



2019 Fieldays® in New Zealand: Economic impacts for Waikato region and New Zealand



The birth of Fieldays® in 1968

The University of Waikato has a long history with Fieldays dating back to the role played by the University's founding Vice-Chancellor, Sir Don Llewellyn in 1970.

The University has maintained its association with Fieldays, supporting this event which is vitally important for the region and the agriculture and related sectors.



Founded in 1968 by a group of passionate and like-minded individuals with a common vision and a will to succeed, the first event was expected to attract 3,000 patrons at a quiet time of year for farmers. That is, when they could take a break from farming and view the products and services they utilised. In 1969, the first Fieldays® was held at Hamilton's Te Rapa racecourse and patrons exceeded 10,000. This prompted the realisation that the Te Rapa location was too small and a bigger venue was needed.

In 1970, the home at Mystery Creek in Hamilton was purchased for \$62,000, financed by a 100% mortgage secured against the personal farms of the organising committee. Through the efforts of this dedicated group of volunteers, some of whom are still involved today, the current site was created and developed to become the home of Fieldays, with the Mystery Creek Events Centre arguably known worldwide as the heart of New Zealand Agriculture.

Fieldays has continued to grow over the years to annually attract approximately 1,000 exhibitors on over 1,500 exhibition sites, and approximately 130,000 patrons including nearly 1,500 visitors from 50 countries. This makes Fieldays the largest agribusiness exposition in the Southern Hemisphere. The event is a self-sustaining, not-for-profit organisation, independent and mandated to work for the greater good, supporting the promotion and development of agriculture internationally.

Fieldays is more than just a farm show. It is an agribusiness exposition that provides a window into one of the most innovative, forward-thinking agricultural economies in the world. The role of Fieldays is to connect business to business, business to consumer, exporter with new markets, and town to country.

The mission of Fieldays is to connect people and organisations to create opportunities, facilitate the open exchange of ideas and showcase the very best that New Zealand agriculture has to offer the world.

As an independent body, Fieldays is non-partisan, with the capability to draw on and bring together representatives and parties from all corners of the agricultural industry and primary sectors. By acting as a conduit, Fieldays uses its reputation, enhanced over the last 51 years, as the foundation for facilitating collaboration and partnership across domestic and international borders.

Since its inception 51 years ago in 1969, it has been estimated that Fieldays has generated over \$18 b in sales revenues in 2019 dollars for the NZ economy and \$8 b in GDP.

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Executive summary

The 2019 Fieldays event over 12th – 15th June saw major advances on all metrics used to measure the platform's economic importance for the New Zealand economy, and particularly its agribusiness sectors.

Attendance at 128,747 patrons was down 1.6% on last year. Aggregate economic impacts from all revenue sources for the Waikato region and all New Zealand are shown in the following table.

TOTAL ECONOMIC IMPACTS DUE TO 2019 FIELDAYS FROM ALL SOURCES

Region & Impact Source	Revenue \$ m	Net Household Income \$ m	Employment Persons	Value Added or GDP \$ m
Waikato Region				
Visitor Expenditure	50.78	9.82	362	21.54
Exhibitor Expenditure Onsite	9.48	1.85	76	4.15
Equipment Sales	97.25	17.83	383	37.39
Organisational Expenditure	25.21	3.95	72	16.88
Total Impact for Waikato Region	182.72	33.45	893	79.96
Rest of NZ				
Visitor Expenditure	9.92	2.78	23	7.08
Exhibitor Expenditure on Logistics etc.	6.18	1.36	20	3.15
Equipment Sales	346.47	70.76	1,344	154.83
Organisational Expenditure	3.93	1.31	14	1.77
Total Impact for All NZ	549.22	109.66	2,294	246.79
COMPARISONS 2015 – 2019				
Waikato Percentages of NZ by Year				
2019	33.3%	30.5%	38.9%	32.4%
2018	34.2%	32.0%	40.7%	31.9%
2017	35.6%	33.8%	38.5%	33.3%
2016	28.9%	31.6%	35.0%	30.4%
2015	36.0%	31.7%	34.6%	32.1%
Total Waikato Impacts by Year				
2019	182.72	33.45	893	79.96
2018	168.10	32.10	860	70.43
2017	191.26	36.77	900	79.22
2016	124.50	27.81	708	57.95
2015	142.61	24.07	619	53.28
Percent Gain For Waikato 2019/2018	8.7%	4.2%	3.8%	13.5%
Total NZ Impacts by Year				
2019	549.22	109.66	2,294	246.79
2018	492.05	100.27	2,111	220.77
2017	537.78	108.65	2,340	238.12
2016	430.21	87.93	2,021	190.93
2015	396.11	75.84	1,789	166.23
Percent Gain For All NZ 2019/2018	11.6%	9.4%	8.7%	11.8%
Equivalent Annual Percentage Gains in Total from Fieldays 2015 – 2019				
	Revenue	Net HH* Income	Employment	Value Added
Waikato Region	6.4%	8.6%	9.6%	10.7%
NZ in Total	8.5%	9.7%	6.4%	10.4%

*HH = Household

Economic impacts for Revenue, Net Household Income (after tax), Employment, and Value Added (GDP) were all up for 2019 over 2018: 4% to 14% gains were registered for the Waikato region and 9% to 12% for NZ in total (includes Waikato).

For the 2019 event, a total of 1,066 firms (1,017 in 2018) exhibited their goods on 1,540 sites (1,466 in 2018). Overseas

exhibitors at 35 were down on last year's 54, although these exhibitors utilised 45 sites compared to 49 last year. Equipment and other sales per site at \$129,405 were up a significant 7% over last year's \$121,005.

For the current year, an estimate of the brand value of the Fieldays platform jumped 25% from \$488 m last year to \$610 m in 2019. This year we included

lost sales (if no Fieldays) for overseas exhibitors since these sales add to brand value just as much as lost NZ sales.

Fieldays is becoming an international brand with 11 overseas countries represented this year, and it should be valued as such. The metrics underlying this estimate of brand value are summarised in the following table.

TRENDS IN INDICATORS OF BRAND VALUE 2015 – 2019

Indicator Category	2015	2016	2017	2018	2019
Fieldays Equipment & Other Sales per worker for all NZ	\$229,993	\$224,391	\$244,992	\$257,034	\$256,931
Lost Sales if Fieldays not attended by Exhibitor (percent)		8.8%	9.1%	11.4%	9.2%
Number of Exhibitor Customer Leads generated at Fieldays			210,532	247,267	265,908
Average Brand Value for the Fieldays Platform			\$465 m	\$488 m	\$610 m

Not all metrics are available for all years but the trends in all indicators show the Fieldays platform to be of increasing value to the New Zealand economy over the last five years.

The Fieldays economic impact highlights from the 2019 results are as follows:

- \$549 m generated in sales revenue for NZ firms including \$183 m for the Waikato region;
- Over 2,000 full-year jobs (both full and part-time) sustained in the NZ economy in 2019 (almost 900 Waikato jobs);
- \$247 m additional GDP generated for the NZ economy in 2019 (\$80 m addition to Waikato GDP);
- Approximately 34% of Fieldays impacts were realised in the Waikato regional economy in 2019, down 1% from 2018; and
- Equivalent annual percentage gains in the economic impacts over the 2015 – 2019 period remain impressive.

The economic analysis of Fieldays 2019 resulted in the following conclusions:

- Each of the 128,747 gate entries (130,866) at the 2019 Fieldays generates over \$4,200 (\$3,700) in sales revenue for NZ firms, including machinery and equipment sales;

- Every gate entry by a visitor from outside the Waikato region results in \$312 (\$308) in direct spending in the Waikato hospitality sectors such as accommodation, restaurants, bars and retail trade (excludes equipment sales);
- Waikato hospitality sectors, show increasing efficiency and capacity, capturing a greater share of visitor spending this year at the expense of the rest of NZ;
- Every dollar expended at Fieldays on accommodation, equipment sales, organisational infrastructure etc. generated another \$1.33 of sales revenue somewhere else in the NZ economy including the Waikato region;
- Currently the brand value of the Fieldays platform is estimated conservatively at \$610 m;
- A total of 87% of 2019 patrons rated Fieldays as "Excellent" or "Very Good";
- Overseas patrons and exhibitors injected \$9 m into NZ's transport, tourist and hospitality sectors in 2019; and
- Over the 51 years of Fieldays operations starting in 1969, it is estimated that the event has contributed over \$18 b in sales revenue and \$8 b in GDP (2019 dollars) to the wider NZ economy in that time.

While the economic impacts from Fieldays are the main focus of this report, other impacts are just as important. Approximately 25,000 patrons came through the Health and Wellbeing Hub at Mystery Creek to get moles checked, sugar levels tested, and general health monitored. At the International Business Centre, 400 visitors from 31 countries registered their attendance at this year's event, boosting the Fieldays reputation internationally.

This year the Official Fieldays App made it to #1 in both NZ's Apple App store and the Google Play Store, with 42,394 downloads and total metrics at 1.3 m at last count. Also 866 school leaver-aged students from 41 schools participated in the Fieldays Careers and Education programme.

Evolving the Mystery Creek location into an iconic exhibition zone with ultramodern road, air logistics and world-class hospitality amenities in association with the private sector remains a prime objective of local and central Government.

Introduction to the economic impacts from Fieldays 2019

The 2019 Fieldays were held at the Mystery Creek home location in Hamilton from June 12th to 15th. Gate entries over the four-day event totalled 128,747, down 1.6% on the 130,866 in 2018. In 2019 there were 1,066 exhibitors (1,017 last year), including 35 international exhibitors (54) on 1,540 sites (1,466) at the Mystery Creek complex. Although overseas participation was down this year, 11 countries besides New Zealand were represented, confirming that international interest is manifestly a factor for this event. A total of 87% of patrons attending this year rated Fieldays as "Excellent" or "Very Good". Clearly Fieldays patrons continue to recognise the importance of this international event and particularly its role as the main showcase for NZ expertise in agricultural, horticultural, and related technology.

