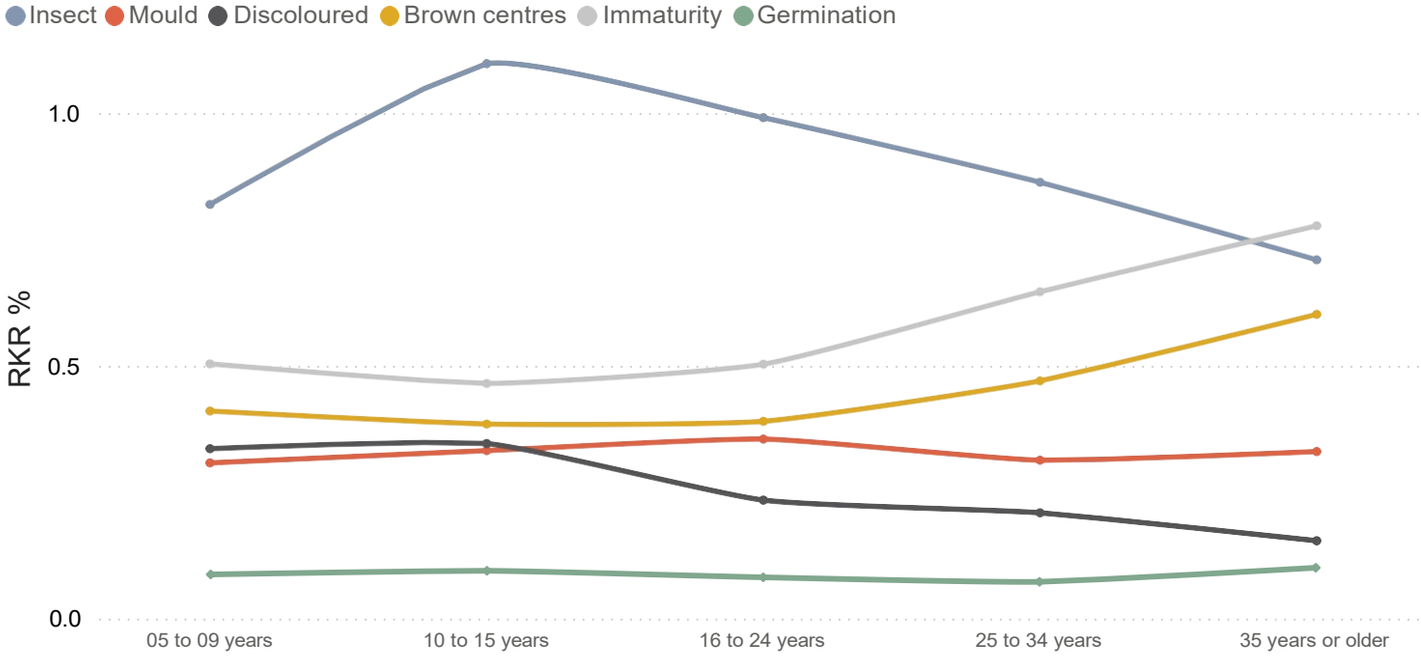
Productivity and kernel recovery by tree age

Unweighted averages for bearing farms



Factory rejects by tree age

Unweighted averages for bearing farms



Mid North coast NSW region

The Mid North Coast NSW (MNNSW) region includes areas in and around Valla, Nambucca Heads, Macksville and Yarrahapinni.

Plantings in 2024

Total farms	Bearing farms
25	23
Tree age (all)	**Tree age (bearing)**
26	26
Avg. planted hectares	**Avg. bearing hectares**
18	18

Planting data shown is from the 2024 season, while long-term productivity and cost averages are for bearing farms only over the last five seasons (2020-2024).

Averages are weighted by planted area to best illustrate results for the whole region.

An average of 25 farms in the MNNSW region have participated in benchmarking each season since 2009. A total of 25 farms provided data for the 2024 season, representing 9% of all farms in the benchmark sample.

The MNNSW region is among the older production regions, with an average tree age of 26 years. Less than 1% of this region's plantings in the benchmark sample are less than five years of age and therefore not yet considered bearing. In 2024 the average age of farms in the region was 26 years and the average farm size was 18 hectares.

Productivity 2020-2024

NIS t/ha	SK t/ha
2.3	0.8
Saleable KR%	**Premium KR%**
38.1	32.3
Commercial KR%	**Reject KR%**
5.8	3.2

Average long-term productivity per bearing hectare and average kernel recovery are shown for all bearing farms in the region for the last five seasons. These averages are based on 123 farm-years.

Productivity in the MNNSW region increased slightly in 2024 compared with the previous season. Despite large variation in both NIS and saleable kernel productivity between seasons, there has generally been an 21% increase in 5- year average productivity in this region since benchmarking began.

Costs 2020-2024

Cash $/ha	Total $/ha
$8,019	$8,657
Cash $/T NIS	**Total $/T NIS**
$4,132	$4,461
Cash $/T SK	**Total $/T SK**
$11,473	$12,386

Average operating costs are shown for the last five seasons (60 farm-years).

