Government of **Western Australia**
Department of **Fisheries**

Fish for the future

Bulletin No. 47 **December 2012**

COMMERCIAL FISHERIES PRODUCTION BULLETIN

WESTERN ROCK LOBSTER FISHERY – 2011/13 SEASON

THE COASTAL FISHERY TO DATE

Preliminary production figures from Catch Disposal Record (CDR) forms indicate that to the end of September approximately 5187 tonnes of rock lobsters have been taken. The monthly production (tonnes) by the various zones is listed below:

	Zone A	Zone B	Zone C	TOTAL
November 2011	–	76	42	118
December 2011	–	439	602	1041
January 2012	–	321	501	822
February 2012	–	182	283	465
March 2012	182	45	223	450
April 2012	232	110	263	605
May 2012	235	141	247	623
June 2012	142	115	148	405
July 2012	60	98	116	274
August 2012	31	102	77	210
September 2012	12	112	50	174
TOTAL	**894**	**1741**	**2552**	**5187**

The current season, which is the second season to be managed under the Individual Catch Limit (ICL) management system, has progressed steadily (see Commercial Fisheries Production Bulletin No. 46, April 2012).

It can be seen from the above production figures that approximately 1751 tonnes of quota remains to be caught before 14 January 2013. This is partially the result of fishers holding back due to the extended season and possibly in the hope that higher prices would materialise later in the year.

Catches during July and August (which have not been open since the 1976/77 season, and were closed at the time for stock conservation reasons), together with September were generally disappointing as the catches were comprised mostly of setose females (protected) and a small proportion of males.

Generally, with the exception of periods of swell, catches in the shallows have been poor, reflecting poor puerulus settlement in the past.

The ubiquitous octopus was widespread throughout the fishery, particularly in the shallows. Fishers licensed to catch octopus in traps have done extremely well this season, with good catches accompanied by good prices.

THE WINDY HARBOUR/AUGUSTA AND CAPES AREA

A small amount of fishing was carried out from Augusta for western rock lobsters with limited success. Most effort by the remaining vessels was directed towards deep-sea crabs. No fishing of consequence was carried out in the southern area of the Capes.

THE ABROLHOS ISLANDS FISHERY

During the period 15 March to 30 September a total of approximately 894 tonnes of rock lobsters was taken by the 74 boats licensed to fish the area.

It can be seen from the enclosed production figures that by the end of June nearly 90% of the allowable catch had been taken. Low catches later in the season were probably due to high levels of setose.

A few vessels ventured to south of the Northern Abrolhos Line for short periods. Anecdotal evidence from fishers suggests that the northern area, together with very deep water west of the Islands, was not quite as good as last season, possibly due to a decline in recruits ('whites') as a direct result of lower puerulus settlement three to four years previously.

NEW STUDY ON LOBSTER MATING

With the recent extension of the fishing season into winter and the greater protection being given to female than male lobsters, there is concern by some fishers that excessive numbers of male lobsters are being caught, potentially leading to a lack of fertilisation during spawning. This is referred to as "sperm limitation" and is not a new issue, having been shown that it can occur in a number of other crustacean fisheries around the world. The Department conducted an FRDC study into this phenomenon in the mid-2000's, which found no indication of sperm limitation. In addition to this we monitor annually the percentage of females mated and those with eggs during each of the annual Independent Breeding Stock Surveys. This has also not shown any significant changes in fertilisation rates over recent years.

Irrespective of this we still consider fertilisation to be one of the potential 'bottlenecks' for good egg production and have therefore again initiated research into this area, this time with a PhD candidate at University of WA who will be using some novel genetics-based techniques.

This current research is testing sperm limitation using laboratory experiments to compare the reproductive outputs of different sized males and their ability to mate with multiple females. Small (90 – 100 mm carapace length (CL) and large mature males (140 – 155 mm CL) are being allowed to mate with as many average sized mature females (115 – 125 mm CL) as they can manage. The aim of this is to determine how many females one male can provide enough sperm to so that the resultant egg fertilisation rates do not decline. For each mating, the size of the spermatophore (tar spot), the sperm content in the spermatophore, the total subsequent number of fertilised eggs, and the percentage of eggs fertilised are being determined. Results from these experiments will allow us to understand how biased sex ratios (females:males) in the wild can become before sperm limitation starts to impact on egg production. The techniques being developed in the laboratory will also be used in the field to assess the quantities of sperm females are actually receiving in the wild fishery, therefore directly measuring whether sperm limitation is occurring. We will provide results from this work as they become available, either in this newsletter or on the Coastal Tour.

RESEARCH DATA

The level of participation by fishers in providing research data on the bottom section of the CDR forms varied throughout the season from approximately 26% to 34%. Generally the average was approximately 29%.