The economic impacts such as sales revenue, employment etc. from this event accrue first in the Waikato region but also spill over into the rest of NZ for a significant nationwide economic stimulus. World economic growth has recovered in recent years from the Global Financial Crisis (GFC), but currently has entered a period where future growth is seen to be less certain than was previously the case. The prospect of trade wars instigated by the Trump Administration in the US and potential fallout from Brexit are seen as dampening world growth prospects. Only time will tell if slower economic growth for the world economy is the outcome of these events, although falling growth is already evident in many countries.

The four economic impacts estimated in this report due to Fieldays activities comprise sales revenue, net (after tax) household income, employment as measured by employment count (includes both full and part-time workers), and value added or gross domestic product (GDP or gross regional product GRP for a region such as the Waikato Regional Council). Value added or GDP/GRP comprises the

gross wages and salaries of regional (or national) workers, the gross (before tax) profits of regional business units plus depreciation of fixed capital used up in production. GDP is a better measure of regional gain than sales revenue since the latter includes the value of imported goods and services included in the final sale. For products such as vehicles and sophisticated machinery such as turbines, the sales revenue figure is high but most of the value added is generated overseas. All four economic impacts are reported on in this study with comparisons to earlier years (usually shown as here). A review of the economic models used in the analysis is presented in Appendix 1.

Economic impacts from events such as Fieldays originate from three main sources. First, the economic activity generated by out-of-region patrons at the event or visitors to the region. Their Fieldays expenditure would have typically occurred in their home region but the Fieldays event results in some expenditure being transferred to the Waikato region. This is a net regional gain for the Waikato but not of course for NZ in total. Hospitality expenditure by Waikato patrons at Fieldays (e.g. a restaurant meal) would almost certainly have occurred in Waikato at some time during the 2019/20 year without the event and is therefore excluded from the Fieldays impacts. Other impacts for the Waikato region emanate from Exhibitor spending on accommodation for their site representatives and other expenditures onsite. For the rest of NZ, Exhibitor spending on logistics for transit of products to the Mystery Creek site is also accounted for in the overall economic impacts. Sales of equipment, machinery, outdoor furniture etc. to Waikato residents are included as an impact, although a proportion of this expenditure would have occurred without the Fieldays event. These sales accrue first to Waikato firms, then firms in the rest of New Zealand and

also overseas firms. This year, exhibitors estimated that 9.2% of sales made at Fieldays would have been lost to the seller in the absence of this year's event, or if they had not participated in the 2019 event (last year 11.4%).

Second, in estimating economic impacts in NZ, sales revenues secured at Fieldays by overseas firms are excluded from the economic estimates reported here. In fact, a proportion of these sales (possibly 10% - 15% of the total sales value) would generate activity for NZ businesses and employees through delivery, after-sales service, maintenance, parts etc. This means that as all sales from overseas sites are excluded from the economic impacts recorded here, the estimated impacts reported can be considered conservative.

Finally, expenditure by organisations at Fieldays (e.g. electricity, security, waste disposal etc.) will also generate impacts for the Waikato region and the rest of NZ. This organisational spending by entities such as NZ National Fieldays and the exhibitors will have impacts mainly for the Waikato region, although there will be some flow-ons into the national economy. Specialised financial services such as insurance will generally directly impact the major cities such as Auckland and Wellington and not regions such as Waikato (Hamilton). All such so-called flow-ons are estimated from the economic models and are included in the total impacts for all NZ.

All economic impacts for the Waikato region and NZ in total have been estimated using 106-sector economic models for the year ended December 2018 (see Appendix 1). Note that these models have been generated from March 2013 models completed by Statistics NZ and other researchers with latest growth rates extrapolated for the year ended December 2018. Individual sectors in the models are *italicised* below for easy identification and are detailed in Appendix 1.

Patron attendance at 2019 Fieldays

Table 1 summarises the 2019 Fieldays patron demographics by age and residency. Comparisons with earlier years are also shown.

TABLE 1: VISITOR DEMOGRAPHICS BY AGE AND RESIDENCY 2015 - 2019

	2015 Percent	2016 Percent	2017 Percent	2018 Percent	2019 Percent	2019 Number
Age						
0 – 30	32	26	31	18	14	18,529
30 – 39	14	13	13	17	16	20,820
40 – 49	18	18	18	24	22	28,738
50 – 59	20	22	19	23	23	29,498
60 – 69	12	15	14	14	18	22,971
70+	4	6	5	4	7	8,191
TOTALS	100%	100%	100%	100%	100%	128,747
Residency						
Northland	4	5	5	4	2	3,190
Auckland	15	17	10	20	25	31,780
Waikato/Coromandel	44	42	48	39	42	53,580
Bay of Plenty	16	16	15	19	15	19,290
Lower North Island	15	16	16	13	12	15,964
South Island	3	3	4	4	3	3,553
Overseas	3	1	2	1	1	1,390
TOTALS	100%	100%	100%	100%	100%	128,747

This year saw a drop in the youngest age group but a rise in the two oldest age groups. The relatively even spread over the various age groups is a good sign for all types of exhibitors.

Northland and the Bay of Plenty saw a significant percentage drop in patronage this year. The pronounced percentage increase over recent years from the Auckland region is noteworthy, perhaps reflecting better traffic logistics. The Waikato percentage remains static at just over 40 percent.

Overseas patrons at 1,390 were down significantly on the 1,911 last year and the 2,672 in 2017. The 2019 figure cements the downward trend in overseas patrons in recent years.

The male/female dichotomy this year at 55%/45% is in line with recent years and exactly the same as in 2018.

Patron attendance at 2019 Fieldays continued

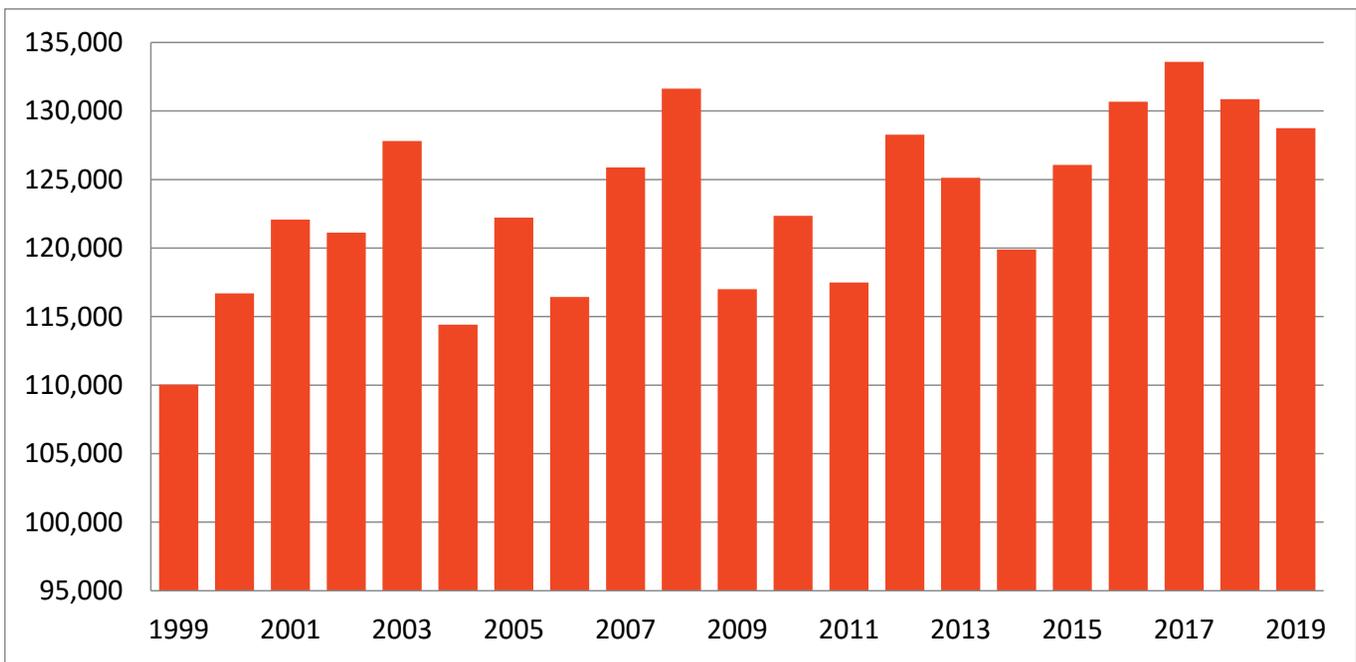
TABLE 2: GATE ENTRIES BY DAY FOR 2019 FIELDAYS

Day of the Week	2019 Entries	2018 Entries	2019/2018 Percent Change
Wednesday 12 th June	26,360	24,663	+6.9%
Thursday 13 th June	30,842	35,704	-13.6%
Friday 14 th June	40,135	39,410	+1.8%
Saturday 15 th June	31,410	31,089	+1.0%
TOTALS	128,747	130,866	-1.6%

The pattern above suggests that Thursday was the one bad day this year, with all other days showing a moderate to slight increase. Possibly, on the one day potential patrons could attend (i.e. Thursday) they did not come because of other factors such as the weather.

In Figure 1, the bar graph shows the gate entries starting in 1999. Total attendance this year dropped by 1.6% over last year. Average gate entry fee this year (including GST) was \$21.59 compared to \$22.00 last year.

FIGURE 1: FIELDAYS GATE ENTRIES FOR YEARS 1999-2019



Visitor and exhibitor spending impacts

The 75,167 out-of-region patrons (i.e. non-Waikato with 79,266 in 2018 and 69,466 in 2017) directly spent an estimated \$23.44 m in total over the four days of the 2019 Fieldays, just less than the \$24.4 m last year.

In this report, we will show last year's figure in brackets; as in \$23.44 m (\$24.4 m). The \$23.44 m equates to an average spend of \$312 per person (\$308) at the event, although this excludes the cost of entry to Fieldays itself.