Average costs for this region have fluctuated significantly between seasons and also between farms in some seasons. Over the long term, average cash costs have generally risen by approximately 13% since collection commenced in 2013, which is less than in other regions. The standard deviation in cash costs over the last five seasons was approximately $3531 per hectare, or 44% of the mean.

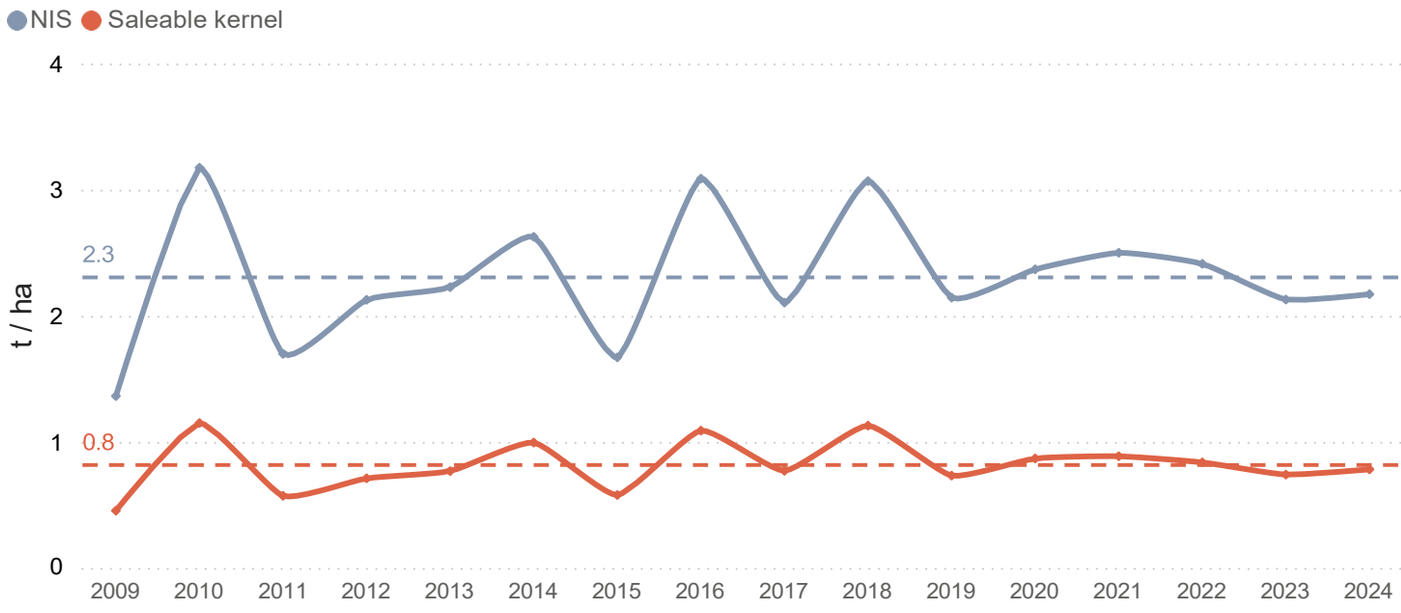
Seasonal productivity and kernel recovery trends in Mid North Coast NSW

The charts below show seasonal trends in average productivity and kernel recovery for farms in the Mid North Coast region of NSW. The top chart shows average nut-in-shell and saleable kernel productivity for mature farms in the benchmark sample, weighted by production. Mature farms are those with a weighted average tree age of 10 or more years. The bottom chart shows average saleable, premium, commercial and reject kernel recovery for all farms in the region.

A record high average premium kernel recovery was evident in 2024. contributing to saleable kernel recovery levels above the long-term average. Reject kernel recovery increased from record low levels in 2023 to above the long-term average, while commercial kernel recovery remained relatively low compared with previous seasons.