The rock lobster research team at the Laboratories at Hillarys would like to pass on sincere thanks to all those fishers who went to a great deal of trouble to record their catches of breeding animals, undersize, etc., together with the numbers of animals high-graded. Naturally, we would like more fishers to participate and hopefully this will be the case next season. Please 'have a go'! Remember, the more information we receive the better our understanding of this extremely important fishery. Please feel free to drop into the Laboratories and have a chat over a cup of tea or coffee.

Don't hesitate to call either Eric Barker or Mark Rossbach on 9203 0111 if we can be of any help to you.

PUERULUS SETTLEMENT

The 2012/13 puerulus settlement is underway (commenced May 2012 until April 2013) and at this stage of the collection period we have seen settlement below the historical long term averages at all sites. The current puerulus settlement information for 2012/13 is posted onto the Department of Fisheries web site monthly (see address below), to enable all WRL stakeholders to access the latest information in a timely manner.

The resultant recruitment from this year's settlement will be seen first in the catches of reds and whites in 2015/16.

http://www.fish.wa.gov.au/Species/Rock-Lobster/Lobster-Management/Pages/Puerulus-Settlement-Index.aspx

ODDS OF EL NIÑO EASE, BUT RISK REMAINS

Tropical Pacific Ocean temperatures have generally cooled over the past fortnight, easing towards neutral values (neither El Niño nor La Niña). Other ENSO indicators such as the Southern Oscillation Index (SOI) and tropical cloud patterns have remained at neutral levels. Given September is the time of year when El Niño events consolidate, this recent cooling is considered somewhat unusual, hence the risk of an El Niño event remains.

Climate models surveyed by the Bureau of Meteorology suggest sea surface temperatures in the tropical Pacific Ocean will maintain values around typical El Niño thresholds for the remainder of 2012.

The Indian Ocean Dipole (IOD) is currently positive, with weekly values of the IOD index consistently above positive thresholds for the past two months. Outlooks from the Bureau's climate model indicate the IOD will most likely remain positive throughout the remainder of spring. **(Australian Government- Bureau of Meteorology).**

Sustained positive values of the SOI above +8 may indicate a La Niña event, while sustained negative values below –8 may indicate an El Niño event. Values of between about +8 and –8 generally indicate neutral conditions.

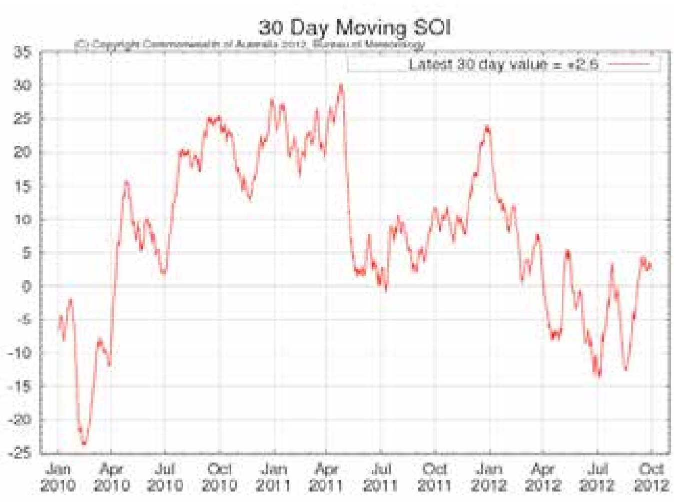


Figure 1 – Southern Oscillation Index since Jan 2010 until Oct 2012 (data supplied by the Australian Government- Bureau of Meteorology).

MESHED POT TRIAL

The meshed pot trial is a program that the rock lobster research team has been running since the 2007/08 season. Commercial fishers whilst fishing their normal gear, have fished an additional meshed or closed pot. This pot was designed to catch small lobsters. These fishers have measured all lobsters caught in this covered pot and their adjacent normal pot and provided the data back to the research division. The project was initiated to examine possible deep water settlement of lobsters during the period of low puerulus settlement. As you can see the program has grown and provides a lot of valuable data that is used by the research team to assess the status of the rock lobster stock.

Since the beginning of the program 63,888 lobsters, ranging in size from 16-155 mm CL have been measured (Figure 2).

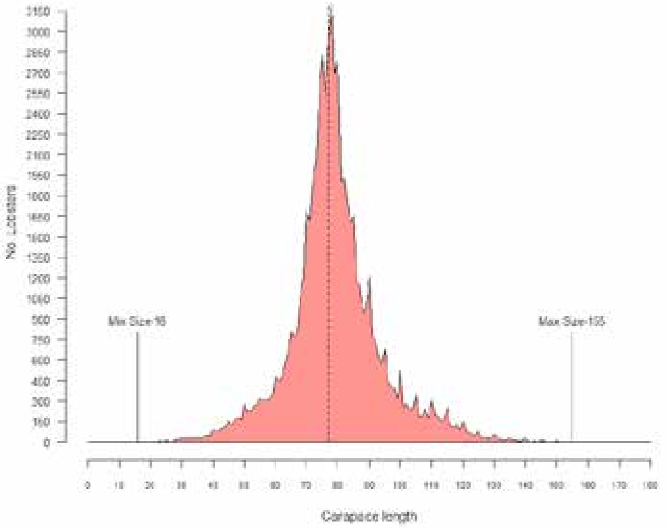


Figure 2 – Number of lobsters measured for each 1mm size class for the duration of the meshed pot program (2007/08-2011/13), showing the smallest and largest lobsters caught.