TABLE 3: TOTAL IMPACTS FROM VISITOR EXPENDITURE AT 2019 FIELDAYS FOR THE WAIKATO REGION & NZ

Expenditure Round	Revenue \$ m	Net Household Income \$ m	Employment Persons	Value Added or GDP \$ m
Waikato				
Direct or first round	23.44	5.84	268	10.80
Flow-on rounds into Waikato	27.34	3.98	94	10.74
Total Impacts Waikato Region	50.78	9.82	362	21.54
Other NZ				
Airfares Overseas Patrons*	3.98	0.68	11	1.62
Other NZ Flow-on Rounds	5.94	2.10	12	5.46
Total Impacts for All NZ	60.70	12.60	385	28.62
Waikato Percentage of NZ**	83.7% (82.3%)	77.9% (75.9%)	94.0% (91.5%)	75.3% (73.6%)
Waikato Region Multiplier**	2.17 (2.13)	1.68 (1.67)	1.35 (1.34)	1.99 (1.96)
NZ Multiplier**	2.59 (2.59)	2.16 (2.19)	1.44 (1.47)	2.65 (2.66)
2019 - 2015 Comparisons				
Waikato Impacts by Year				
2019 as above	50.78	9.82	362	21.54
2018	52.02	10.06	367	22.33
2017	49.06	10.00	344	22.60
2016	27.70	6.20	276	13.76
2015	45.31	8.19	248	19.25
Waikato Percent Gains 2019/18	-2.4%	-2.4%	-1.4%	-3.5%
NZ Impacts by Year				
2019 as above	60.70	12.60	385	28.62
2018	63.22	13.25	401	30.34
2017	55.13	11.72	370	27.01
2016	40.86	8.63	303	19.91
2015	51.00	9.91	288	23.65
NZ Percent Gains 2019/18	-4.0%	-4.9%	-4.0%	-5.7%
Equivalent Annual Percent Gains From Visitor Expenditure at Fieldays 2015 to 2019				
	Revenue	Net HH[#] Income	Employment	Value Added
Waikato Region	2.9%	4.6%	9.9%	2.9%
NZ in Total	4.4%	6.2%	7.5%	4.9%

*Only 25% of airfare expenditure impacts the NZ economy via refuelling, cabin meals, landing charges, cleaning and similar services.

[#]HH = Household

**Note that last year's percentages & multipliers are shown in brackets

Visitor and exhibitor spending impacts continued

This hospitality spending in sectors such as Accommodation, Restaurants & Bars, Sport & Recreation etc. by visitors is labelled direct or first round spending and induces follow on or flow-on spending in sectors supplying the direct spend sectors such as suppliers of Electricity Generation and Distribution, Meat Processing, Beverages Malt & Tobacco, Other Food Manufacturing, Food & Beverages, Sport & Recreation (includes attractions) and similar sectors. This direct or first-round spending is the initial value in Table 3, which summarises all impacts initially in the Waikato and then for all NZ. All other impacts or flow-on impacts are derived from this expenditure using the appropriate economic model for the year ended December 2018 (i.e. the Waikato region or all NZ). All such direct spending induces flow-ons into supplying sectors such as those listed above. All such related spending aggregates up to a total impact for the Waikato region and also for the rest of NZ. Total economic impacts from visitor spending for the Waikato region and the rest of NZ due to Fieldays patrons in 2019 are summarised in Table 3.

The direct spend by visitors to the Waikato of \$23.44 m in the hospitality sectors is the first figure in Table 3. Flow-ons from these first-round expenditures to supplying sectors such as Meat Processing, Road Transport, Electricity Generation etc. then follow for the Waikato region as shown in the fourth line of Table 3. In addition, there are flow-ons into the rest of NZ for goods and services imported into the Waikato region to service Fieldays visitors. This would include; for example, beverages such as beer and wine, as well as fuel for cars and other goods and services. Furthermore, servicing of planes bringing visitors to the event will occur mostly outside the Waikato region, such as at Auckland International Airport. Domestic visitors from outside the region would of course use Hamilton airport if possible.

This year, out-of-region patrons at Fieldays were down 5.2% over 2018 at 75,167 versus 79,266 (overall gate entries were

1.6% lower). As a result, impacts from visitor spending for all measures were down slightly from the 2018 equivalents. However, the Waikato percentages of NZ impacts for all measures were slightly higher than in 2018. Furthermore, the Waikato multipliers as in Revenue showing every \$1 of visitor spending generates another \$1.17 of spending in the region are all up over the 2018 equivalents. As a result, the NZ multipliers are the same or slightly lower to compensate. This suggests that events like Fieldays have augmented the capacity of Waikato businesses to service the event without recourse to as many imports into the region as in previous years. That is, Waikato is becoming more self-sufficient to cater for these events and capturing more of the economic payoff that previously went outside the region. Clearly this is positive for Waikato and recurring events like Fieldays are due some of the credit for this increased capture by the Waikato region.

Visitor spending at Fieldays generates \$61 m of sales revenue throughout New Zealand, with \$51 m of this total (82%) captured by businesses in the Waikato region. Percentage impacts of the NZ totals for the Waikato region varied from 75% to 94%, showing significant gains for the region from this event.

The Revenue multipliers tell us that every dollar of visitor expenditure at Fieldays induces another \$1.17 of expenditure for businesses in the Waikato region, with another 46c of expenditure flowing into the rest of NZ ($1.00 + 1.17 = 2.17$ for Waikato and for all NZ $2.17 + 0.42 = 2.59$). The other multipliers can be similarly interpreted. As noted above, the Waikato proportion of flow-ons has increased slightly this year at the expense of the rest of NZ.

With 75,167 (79,266) patrons from outside the Waikato region at the 2019 Fieldays, we can conclude that every visitor gate entry from outside the Waikato region

generates \$676 (\$656) of expenditure in the region's hospitality and supporting sectors. This is a 3% gain for 2019 over 2018 and reflects that although fewer patrons came through the gates this year, those that did spent more in the hospitality sectors. It also reflects the increased 'capture' noted above by the Waikato region.

From Table 3, it is clear that much of the impacts are realised in the flow-on sectors, with \$27 m (\$28 m) for the Waikato region and another \$10 m (\$7 m) for the rest of NZ. NZ gains approximately \$4m from overseas patron airfares, which was not shown in last year's \$7 m for this measure. For hospitality spending the direct or first round sectors include *Accommodation, Restaurants & Bars, Road Transport* (taxis, tours etc.), *Sport & Recreation* and the retail trade sectors. Furthermore, an estimated 362 (367) full-year jobs (both full and part-time) are sustained in the Waikato region due solely to this Fieldays visitor expenditure in the hospitality sectors (up from 344 in 2017). The sectors gaining most of the flow-on business from hospitality services include *Horticulture & Fruit Growing, Meat Processing, Dairy Processing, Other Food Manufacturing* and *Beverages* which are all substantial employing sectors in the Waikato region. This means the Waikato region needs to import very little in the way of goods and services to supply the hospitality sectors in servicing Fieldays visitor demands. Accordingly, about 75% (74%) of the Value Added (or GRP) created by visitor spending at Fieldays for all NZ remains in the Waikato region. For example, if Hamilton did not have a casino, some of this visitor spending could leak into the Auckland region with its more extensive entertainment infrastructure and easy access via air or road. The proximity of Hamilton to Raglan and Mount Maunganui is also a factor influencing a Hamilton base for out-of-region event patrons who then have easy access to these additional popular tourist destinations.

Detailed economic impacts from the Fieldays event are now available for both the Waikato region and all NZ for the five years from 2015 to 2019. Using these values, another measure of the importance of Fieldays for the NZ economy can be gained by looking at the annual percentage gains for all impacts.

These percentage gains for the Waikato region and all NZ are shown in the last lines of Table 3. These show 3% to 10% annual gains for the Waikato region, with the NZ annual gains slightly higher for most measures (Employment excepted) in

the 4% to 8% range. As host to the event, the Waikato region naturally gains more from visitor spending than the rest of the NZ economy in total.

These annual percentage impact gains indicate just how important the event has become for profitability in the hospitality sectors related to Fieldays throughout the Waikato region and NZ in total. Evidence suggests these sectors are gaining in capability to service large events such as Fieldays and with international sporting events such as rugby and cycling and similar fixtures.

As for last year, expenditures by exhibitors at the event for hospitality etc. and spending by non-Waikato exhibitors in logistic expenditures in getting materials, products etc. to the Mystery Creek site from outside the Waikato region have been analysed for economic impacts.

The former expenditures will directly impact the Waikato economy in the first instance while the second will directly impact the rest of NZ outside the Waikato region. Resulting economic impacts for the four measures we use are summarised in Table 4.

TABLE 4: TOTAL IMPACTS FROM MYSTERY CREEK EXPENDITURE BY EXHIBITORS AT 2019 FIELDAYS FOR THE WAIKATO REGION & NZ

Expenditure Round	Revenue \$ m	Net Household Income \$ m	Employment Persons	Value Added or GDP \$ m
Waikato				
Direct spending on Accommodation etc.	4.29	1.10	58	2.11
Flow-on rounds into the Waikato region	5.19	0.75	18	2.04
Total Impacts Waikato Region	9.48	1.85	76	4.15
<i>Total Impacts for Waikato in 2018</i>	<i>8.90</i>	<i>1.74</i>	<i>71</i>	<i>3.89</i>
Waikato multipliers 2019	2.21	1.68	1.31	1.57
Other NZ				
Direct expenditure on Logistics to MC*	2.18	0.49	5	0.87
Flow-ons from Logistics & MC expenditure	4.00	0.87	15	2.28
Total Impacts for All NZ	15.66	3.21	96	7.30
<i>Total Impacts for All NZ in 2018</i>	<i>14.64</i>	<i>3.01</i>	<i>91</i>	<i>6.85</i>
NZ multipliers 2019	2.42	2.02	1.52	2.45

*MC = Mystery Creek

As 2018 was the first year that these impacts were calculated, we show them in Table 4 for comparison.