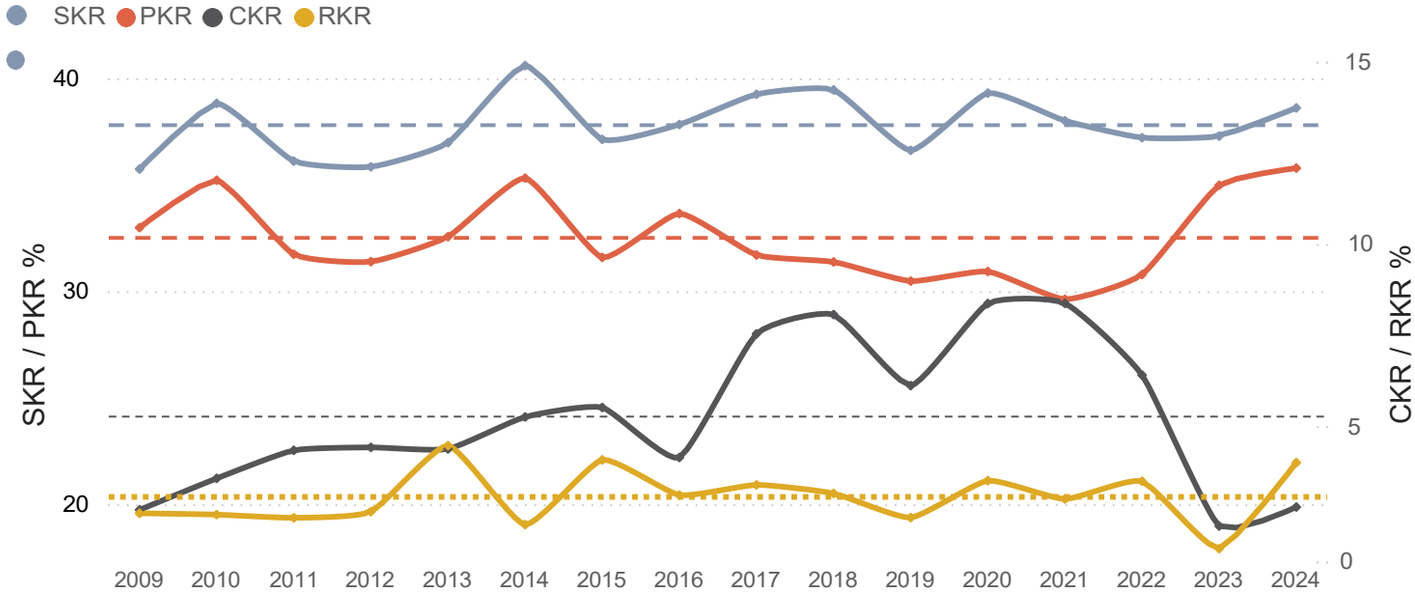
Productivity trends

Mature farms only, weighted by bearing hectares



Kernel recovery trends

Weighted by bearing hectares



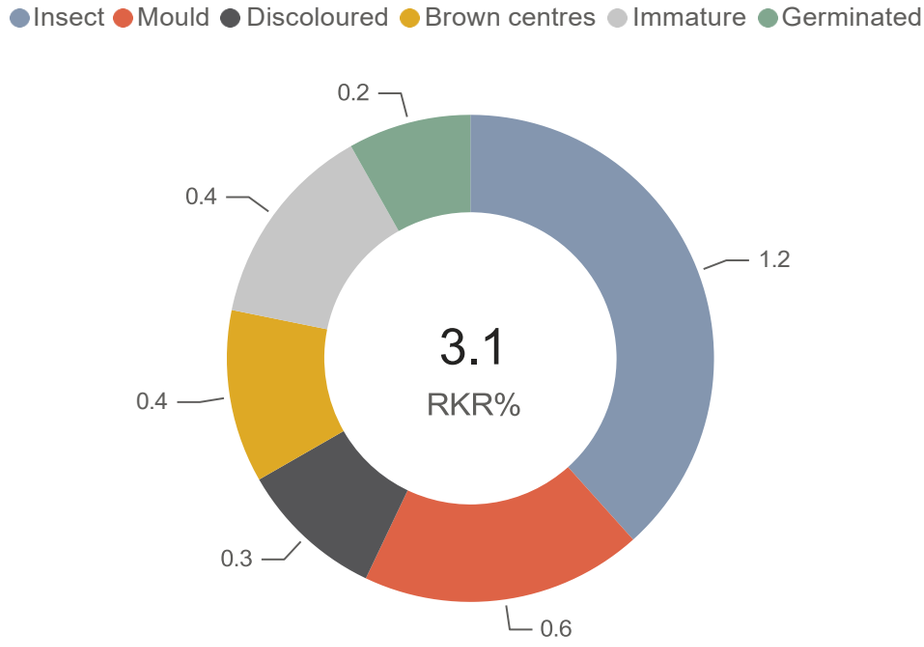
Seasonal reject trends in Mid North Coast NSW

The charts below show seasonal factory reject trends for farms in the benchmark sample within the Mid North Coast region of NSW. All major factory reject categories are shown including insect damage, mould, discolouration, brown centres (internal discolouration), immaturity (shrivelled kernel) and germination (discoloured crest).

The top chart shows a breakdown of long-term average factory rejects since 2009, weighted by NIS production. The bottom chart shows seasonal factory reject trends, also weighted by NIS production.