This year shows a 7% increase in these impacts over 2018 and possibly reinforces the conclusion that exhibitors from the rest of NZ are increasingly important. Naturally this increases logistic and other expenses (e.g. accommodation) in total for the event.

Equipment sales impacts

Exhibitor demographics are summarised in Table 5. Comparing 2019 with last year, an overall increase in exhibitors of 4.8% to 1,066 (1,017) was matched by a 5% increase to 1,540 (1,466) in exhibitor

sites. Overseas exhibitors decreased from 54 last year to 35 this year and overseas sites were down marginally to 45 from 49 last year. This seems a substantial drop in overseas involvement this year; although

the number of exhibitors and sites suggests the big players are still coming. Even with this drop in overseas exhibitors, 11 overseas countries were still represented at this year's event.

TABLE 5: EXHIBITOR DEMOGRAPHICS FOR 2019 FIELDAYS & PREVIOUS YEAR COMPARISONS

	2015	2016	2017	2018	2019	2019/18 % Change
EXHIBITOR RESIDENCY						
Waikato	260	249	234	230	243	5.7%
Rest of NZ (RONZ)	711	717	682	733	788	7.5%
Total NZ	971	966	916	963	1031	7.1%
Overseas	46	43	52	54	35	-35.2%
TOTALS FOR RESIDENCY	1,017	1,009	968	1,017	1,066	4.8%
EXHIBITOR SITES						
Waikato	370	389	389	363	363	0.0%
Rest of NZ (RONZ)	1,022	1,064	1,041	1,054	1,132	7.4%
Total NZ	1,392	1,453	1,430	1,417	1,495	5.5%
Overseas	55	54	55	49	45	-8.2%
TOTALS FOR SITES	1,447	1,507	1,485	1,466	1,540	5.0%

Although the number of Waikato exhibitors increased 5.7% this year, their sites remained unchanged at 363, suggesting new but smaller exhibitors came for the first time and shared a site.

As noted below in Table 6, the rest of NZ exhibitors are growing in importance relative to the Waikato region. This suggests the 'national' as in National Fieldays is gaining traction over recent years. While the number of overseas exhibitors fell substantially, their site use was down only 8%. Clearly the larger overseas exhibitors are continuing to support the event. Over the four years 2015 – 2019, total sites used have grown at an annual rate of 1.6%. The change in the Waikato percentage of exhibitors over recent years is summarised in Table 6.

TABLE 6: WAIKATO PERCENTAGE OF NZ EXHIBITORS 2015 – 2019

Waikato Exhibitors	2015	2016	2017	2018	2019
Number of Exhibitors as percent of NZ	26.8	25.8	25.5	23.9	23.6
Number of Sites as percent of NZ	26.6	26.8	27.2	25.6	24.3

For the number of exhibitors, the Waikato percentage shows a gradual decline over the last five years to 23.6% in 2019. For sites, there have been percentage increases for some years but currently the percentage is 2.3% lower than it was in 2015. Consequently, the rest of NZ has picked up the shortfall with total NZ sites increasing over the years to 1,495 this year. As evidenced above, overseas exhibitors have not markedly increased in either number or sites over recent years.

Fieldays provides an opportunity for exhibitors to demonstrate the latest technology available for the agricultural, horticultural, and other primary sectors. Services to the agricultural sectors as in

the mole screening programme have also contributed in bringing the latest technology to farmers and growers, improving their quality of life.

In estimating equipment sales at each exhibitor site, responding exhibitors were asked to include in their estimate the sales they judged would occur as a result of the Fieldays interactions. While this introduces subjectivity into the sales estimates, it is well understood that not all sales due to Fieldays are realised at the four days of the event. Major equipment purchases are not usually spur-of-the-moment transactions.

Over the four days of the event, average site sales were estimated at \$129,405 or

6.9% ahead of last year's figure of \$121,005. In recent years, sales per site have varied from a low of \$104,200 in 2016 to a high of \$135,995 in 2017, which was a 'bounce back' year. Clearly there was a mean reversion effect in play over the period 2016 to 2019, with lows followed by highs.

Note too that NZ exhibitor sites were up 5.5% this year at 1,495 (1,417), making for an aggregate direct NZ sales impact for equipment and related materials of \$193.46 m (\$171.4 m), a gain of 12.9% over last year. As noted above, sales by overseas exhibitors are excluded from the economic impact calculations for the Waikato region and NZ. Sales at overseas sites will however contribute to the Fieldays brand value

analysed later in this report. Although equipment sales are a predominant feature of Fielddays activities, sales of consumables such as clothing, drenches, sprays etc. and other agricultural services are also important. It is recognised that some of these sales would have taken place in the absence of Fielddays but have been included

in the event's impacts reported here, making surveys of purchases easier to undertake by respondents at Fielddays.

Table 7 below summarises the total economic impacts from equipment and other sales for Waikato and the rest of NZ after allowing for the flow-ons from direct

sales of \$193.46 m for NZ exhibitors.

Note that the flow-on expenditure rounds for the Waikato region and the rest of NZ follow the direct impact Revenue values of \$46.97 (\$43.94 m) and \$146.49 (\$127.48 m) for Waikato and the rest of NZ respectively, or \$193.46 m in total.

TABLE 7: TOTAL IMPACTS FROM EQUIPMENT SALES AT 2019 FIELDAYS FOR THE WAIKATO REGION & NZ

Expenditure Round	Revenue \$ m	Net Household Income \$ m	Employment Persons	Value Added or GDP \$ m
Waikato				
Direct or first round	46.97	10.49	217	18.48
Flow-on rounds into Waikato	50.28	7.34	166	18.91
Total Impacts Waikato Region	97.25	17.83	383	37.39
Other NZ				
Rest of NZ direct or first round	146.49	34.50	638	60.57
Flow-on rounds into all NZ	199.98	36.26	706	94.26
Total NZ Impacts	443.72	88.59	1,727	192.22
Waikato Percentages of NZ by Year				
2019	21.9%	20.1%	22.2%	19.5%
2018	23.0%	21.1%	23.1%	20.3%
2017	25.2%	23.8%	24.3%	23.1%
2016	19.3%	20.2%	19.7%	19.0%
2015	23.4%	20.5%	20.7%	20.1%
Waikato Region Multiplier 2019 (2018)	2.07 (2.06)	1.70 (1.69)	1.76 (1.75)	2.02 (2.01)
NZ Multiplier 2019 (2018)	2.29 (2.30)	1.97 (1.98)	2.02 (2.03)	2.43 (2.44)
Comparisons 2015 – 2019				
Waikato Impacts by Year				
2019 as above	97.25	17.83	383	37.39
2018	90.53	16.64	355	34.81
2017	113.39	21.53	447	45.35
2016	67.88	14.16	309	28.84
2015	74.61	12.57	287	26.45
Waikato Percent Gains 2019/2018	7.4%	7.2%	7.9%	7.4%
NZ Impacts by Year				
2019 as above	443.72	88.59	1,727	192.22
2018	394.29	78.86	1,534	171.20
2017	450.05	90.41	1,837	196.65
2016	351.62	70.21	1,567	151.53
2015	318.31	61.23	1,384	131.72
NZ Percent Gains 2019/2018	12.5%	12.3%	12.6%	12.3%
Equivalent Annual Percentage Gains From Equipment Sales at Fielddays 2015 – 2019				
	Revenue	Net HH* Income	Employment	Value Added
Waikato Region	6.8%	9.1%	7.5%	9.0%
NZ in Total	8.7%	9.7%	5.7%	9.9%

*HH = Household

Equipment sales impacts continued

Percentage gains for 2019 over 2018 averaged just over 7% for the Waikato region and just over 12% for all NZ. Apart from the Employment impact, NZ annual gains over the 2015-19 period for all other measures were slightly higher than those for the Waikato region. However, both Waikato and NZ show significant percentage gains at an annual rate.

In estimating the flow-on impacts from the direct equipment expenditures shown in Table 7 (direct expenditures at \$47 m for Waikato and \$147 m for the rest of New Zealand), 106-sector economic models for the year ended December 2018 for both the Waikato region and NZ in total were utilised. These models are explained in more detail in Appendix 1. The total Revenue impact for all NZ at \$444 m is a very significant impact for the NZ economy and is now approaching the record 2017 year value of \$450 m, which as previously noted was a 'bounce back' year after a recessionary 2016 during the global financial crisis.

After accounting for flow-on impacts as in Table 7, the total sales and employment impacts for NZ show that sales per worker were \$443.72 m/1,727; or \$256,931, which is just under the 2018 value of \$257,034. The numbers are very close and reaffirm last year's conclusion "that the

NZ economy is becoming more productive in producing agricultural machinery and related products".

The multipliers reported in Table 7 show that every dollar of equipment sales at Fieldays engenders another \$1.07 of sales expenditure in the Waikato region and a further 22c in the rest of NZ ($1 + 1.07 + 0.22 = 2.29$). Of course, the direct impacts are much higher for the rest of NZ (excludes Waikato), reflecting the larger number of exhibitors from outside the Waikato region. The high values of all multipliers for the four impact measures reflect the current importance of agriculture generally for the NZ economy.

As noted above, the total Revenue impact for all NZ at \$444 m is slightly less than the 2017 year's record value of \$450 m. Since the majority of NZ exhibitors are from outside the Waikato region, the rest of NZ (excluding Waikato) is the main beneficiary of this very significant economic production. Of course, we must acknowledge that some of these sales would have been realised by NZ firms during 2019/20 in the absence of Fieldays. Nevertheless, it is credible to claim that the size and international significance of the Fieldays event generates attendance by potential buyers from around the world, resulting in sales for NZ firms that would

not have occurred in the absence of the event. Exhibitors this year have estimated that if Fieldays had not been held in 2019 or if they had not participated this year, 9.2% (11.4%) of the Fieldays sales they made at the event would be lost to their businesses. This percentage is up slightly from 8.8% in 2016 and 9.1% in 2017 (see Appendix 2).

Total jobs in NZ attributable to the 2019 Fieldays equipment and other sales are estimated at 1,727 (1,534), which are again down from the 1,837 in the record 2017 year. As noted above, productivity per worker in terms of total sales due to the event was essentially unchanged from 2018 at \$256,931 versus \$257,034 last year.

Gaining international recognition as a reliable supplier of agricultural, horticultural and similar equipment and other industrial machinery makes Fieldays an indispensable input into ongoing profitability for NZ manufacturing firms in these sectors. Continued success in agricultural machinery production can only be achieved if a sufficient scale is attained by NZ manufacturers. Selling internationally is therefore a necessity and the Fieldays event is NZ's best chance of maintaining its standing as a world-class exporter of both agricultural commodities and related machinery.

Organisational expenditure impacts for 2019

A brief summary of 2019 operations at the Mystery Creek Events Centre is shown in Table 8, along with percentage gains over the 2018 year.

TABLE 8: SUMMARY OF OPERATIONS AT THE MYSTERY CREEK EVENTS CENTRE FOR 2017 - 2019

Economic Measure	2017	2018	2019	2019/18 % Change
Expenditure on goods & services \$m	6.97	7.39	7.93	7.3%
Gross wages & salaries \$m	2.45	2.94	2.91	-1.0%
Capital Expenditure on Site Development at Mystery Creek \$m	1.80	1.11	4.23	281%
Total Expenditures by Mystery Creek Events Centre \$m	11.22	11.44	15.07	31.7%
Mystery Creek employees (average for year)	36	38	37	-2.6%
Fieldays gate receipts \$m including GST	2.20	2.88	2.78	-3.5%
Fieldays attendance in patrons	133,588	130,866	128,747	-1.6%

Capital expenditure at the Mystery Creek site was markedly higher this year. Capacity at the site for exhibitor sites and other amenities has been significantly expanded. This has implications for the Fieldays brand value, which is analysed below.

The economic impacts for the Waikato region and NZ in total from Mystery Creek Events Centre expenditure in 2019 are summarised in Table 9. Note that expenditure on goods and services of \$7.93 is added to capital expenditures of \$4.23 for a total direct or first round expenditure impact of \$12.16 m. This expenditure is allocated to sectors such as *Legal & Accounting Services*, as well as construction sectors such as *Non-Residential Building*.

TABLE 9: TOTAL IMPACTS FROM 2019 Fieldays ORGANISATIONAL EXPENDITURE FOR THE WAIKATO & NZ

Expenditure Round	Revenue \$ m	Net Household Income \$ m	Employment Persons	Value Added or GDP \$ m
Waikato				
Mystery Creek Spending on Goods & Services	12.16	2.04	37	7.77
Flow-ons into other Waikato sectors	13.05	1.91	35	9.11
Total Impacts for the Waikato Region	25.21	3.95	72	16.88
Total Impacts for the Waikato Region in 2018	16.65	3.66	67	9.40
Rest of New Zealand				
Flow-ons into the RONZ	3.93	1.31	14	1.77
Total Impact for All NZ	29.14	5.26	86	18.65
<i>Total Impacts for all NZ in 2018</i>	<i>19.90</i>	<i>5.15</i>	<i>85</i>	<i>12.38</i>
Waikato Percentage of NZ Impacts	86.5% (83.7%)	75.1% (71.1%)	83.7% (78.8%)	90.5% (75.9%)
Waikato Region Multiplier	2.07 (1.96)	1.94 (1.78)	1.95 (1.76)	2.17 (1.52)
NZ Multiplier	2.40 (2.34)	2.58 (2.50)	2.32 (2.24)	2.40 (2.00)

The increase in capital expenditure this year results in a significant increase in all impact measures. The Waikato region in particular gains most from this increase since capital expenditure inputs such as Non-Building Construction (roads etc.) will normally be completed by Waikato firms.

Typically construction has high value added impacts as well, so the Waikato region's share of the value added impact rises to 90.5% this year. In general, Waikato percentages of NZ and the multipliers also show a significant increase over the 2018 equivalents.

The NZ multipliers also increase with the increased capital expenditure but not so markedly.

Estimation of brand value of Fieldays platform

Platform businesses such as Fieldays bring together producers or manufacturers and clients for their products in high-value exchanges. The essential properties of the platforms are information and interaction between all interested participants.

With network effects, the number of participants can be expected to grow over time, increasing the value of the platform, which facilitates comparisons of competing products for users. Such growth is essential for platform success and eventual competitive advantage over other alternative competing platforms.

This means that at some level of aggregate interactions, the platform cannot be easily supplanted by a competing platform. At this point, not only are current platform gains of value, but values that will be realised in the future form part of the current brand value and need to be accounted for. The scale of Fieldays 2019 is now judged to be at such a level that a brand value incorporating future returns is justified and this is shown below in Table 10 using horizons of 5 to 10 years.

As foreshadowed above, one essential element of a platform is to continually increase the scale or number of participants. For Fieldays, this is the number of exhibitors and patrons (potential buyers) at the event.

Although the GFC moderated business growth worldwide over earlier years, Fieldays has increased exhibitors from 942 in 2014 to 1,066 in 2019; or 2.5% p.a. Similarly, exhibitor sites have grown from 1,366 in 2014 to 1,540 this year; or at 2.4% per annum. Over the same period, gate entries have increased from 119,982 to 128,747 in 2019; or at a 1.4% annual rate.

These growth rates are feasible for the years ahead, although gate entries may plateau as market saturation is approached. Conservative growth rates lower than recorded currently are used below so as not to unduly inflate the monetary brand value of Fieldays.

A monetary brand value for Fieldays is currently based on three revenue streams for 2019:

- Gate entry value by patrons to the event at \$2.78 m;
- Sales that would be lost to exhibitors in the absence of the Fieldays event estimated at \$53.94 m (see below); and
- Platform value created by event spending and capital expenditure at the Mystery Creek site totalling \$44.8m this year (\$31.76 m in 2018). The increased capital expenditure this year increases the 2019 value.

These values are shown separately in Table 10, with very conservative growth rates assumed for future years to prevent any overstatement in the brand value calculation. A 1.5% growth rate is assumed in Gate Revenues (marginally higher than the 1.4% reported above but justifiable with better traffic logistics) with 1% and 0.5% growth rates for Lost Sales and Site Development and Exhibitor event expenditure, respectively.

The total value created for all three revenue streams is then summed over five or ten years using a 7.5% p.a. discount rate. This 7.5% rate reflects the lower interest rates and lower inflation prevailing worldwide as countries now seem to have recovered from the effects of the GFC, although interest rates remain low. Prior to the onset of the GFC, perhaps a 10% rate would have been more appropriate. Of course, the higher the discount rate for future returns, the lower the brand value.

Currently, interest rates in the major economies have remained lower for longer than was previously forecast and are currently negative in Japan, Switzerland, Denmark, and Sweden.

TABLE 10: AN ESTIMATED BRAND VALUE FOR THE FIELDAYS PLATFORM AS AT 2019

Year	Gate Revenue \$m	Lost Sales \$m	Site Development \$m	Total Value \$m	Discounted Value \$m	Horizon Year	Horizon Value \$m
2019	2.78	53.94	44.80	101.52	101.52	1	
2020	2.82	54.48	45.02	102.33	95.19	2	
2021	2.86	55.02	45.25	103.14	89.25	3	
2022	2.91	55.57	45.48	103.96	83.68	4	
2023	2.95	56.13	45.70	104.78	48.46	5	448
2024	2.99	56.69	45.93	105.62	43.57	6	
2025	3.04	57.26	46.16	106.46	68.98	7	
2026	3.09	57.83	46.39	107.31	64.68	8	
2027	3.13	58.41	46.62	108.16	60.65	9	
2028	3.18	58.99	46.86	109.03	56.87	10	773
Average Brand Value at 5 & 10 years							\$610 m

Exhibitors estimated their lost sales in the absence of 2019 Fielddays at 9.15% of sales made at the event compared with 11.4% last year (see Appendix 2). These direct sale losses then snowball, with further losses in flow-ons from other producers manufacturing inputs into equipment sold at Fielddays both in NZ and overseas. Other losses follow from lower worker income and expenditure by households in day-to-day living.

Not only are NZ losses relevant for brand value but also the losses for overseas exhibitors since the brand value here is a world brand value. Accordingly, the estimated loss in NZ will be 9.15% of the \$444 m in Table 7 or \$40.6 m.

Since the brand value is a world-wide value, NZ lost sales need to be increased to account for overseas lost sales. If we take 45 overseas sites with a per site sale value of \$129,405, we get total overseas sales of \$5.82 m. This value, however, is only the first round value and using the NZ revenue multiplier of 2.29 (Table 7), total overseas sales lost aggregate up to

\$13.34 m after flow-ons in the respective countries. Since these are overseas exhibitors, this represents the total value of lost sales (no percentage) since overseas exhibitors have no NZ business outlet to compensate for sales not made at Fielddays. Consequently, lost sales in total come to \$53.94 m. These lost sales are assumed to expand at a 1% rate in coming years.

Similarly, the national Revenue impact for organisational expenditure shown at \$44.8 m for 2019 from Table 10 expands at a 0.5% p. a. rate out to 2028. The total value of these three revenue streams attributable to the Fielddays platform is then discounted at a 7.5% rate to estimate the brand value in today's 2019 dollars. This gives a current Fielddays brand value using an average of the five and ten year horizons of \$610 m; up 25% from the \$488 m estimate last year.

Note that if a ten-year horizon is utilised for calculating the brand value, it increases to \$773 m (\$618) under the above assumptions. Alternatively, if only a five-year horizon is deemed applicable, the brand value reduces to \$448 m (\$358 m).

No matter which assumptions are employed in this calculation, the resulting brand value is very substantial for a NZ business platform.

As Fielddays expands in size in future years, the Site Development revenue stream will reduce to a steady site maintenance value. With the expanded site, however, the number of exhibitors will increase as will the Lost Sales revenue stream associated with them. The Gate Revenue stream should also increase with greater patronage and better traffic logistics around the Mystery Creek site. This means that an annual total value for brand value estimation in the range of \$100 m to \$110 m in 2019 dollars as shown in Table 10 will still be appropriate for future years.