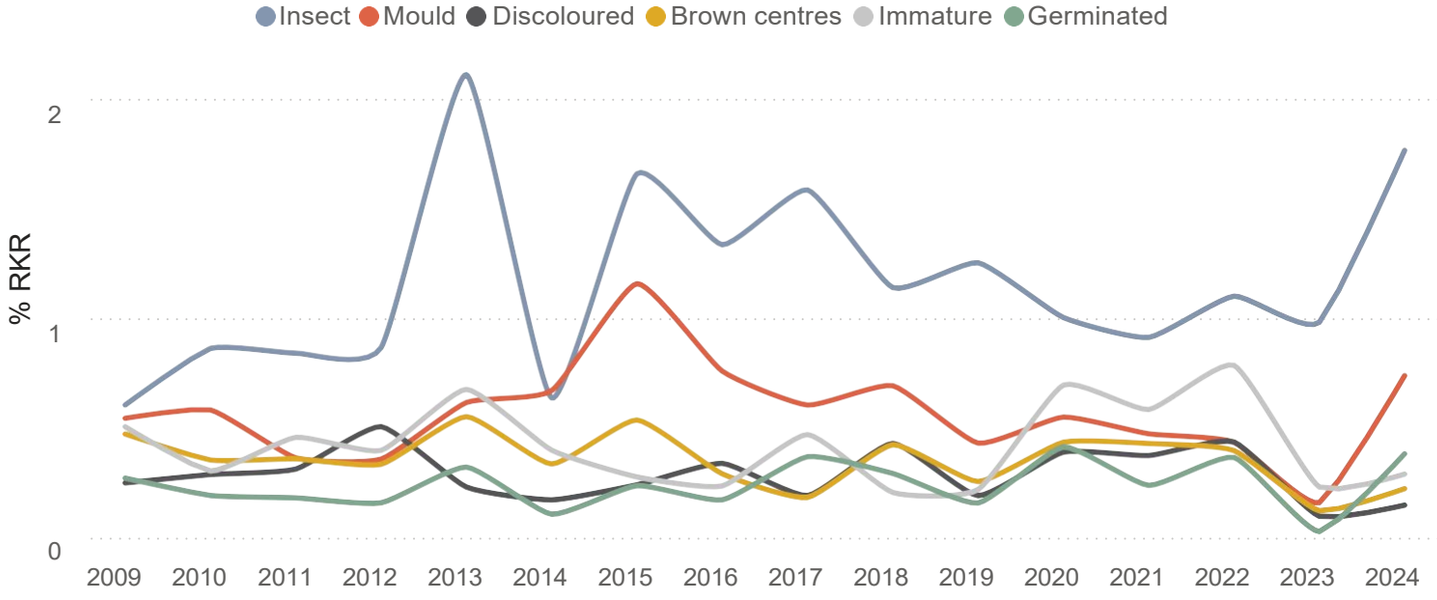
Insect damage is typically the major cause of factory rejects in the MNNSW region in most seasons. In 2024 growers reported high incidence of damage due to Fruit Spotting Bug, rats and birds.

Long-term average factory rejects by category



Factory reject trends

Bearing farms, weighted by NIS production



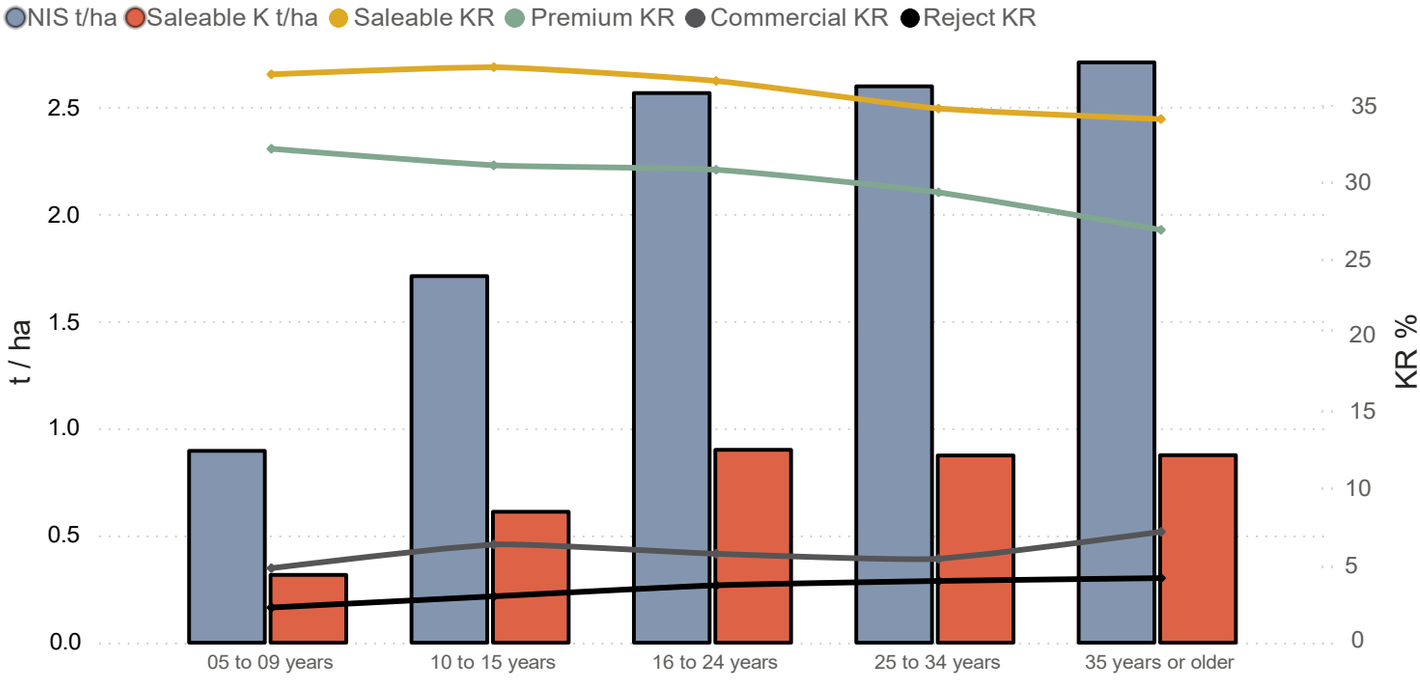
Long-term trends by tree age in Mid North Coast NSW

The charts below show long-term trends in productivity, kernel recovery and factory rejects for farms in the benchmark sample in the Mid North Coast region of NSW since 2009.