Other events generating revenue are held at the Mystery Creek site throughout the year. Revenues from these events are not, however, attributable to Fielddays and are not included in the brand value calculation.

Metrics underlying the brand value calculation

In estimating the brand value of the Fieldays platform, objectively based dollar revenue streams form the basis for the estimated value reported above. However, indicators of brand value such as productivity trends in the agricultural machinery etc. sectors can be analysed to provide further evidence of brand value augmentation. Trends in the Lost Sales percentage examined below are

also another indicator that can be used to verify brand value enhancement. Any increase over time in this percentage indicates that the Fieldays Platform is becoming increasingly valuable for exhibitors. Finally, exhibitors are asked to estimate the number of 'Leads' (potential future customers) generated at their Fieldays site over the event. Although there is no sales value attached to this

metric, an upward trend in this number would indicate that the Fieldays brand value is potentially increasing based upon an underlying increasing customer base available to regular exhibitors.

Trends in these indicators of brand value are summarised in Table 11.

TABLE 11: TRENDS IN INDICATORS OF BRAND VALUE 2015 – 2019

Indicator Category	2015	2016	2017	2018	2019
Fieldays Equipment & other sales per worker for all NZ	\$229,993	\$224,391	\$244,992	\$257,034	\$256,931
Lost Sales if Fieldays not attended by Exhibitor (percent)		8.8%	9.1%	11.4%	9.2%
Number of Exhibitor Customer Leads generated at Fieldays			210,532	247,267	265,908
Average Brand Value for the Fieldays Platform			\$465 m	\$488 m	\$610 m

Note that not all indicators are available for some of the earlier years, but the generally upward trend in these indicators is unanimous evidence of the increasing value of the Fieldays platform.

The equipment sales per worker indicator includes all direct sales of machinery, supplies etc. at Fieldays as well as flow-on sales in the sectors supplying equipment worker households as in *Supermarkets & Groceries, Other Retailing* and similar sectors. For 2019, this indicator is derived from Table 7 as follows: \$443.72 m / 1,727, or \$256,931 down marginally from last year's \$257,034 per worker.

As evidenced in Table 11, it is possible that the Fieldays platform has played a role in this increased worker productivity in the relevant sectors of the NZ economy such as *Fertiliser & Pesticides, Fabricated Metal Products, Machinery Manufacturing, Transport Equipment* and similar sectors. Possibly, the 11.4% reported in 2018 was an overestimate, with the 2019 value more in line with those of earlier years.

Finally, while there must be some subjectivity in the 'Leads' generator reported by exhibitors, the opinion of 316 (363) respondents this year is that this indicator is increasing significantly, with a 7.5% increase for 2019 over 2018. This

percentage increase is consistent with the 12.5% increase this year in equipment sales (includes flow-ons as in Table 7) and suggests increasing confidence in NZ's agricultural sectors.

Reflecting the trends in all these metrics, the estimated average Fieldays brand value shows a significant 25% increase this year over the 2018 estimate. The extent of this increase results from the change this year in accounting for the Lost Sales for overseas exhibitors which were previously excluded, as well as the increased capital expenditure at the Mystery Creek site this year (see Table 8).

Impacts due to overseas patrons and exhibitors

This year 35 overseas exhibitors from 11 countries on 45 sites presented their wares at Fieldays. Foreign patrons numbered 1,390 this year, which was down from 1,911 last year. Expenditures by overseas exhibitors and patrons will have a large impact on NZ's transport, tourism and hospitality sectors. Table 12 below summarises the estimate of these impacts for the four economic impact measures.

TABLE 12: ECONOMIC IMPACTS FROM OVERSEAS PATRONS AND EXHIBITORS FOR 2019

Expenditure Round	Revenue \$ m	Net Household Income \$ m	Employment Persons	Value Added or GDP \$ m
Hospitality				
Patrons: 1,390/75,167 from Table 3 (excl. airfares)	1.05	0.22	7	0.50
Exhibitors: 45/1,540 from Table 4	0.46	0.09	3	0.21
Total for Hospitality for Patrons & Exhibitors	1.51	0.31	10	0.71
Extra Expense Factor for Overseas: Factor x 3	4.53	0.93	30	2.13
Airfares from Overseas Patrons Table 3	3.98	0.68	11	1.62
Total Impacts Overseas Patrons & Exhibitors	8.53	1.24	41	3.75

Since the impacts from overseas patron airfares have been estimated separately in the second-to-last line of the table above, they are excluded from patron hospitality calculations in the first line of Table 12.

The first two impacts are calculated strictly proportionally using overseas patrons at 1,390 and overseas exhibitor sites at 45. Since overseas patrons and exhibitors will almost certainly spend more than the averages previously calculated, these expenses have been tripled (factor of 3) to more truly reflect the actual amounts paid by these patrons and exhibitors. Consequently, the total Revenue impact comes to \$8.53 m and the Value Added or GDP impact comes to \$3.75 m.

The majority of these impacts will be captured by the air services and other transport sectors, as well as sectors related to hospitality such as *Electricity Generation and Distribution, Employment & Other Business Services, Waste Disposal, Building Cleaning & Pest Services*.

Summary and conclusions

Aggregating impacts from the three initiating sources (visitors, equipment, organisational) leads to total impacts from Fieldays over the four impact measures (revenue, income, employment and GDP) as summarised in Table 13.

TABLE 13: TOTAL ECONOMIC IMPACTS DUE TO 2019 FIELDAYS FROM ALL SOURCES

Region & Impact Source	Revenue \$ m	Net Household Income \$ m	Employment Persons	Value Added or GDP \$ m
Waikato Region				
Visitor Expenditure	50.78	9.82	362	21.54
Exhibitor Expenditure Onsite	9.48	1.85	76	4.15
Equipment Sales	97.25	17.83	383	37.39
Organisational Expenditure	25.21	3.95	72	16.88
Total Impact for Waikato Region	182.72	33.45	893	79.96
Rest of NZ				
Visitor Expenditure	9.92	2.78	23	7.08
Exhibitor Expenditure on Logistics etc.	6.18	1.36	20	3.15
Equipment Sales	346.47	70.76	1,344	154.83
Organisational Expenditure	3.93	1.31	14	1.77
Total Impact for All NZ	549.22	109.66	2,294	246.79
COMPARISONS 2015 – 2019				
Waikato Percentages of NZ by Year				
2019	33.3%	30.5%	38.9%	32.4%
2018	34.2%	32.0%	40.7%	31.9%
2017	35.6%	33.8%	38.5%	33.3%
2016	28.9%	31.6%	35.0%	30.4%
2015	36.0%	31.7%	34.6%	32.1%
Total Waikato Impacts by Year				
2019	182.72	33.45	893	79.96
2018	168.10	32.10	860	70.43
2017	191.26	36.77	900	79.22
2016	124.50	27.81	708	57.95
2015	142.61	24.07	619	53.28
Percent Gain For Waikato 2019/2018	8.7%	4.2%	3.8%	13.5%
Total NZ Impacts by Year				
2019	549.22	109.66	2,294	246.79
2018	492.05	100.27	2,111	220.77
2017	537.78	108.65	2,340	238.12
2016	430.21	87.93	2,021	190.93
2015	396.11	75.84	1,789	166.23
Percent Gain For All NZ 2019/2018	11.6%	9.4%	8.7%	11.8%
Equivalent Annual Percentage Gains in Total from Fieldays 2015 – 2019				
	Revenue	Net HH* Income	Employment	Value Added
Waikato Region	6.4%	8.6%	9.6%	10.7%
NZ in Total	8.5%	9.7%	6.4%	10.4%

*HH = Household

For the 2019 event, all economic impacts for both the Waikato region and all NZ are up significantly over the corresponding impacts in 2018. This is the complete reverse of the previous year when all 2018 impacts decreased from their 2017 levels. With hindsight, the results for 2017 were those of a banner year reflecting a recovery from both the subdued confidence in the preceding years due to the GFC and also the downturn in NZ dairying in the 2016 year. Accordingly, some 'mean reversion' in 2018 from these record 2017 results could be expected and is confirmed by the year-by-year results in Table 13. Mean reversion in 2019 is again in operation, possibly restoring impacts to their traditional trend levels.

Another way to measure the overall impact of the Fieldays event is to document that every one of the 128,747 (130,866) gate entries (man, woman, and child) generates over \$4,200 (\$3,700) in sales revenue for NZ firms, and just over \$1,400 (\$1,300) in revenue for businesses in the Waikato region. These averages include hospitality services, equipment sales, and organisational expenditures. The Waikato average is significantly lower due to an estimated 76% (74%) of direct or first round equipment sales coming from outside the Waikato region, with most flow-ons from this stimulus also attributable to the rest of NZ.

For the Waikato region, the impact of Fieldays visitor patron expenditure alone (excluding equipment purchases) is significant. Every gate entry by the 75,167 (79,266) visitors to the region generates \$312 (\$308) of direct or first round

spending on accommodation, restaurants, retailing and other recreation for Waikato businesses. The politicians, market movers, and overseas executives attracted to this international event facilitate worldwide and regional interactions that could help the Waikato region further develop its production and logistics potential.

The importance of Fieldays to the continued success of the NZ economy, particularly the major agricultural exporting sectors, cannot be overstated. Fieldays provides a platform for advertising the latest technology available to augment the productivity of workers in the farming and agribusiness sectors generally. It is important that NZ maintain leadership in the early adoption of productivity-augmenting equipment in the primary sectors.

Early adopters, however, run the risk of paving the way for larger, better capitalised competitors to reap the majority of the rewards the early adopters have demonstrated. This can curb future innovation and this is something NZ cannot afford to facilitate, especially in the sectors so vital to the country's future prosperity. Support for surrounding road infrastructure and site development around and at the Mystery Creek location would seem a compelling objective for central Government to adopt. Increased patronage for the event will only come if traffic congestion does not become an overriding feature of Fieldays. Development of Hamilton airport as an alternative to Auckland airport in emergencies would also add to NZ's stature as a tourist mecca.

The growth in economic impacts due to Fieldays shows the event has evolved into a major player in assuring NZ's economic future. First, Fieldays can provide a platform for bringing NZ innovation in agricultural, horticultural etc. machinery to the attention of the world food producers and potential equipment purchasers. Innovative but small NZ manufacturers may not be able to afford a presence in other similar forums overseas. Better to have the world come to Hamilton, New Zealand in June every year.

Secondly, maintenance of brand leadership requires a continual presence at least annually at a world-class event such as Fieldays. It is important for NZ to realise that the current Fieldays in Hamilton is NZ's best shot at achieving and maintaining the world-class status of this event. While other similar events around NZ may deserve resources, they will never attain the scale and recognition that Fieldays has already achieved over the last 51 years. World players in agriculture may come to NZ but once a year, so why not ensure that such a visit is as memorable as possible by making the Fieldays site iconic?

Thirdly, the availability of innovative productivity enhancing equipment needs to be demonstrated to the actual NZ farmers and growers in the field. Only by using the latest equipment and techniques can NZ producers expect to maintain their current high standing in dairy and meat products, horticultural, wine, and other primary production.

Appendix 1

METHODOLOGY REVIEW OF THE 106-SECTOR ECONOMIC MODELS

This review provides a brief non-technical description of the 106-sector Input/Output model used to generate the general equilibrium economic impact (resulting impacts after all reactions to initiating events, industry developments etc. are accounted for) on the NZ economy, as well as any regional economies such as the Auckland City economy, Waikato Regional Council economy, Waipa District Council economy etc. that may be affected by the activity under analysis.

The economic models were constructed from data originating with Statistics NZ for the year ended March 2013. The NZ economy and all regional economies were categorised into 106 sectors (see below and *italicised* for easy identification). They comprise the basic farming sectors such as *Sheep Beef & Grain Farming, Dairy Farming, Other Farming* (poultry, pigs, goats, horses etc.), *Horticulture & Fruit Growing, Agriculture Forestry & Fishing Support Services* and similar. There are 11 such primary sectors in the model up to *Exploration & Other Mining Support Services*.

Related follow-on sectors to these primary producers that are important for rural regional economies include *Meat Processing, Seafood Processing, Dairy Product Manufacturing, Fruit Cereal & Other Food Manufacturing* (vegetables, fish, confectionery), *Beverages & Tobacco*, and two sectors related to clothing and footwear manufacturing, and another two sectors related to wood processing, pulp and paper manufacturing.

Altogether there are 22 manufacturing sectors, including the primary processing sectors above, as well as *Machinery Manufacturing, Transport Equipment, Electronic & Electrical Equipment Manufacturing* etc. There are five utility sectors as in *Electricity Generation, Electricity Distribution, Gas, Water and Sewerage & Drainage Services*. Construction is sub-divided into four sectors including *Construction Services* (e.g. paving, pools, wiring, plumbing, roofing, landscaping).

The models then use 61 sectors covering a variety of wholesale and retail trade sectors, seven transportation sectors, 25 finance and business service sectors, central and local government services as well as separate sectors for *Preschool Education, School Education, Tertiary Education* and *Adult Education, Hospitals, Community Care Services, Sport & Recreation* and similar. All of the 106 sectors are listed below. Where a sector description is not obvious, some of the activities in that sector are listed in the right-most column.

These comprehensive economic models comprise a class of so-called general equilibrium economic models labelled Input/Output models. Each of the 106 sectors in a model quantifies the inputs it receives from all other sectors such as *Electricity Distribution* in order to produce the goods and services sold in a given period (output level in dollars) usually a year.

Also quantified are the total inputs of labour and capital goods (depreciation or capital replacement) needed to produce at that output level. The models are constructed for the latest year for which comprehensive statistics have been collated by Statistics NZ, including employment data for each of the 106 sectors. Currently this means a model for the year ended December 2018. The Input/Output models provide detailed information concerning:

- The structure of the NZ and/or regional economies as to the most important sectors in the economy in terms of employment, profitability, exports out of the country/region etc.;
- The impact of a change originating in one sector (e.g. *Meat Processing*) and its implications for other related sectors (e.g. *Road Transport*) and the national/regional economy as a whole; and

The implications for the regional and national environment of significant increases in the output level of any sector or group of sectors (e.g. *Dairy Farming* with dairy conversions as in the recent past).

There are four economic impacts that can be analysed for the national or regional economy as follows:

- Total sales revenue, turnover, or output level in dollars;
- Net household income after tax, ACC charges, superannuation and other saving in dollars;
- Employment Count as in both full and part-time workers; and
- Value Added for the region (defined below) otherwise known as gross regional product (GRP) or regional GDP. Gross domestic product or GDP is the equivalent national measure for all NZ.

Although total sales or output best measures the dollar value of total economic activity in a region, it can be inflated by the value of large imports of products or services (e.g. power turbines) into a region such as the Waikato from say Auckland or overseas. While the sales or revenue figures measure total transaction value, the Value Added or GRP value quantifies the economic value in dollars created with a region such as Waikato by local businesses and their workforces, after allowing for any necessary imports of raw materials and other goods and services from outside the region. This is the measure of GRP for a regional economy and ultimately inputs into NZ's GDP and best reflects the true gain to the regional economy. The Value Added measure includes:

- Net after-tax wages and salaries for employees;
- Net after-tax business operating surpluses but before dividends and interest paid by businesses;
- Capital replacement of plant and equipment used up in current production; and
- All taxes paid to government as in PAYE, company tax, GST, excise and customs taxes, road user charges and all similar taxes paid to central Government.

Value Added can be considered the total return from any activity or event received by workers (wages), businesses (profits) and government (taxes).

Net after-tax wages and salaries (or net household income) is the best measure of available household purchasing power. Strong growth or impact for this measure in a region signals improved prospects for all wholesale and retail trade sectors, as well as for sectors like *Construction Services* (e.g. house additions or renovation) and similar sectors.

A wealthy country or region may show acceptable outcomes for the three dollar measures above, but may lack the industrial capacity to support significant job growth in the region or country as a whole. Employment is therefore an important attribute of regional prosperity and this means economic development within the region may be required to expand opportunities for a regional workforce. Such employment is measured in the economic models as Employment Count and includes both full and part-time persons. An

important capital intensive facility such as a port or airport may itself need only a moderate workforce (direct employment) for efficient operation. Through the facility's linkages to other sectors, however, it can ensure profitability to those sectors and drive significant employment growth in those sectors (e.g. *Horticulture & Fruit Growing* which includes floriculture, strawberries, asparagus etc.) by facilitating immediate transport to high value markets supplied by any NZ region either to overseas markets or other NZ regions.

The so-called general equilibrium (includes all subsequent reactions to initiating economic stimuli) nature of the 106-sector Input/Output model is designed to reflect the idea that employment in any one sector generates employment in other sectors of the economy/region being analysed. From employment, related benefits such as income, value added etc.

follow. As employees in the initiating sector build houses and educate their families in the general course of living, they create demands for goods and services that must be satisfied by other sectors with their own employees. In turn, these employees create yet further demands in other sectors and so on and so on.

In economic jargon, these successive rounds of impacts are labelled round-by-round effects with some activities down the line requiring yet further services and employment from the initiating sector. The resulting general equilibrium impacts (Revenue or Output, Net Household Income, Value Added, and Employment) are estimated by the Input/Output methodology and account for all rounds of economic activity. Modern computers and software have made these calculations now routine.

106-SECTOR ECONOMIC MODEL DESCRIPTIONS

1	Horticulture and Fruit Growing	Nurseries floriculture veg kiwi grapes fruit citrus
2	Sheep Beef Grain Farming	Grains rice livestock fattening & finishing
3	Dairy Farming	Milk solids production
4	Other Farming	Poultry horses pigs goats emus deer beekeeping
5	Forestry & Logging	
6	Fishing & Aquaculture	Ocean fresh & fish farming
7	Agriculture Support Services	Horticulture fencing farming forestry fishing services
8	Coal Mining	
9	Oil & Gas Extraction	
10	Mining & Quarrying	Metal ores non-metallic minerals
11	Exploration & Mining Support Services	Oil minerals
12	Meat Processing	
13	Seafood Processing	
14	Dairy Processing	
15	Other Food Manufacturing	Bread biscuit confectionery potato chips animal feed
16	Beverages	Beer wine spirits water energy drinks
17	Textile Manufacturing	Wool scouring leather floor coverings rope
18	Clothing & Footwear	
19	Wood Product Manufacturing	Prefab buildings
20	Pulp & Paper	Sanitary stationery bags
21	Printing	Reproduction & recorded media
22	Petrol & Coal Products	
23	Basic Chemicals & Polymer	
24	Fertiliser & Pesticides	