The top chart shows the unweighted average productivity and kernel recovery for farms within various average tree age categories ranging from 5-9 years through to 35+ years. The bottom chart shows a breakdown of unweighted average factory reject categories for each of those tree age groups. It should be noted that there are relatively fewer farms in the 5-15 years and 35+ years categories than in other age categories.

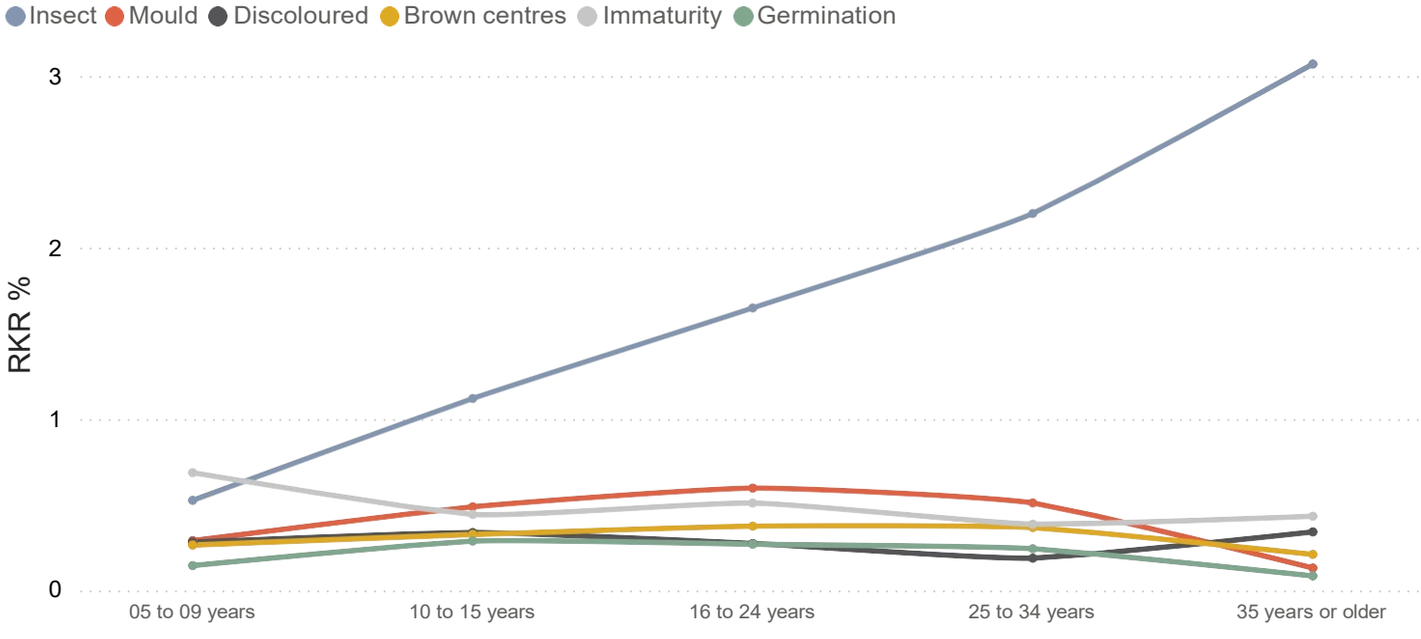
Productivity and kernel recovery by tree age