Appendix 1 continued

25	Pharmaceuticals Cleaning & Other Chemicals	Explosives
26	Polymer & Rubber Manufacturing	Tyres adhesives paints
27	Non-Metallic Mineral Products	Glass bricks plaster concrete
28	Primary Metal & Product Manufacturing	Steel pipes aluminium metal castings
29	Fabricated Metal Manufacturing	Aluminium joinery guttering boilers wire nuts & bolts
30	Transport Equipment Manufacturing	Vehicles boats rolling stock aircraft
31	Electronic Equipment Manufacturing	Photo optical scientific communications white ware
32	Machinery Manufacturing	Pumps heating ventilation lifts tools
33	Furniture Manufacturing	Mattresses
34	Other Manufacturing	Toys jewellery
35	Electricity Generation	
36	Electricity Distribution	
37	Gas Supply	
38	Water Supply	
39	Sewerage & Drainage	
40	Waste Collection & Treatment	
41	Residential Building	
42	Non-Residential Construction	Plants retail commercial
43	Non-Building Construction	Roads bridges ports runways tarmac
44	Construction Services	Site preparation aircon painting glazing security
45	Basic Material Wholesaling	Wool cereal petroleum products timber plumbing
46	Machinery & Equipment Wholesaling	Computer scientific communications construction
47	Motor Vehicles & Parts Wholesaling	
48	Food Drink & Tobacco Wholesaling	
49	Other Goods Wholesaling	Toiletries clothing footwear books sporting
50	Motor Vehicles & Parts Retailing	
51	Fuel Retailing	BP Caltex Z
52	Supermarkets & Grocery	
53	Specialised Food Retailing	Butchers fish liquor fruit & veg
54	Furniture Electrical Hardware Retailing	
55	Recreational Clothing Footwear Personal Retailing	Books watches jewellery
56	Department Stores	
57	Other Retailing	Antiques flowers
58	Accommodation	
59	Food & Beverage Services	
60	Road Transport	Freight bus taxi tours
61	Rail Transport	
62	Water & Other Transport	Water freight & passenger pipelines scenic tours
63	Air Transport	
64	Postal & Courier Services	
65	Transport Support Services	Stevedoring ports terminals customs freight forwarding
66	Warehouse & Storage Services	
67	Publishing	Newspapers books software directory
68	Movie & Recording	
69	Broadcasting & Internet	
70	Communications	
71	Library & Information Services	

72	Banking Services	Credit unions building societies
73	Life Insurance	
74	Health & General Insurance	
75	Superannuation & Pension Services	
76	Financial & Insurance Services	
77	Equipment Hire	Scaffolding video vehicle
78	Residential Property Management	
79	Non-Residential Property Management	
80	Real Estate Services	
81	Owner-Occupied Housing	
82	Technical Services	Scientific engineering architecture surveying testing
83	Legal & Accounting Services	
84	Other Business Services	Advertising marketing consulting mail-out
85	Veterinary Services	
86	Computer Services	
87	Travel & Tour Services	
88	Employment & Administrative Services	Call centres debt collection credit checking
89	Building & Other Support Services	Cleaning pest gardening packaging
90	Local Government	
91	Central Government	
92	Defence	
93	Public & Regulatory Services	Police fire correctional security
94	Preschool Education	
95	School Education	
96	Tertiary Education	
97	Adult Education	Sports arts supporting services
98	Hospitals	
99	Medical & Health Services	Doctors dental chiro physio ambulance optometry
100	Residential Care	
101	Heritage & Arts	Museums botanical performing
102	Sport & Recreation	Amusement parks fitness horse & dog racing Mystery Creek
103	Gambling	Casinos lotteries
104	Repair & Maintenance	Auto appliance repair & maintenance
105	Personal Services	Hair beauty diet funeral dryclean parking domestic serv
106	Religious & Business Groups	Rotary Lions

Appendix 2

DATA SUMMARY

This appendix reproduces some of the raw data used in calculating the economic impacts from Fieldays 2019.

Group Size

Although there were 128,747 gate entries at 2019 Fieldays, patrons do come in groups, which may be a household as in husband and wife plus children; or a group of farmers who come to Fieldays together; or another group of Fieldays patrons as represented by a business. The following table summarises the basic data from a sample of 1,668 respondents.

GROUP SIZE

Number in Group	Groups	Percentage
1	176	10.55
2	718	43.05
3	314	18.82
4	257	15.41
5	78	4.68
6+	125	7.49
TOTALS	1,668	100.00

Average group size (using 7 as average for 6+) is 2.91 this year, compared to 3.07 in 2018, 2.89 in 2017 and 2.77 in 2016. These figures suggest that group size is increasing over the years, indicating that Fieldays is becoming more popular and established in the NZ spectrum of events.

Airfare Impact

Fieldays attracted an estimated 1,390 overseas patrons; down from 1,911 last year. An average airfare of \$5,000 was estimated using respondents spending \$500 or more on transportation.

Total airfare expenditures for Fieldays 2019 are estimated in millions as $1.39 \times 5.0 = \$6.95$ m.

A 25% share of this expenditure or \$1.74 m (last year \$1.91 m) is used for NZ economic impact calculations and covers expenditures by airlines in NZ for refuelling, cleaning, landing charges, cabin meals, and similar services; together with flow-ons from these expenditures and the wages of workers servicing the aircraft.

Hospitality Spending by Non-Waikato Patrons

Non-Waikato patron gate entries totalled 75,167 (last year 79,266) with 75,167/2.9058 or 25,868 groups (last year 25,856). Average expenditure by group is shown in the following table with total expenditure by category.

HOSPITALITY EXPENDITURE

Category of Expenditure	Group Average \$	Total Expenditure \$ m
Accommodation	134.40	3.48
Transportation	209.97	5.43
Retail Trade	164.42	4.25
Restaurants & Bars	397.59	10.28
TOTALS	906.38	23.44

The total direct spend at 2019 Fieldays by 75,167 non-Waikato patrons was \$23.44 m (\$24.4 m). This equates to just less than \$312 per person (last year \$308).

Sales Realised at Fielddays by Exhibitors

The following table shows a sample of 316 (363) exhibitors as to actual sales or firm orders realised at the 2019 Fielddays by site.

EQUIPMENT AND CONSUMABLES PURCHASES

Sales Value	Percentage
\$0 - \$5,000	21.84
\$5000 - \$9999	13.61
\$10,000 - \$49,999	35.13
\$50,000 - \$99,999	10.44
\$100,000 - \$499,999	14.24
\$500,000 - \$999,999	3.16
\$1,000,000 - \$1,999,999	1.27
\$2,000,000 +	0.33
TOTAL	100

Only sales by NZ exhibitors over 1,495 sites are used for economic impact purposes. Most of the value added by overseas exhibitors, such as vehicle firms, accrues to overseas countries and is excluded from NZ impacts. Consumables such as clothing, drenches, sprays etc. are included in the above but the majority of sales will be equipment related. For the final group in the above table at \$2 m+ sales, an average of \$7.5 m was used in the mean sales calculation.

Average sales per site are up 6.9% this year at \$129,405 (\$121,005) over 1,495 (1,417) NZ exhibitor sites, for total sales of \$193.46 m (\$171.46 m); up 12.9% this year.

Average Leads per Site

This measure is important since it indicates the number of potential sales per site at Fielddays. This question was asked for the first time in 2017. Trends in this number over future years will be one gauge as to the relative importance of Fielddays as a platform for generating sales in the agri-business sectors.

TABLE ON NUMBER OF LEADS GENERATED AT FIELDAYS 2019

Number of Leads	Percentage 2019
0 – 50	64.87
51 – 100	17.09
101 – 250	7.59
251 – 500	5.38
501 – 1000	2.85
1001 +	2.22
TOTALS	100.0

Using 4,000 as an average for the last group in the table above, the estimated leads generated per site in 2019 was 172.6675 (168.6675). Using 1,540 as the total number of sites, total leads generated are estimated at 265,908 (247,267). This is a 7.5% increase for 2019 over 2018, but less than the actual sales gain of 12.9% above.

Percentage of Fielddays Sales Lost If Fielddays 2019 Had Not Been Held or Exhibitor Had Not Attended

RESPONSES TO THE LOST SALES QUESTION

Percentage of Fielddays Sales Lost	Number	Percentage
0% or no sales lost	79	25.00
Less than 5%	100	31.65
5% - 9%	51	16.14
10% - 19%	19	6.01
20% or more (average used is 30%)	67	21.20
TOTALS	316	100.00

Using zero or the mid-point of the above ranges, the mean percentage of sales lost was estimated at 9.2%, compared with 11.4% in 2018, 9.1% in 2017, and 8.8% in 2016.

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- Diversity and leadership
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- Māori leadership
- Servant leadership



Dr Warren R Hughes – Author Profile

Dr Warren R Hughes was born in Cambridge, New Zealand and is a graduate of both the University of Auckland and Indiana University in the USA, where he completed his doctorate in Business Economics and Public Policy in 1970.

Since that time, he has taught in the areas of econometrics, forecasting, financial economics and managerial strategy at The University of New South Wales in Sydney (1970 – 1978) and the University of Waikato (1978 – 2007). At various times, he has taught in MBA programmes at the University of Florida in Gainesville and in the Graduate School of Management at the University of California at Irvine.

Dr Hughes retired from the University of Waikato in 2007 and was appointed an Honorary Fellow in Economics in 2008. At present, he works as an independent economic consultant based in Auckland.

Dr Hughes has published extensively, mainly as single-authored articles in international journals such as *Decision Sciences*, *Theory and Decision*, *The Journal of Business*, *Mathematical & Computer Modelling*, *Environment & Planning*, *Australian Journal of Management*, *Forest Science*, *Australasian Journal of Regional Studies*, *OMEGA* and the *Chinese Business Review*. Other articles on theoretical and applied economics have been published by the author in *NZ Economic Papers* and *Australia's Economic Record*.

Dr Hughes has developed a particular expertise in the area of impact and regional analysis. He was the Editor/Manager of the *Regional Economic Bulletin*, which focused on topical issues relevant to the business and wider communities, mainly but not exclusively in the Waikato and Bay of Plenty regions.

Dr Hughes has acted as a consulting economist for *Economic Solutions Limited*, *Environment Waikato*, *Carter Holt Harvey Limited*, *Contact Energy*, *Norske Skog Tasman Limited*, *Port of Tauranga Limited*, *Port of Napier*, *Feltex Carpets Limited*, *Man'O War Farm Limited*, *Refining NZ Limited*, *Zespri International*, *Waikato Innovation Park*, *Property Council of NZ*, *Creative Napier*, *Katolyst*, *Priority One BOP*, *Vision Manawatu*, *Enterprise Franklin*, *Venture Taranaki*, various District Councils in the Waikato, Bay of Plenty, Hawkes Bay and other regions, and for events such as NZ's *National Fieldays*, *Tauranga's Montana Jazz Festival*, *Balloons Over Waikato* and *Napier's Art Deco Weekend*.

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