Unweighted averages for bearing farms



Factory rejects by tree age

Unweighted averages for bearing farms



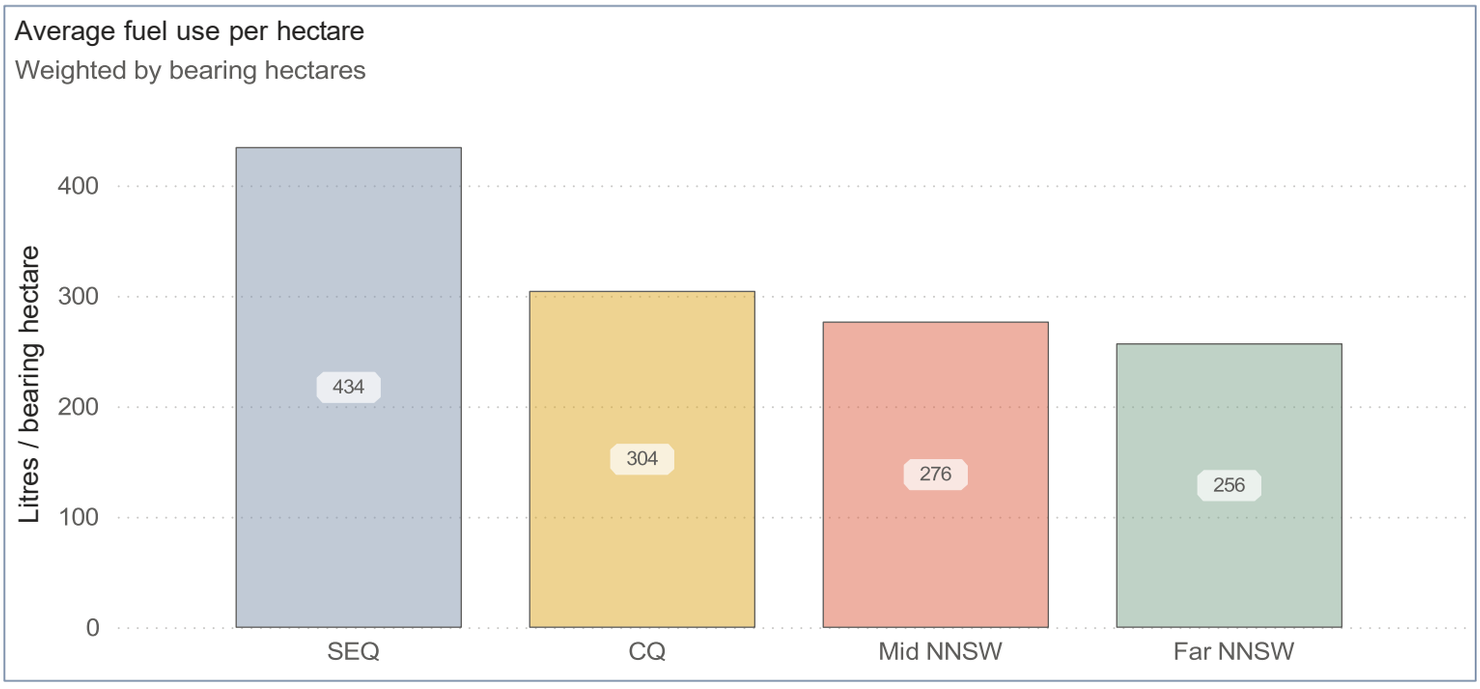
Seasonal fuel use

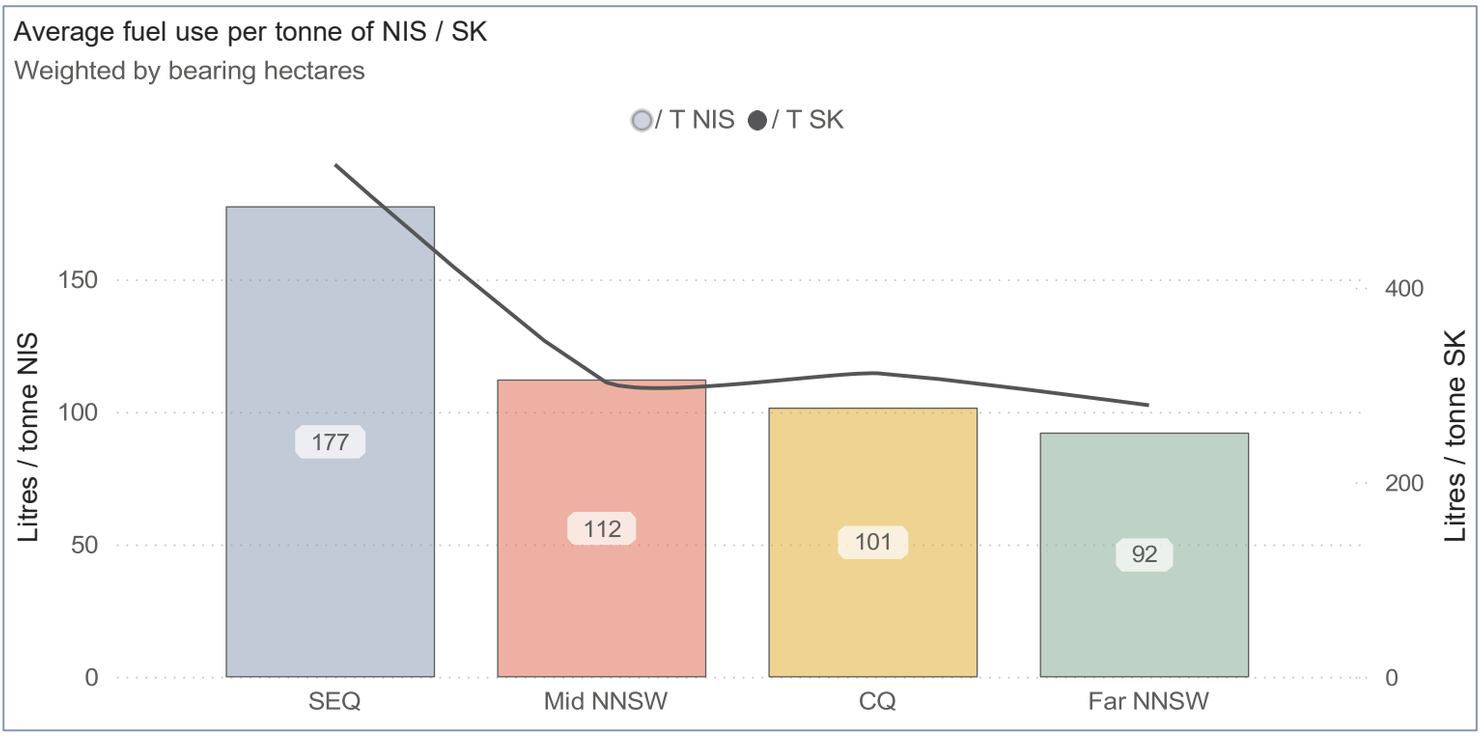
The figures below show fuel use for bearing farms in the benchmark sample. All averages are weighted by bearing hectares. A total of 88 farms provided fuel use data for the 2024 season.

The table below shows averages for the whole benchmark sample and the charts show averages for each major production region. The top chart shows average fuel use per hectare and the bottom chart shows equivalent fuel use per tonne of nut-in-shell and per tonne of saleable kernel production.

Average fuel use in 2024

318	113	342	88
Litres per bearing hectare	Litres per tonne NIS	Litres per tonne SK	Farms





Seasonal electricity use

The figures below show electricity use for bearing farms in the benchmark sample. All averages are weighted by bearing hectares. A total of 65 farms provided electricity use data for the 2024 season.

The summaries shown below show averages across the whole benchmark sample. These are split into fully-irrigated and non-irrigated farms, as electricity consumption varies significantly between these groups. A total of 24 fully-irrigated farms and 38 non-irrigated farms submitted data. Caution should be used when interpreting results due to relatively small sample sizes.

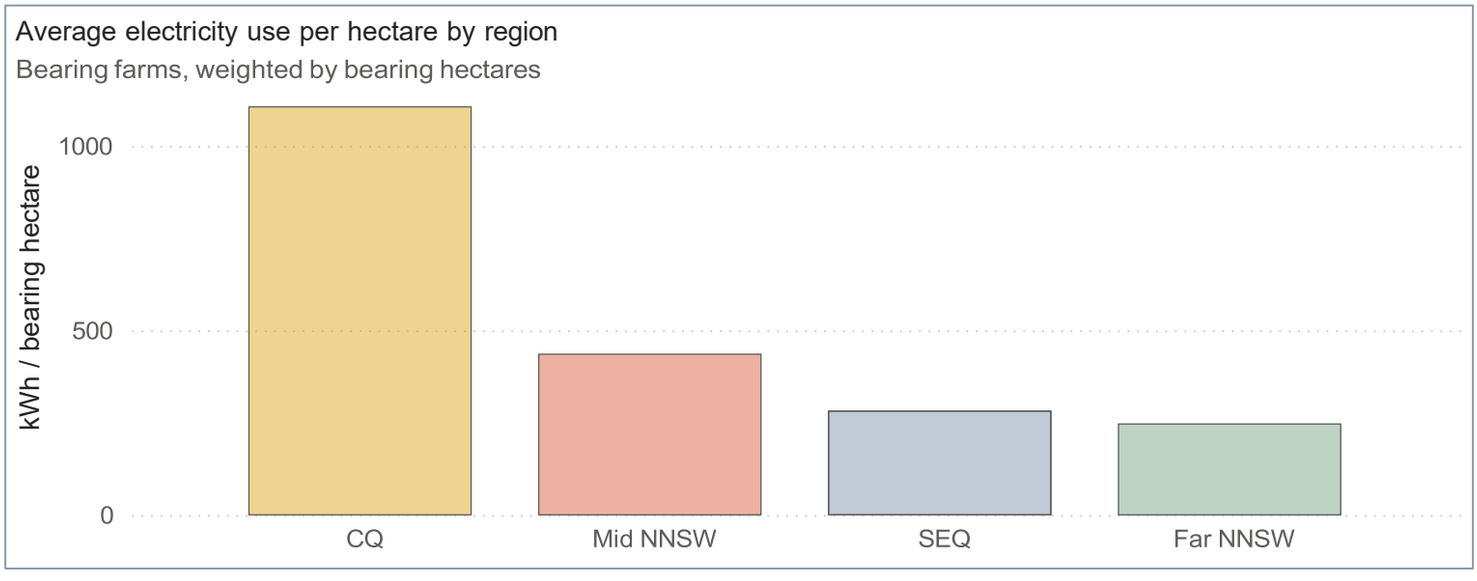
The charts show average electricity use for each major production region. The top chart shows use per hectare and the bottom chart shows equivalent use per tonne of nut-in-shell and per tonne of saleable kernel production.

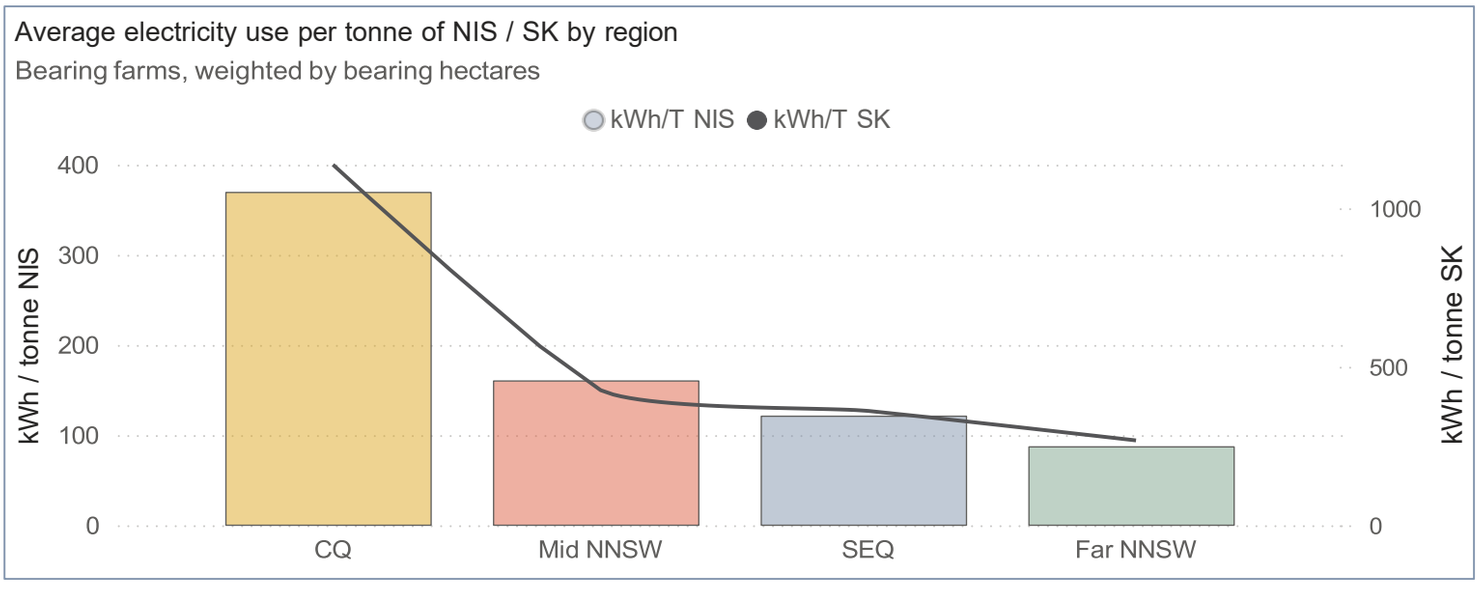
Average electricity use for fully irrigated farms in 2024

1072	352	1077	24
kWh per bearing hectare	kWh per tonne NIS	kWh per tonne SK	Farms

Average electricity use for non-irrigated farms in 2024

270	104	312	38
kWh per bearing hectare	kWh per tonne NIS	kWh per tonne SK	Farms





Seasonal water use

The figures below show average water use for bearing farms in the benchmark sample, weighted by bearing hectares. A total of 30 fully irrigated farms and 7 partially irrigated farms provided water use data for the 2024 season. Caution should be used when interpreting these data due to the relatively small sample size.

The summaries shown below show averages across the whole benchmark sample. These are split into fully-irrigated farms and those with partial or supplementary irrigation. The chart shows average water use for irrigated farms in the CQ and SEQ regions per hectare, per tonne of nut-in-shell and per tonne of saleable kernel.

Average water use for fully irrigated farms in 2024

3.3	1.1	3.3	30
ML per bearing hectare	ML per tonne NIS	ML per tonne SK	Farms

Average water use for farms with partial/supplementary irrigation in 2024

0.3	0.1	0.4	7
ML per bearing hectare	ML per tonne NIS	ML per tonne SK	Farms

Average water use by region

Fully irrigated farms, weighted by bearing hectares

Data considerations

Farms and plantings

- The term farm-year is used to describe data for an individual farm for a given year.
- Plantings less than five years of age are generally excluded from estimates of bearing hectares. This is important for consistency across the benchmark sample.

Averages

- Averages presented for any given season are based on data from a minimum of ten farms. This minimum is applied to safeguard the confidentiality of individual farm data.
- Unless otherwise stated, averages presented are unweighted. This means that all farms in the sample exert an equal influence on the average regardless of their size.
- All weights presented are based on the industry standard moisture content of 10% for nut-in-shell and 1.5% for kernel.
- Averages that span multiple seasons are derived from all available seasons unless otherwise specified.
- Where potential for significant skewing of a data occurs (e.g., seasonal costs) medians rather than averages may be presented to provide an understanding of the mid-point of the sample.
- Some averages may be based on subsets of all available data. Atypical or non-representative data may be excluded from some analyses to avoid adversely skewing averages. Where this has occurred, it will be indicated in results (e.g. mature farms only).

Factory rejects

- The sum of reject kernel category values presented equates to the total reject kernel recovery percentage, rather than totalling 100%. This standard is applied for consistency across the benchmark study.
- Widely recognised terms are used wherever possible to describe kernel recovery and reject analysis categories, although some processors may use different terminology to describe similar reject categories or have their own additional reject categories.

Costs

- Cost data reported for any given season includes all expenditure incurred in the preceding financial year (e.g., 2022/23 financial year for 2023 production season).
- Costs such as capital expenditure, depreciation and taxation are excluded from this study.
- Unpaid labour hours have been collected since 2017. The value of this labour is imputed at the Horticulture Aware rate of $30 per hour to derive a more complete picture of labour costs, particularly for owner-operated farms.
- All farm costs per hectare are based on total planted hectares unless otherwise stated. This may include non-bearing hectares for some farms as most businesses do not separate costs by tree age within their accounting systems.
- Heads of expenditure shown in this report are based on a standard chart of accounts, developed in conjunction with accountants and financial advisors. This is used to ensure consistent interpretation of costs across multiple farm businesses.