This season 13,452 lobsters have been measured from 1,877 pot pulls, with much of the fishery being covered (Figure 3). The smallest lobster measured so far this season had an 18 mm carapace and was from deeper water off Lancelin. The largest animal came from a similar depth off Mandurah and was 151 mm CL.

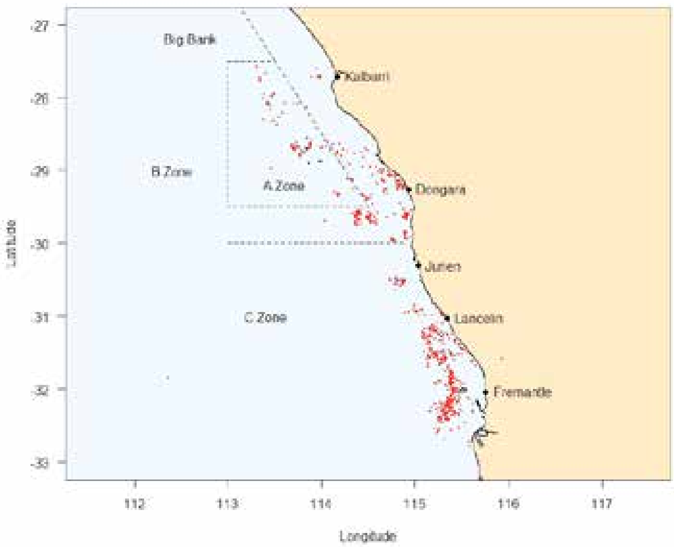


Figure 3 – Pot locations (2011-13 season) of where samples have been returned for the meshed pot program.

The catch of the closed (meshed) pots all appear to be working well at catching lobsters smaller than those from a normal open pot. There has been a real increase in the smaller sized lobsters that the closed pot has caught this year, compared to previous seasons consistent with small improvements in puerulus levels after 2008/09 (Figure 4).

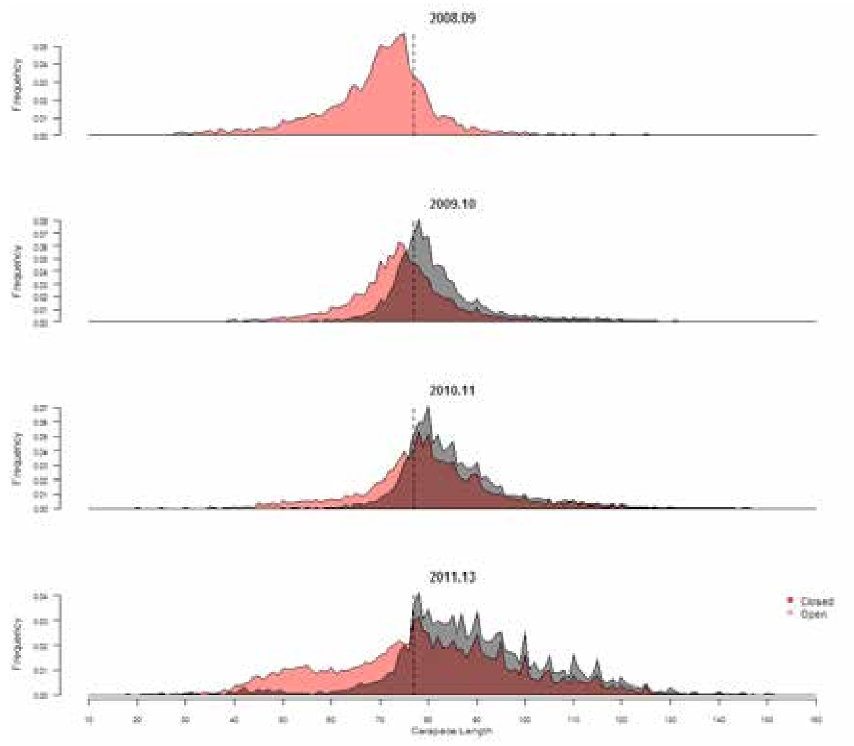


Figure 4 – Frequency of lobsters caught in each 1 mm size classes for open (grey) and closed (red) pots for the last four seasons.

There have been several hotspots along the coast where small (<65 mm CL) lobsters have been caught (Figure 5). The highest catch rate was in the Abrolhos Islands, though there was also a high catch rate north of Lancelin, south of Jurien and around Mandurah.

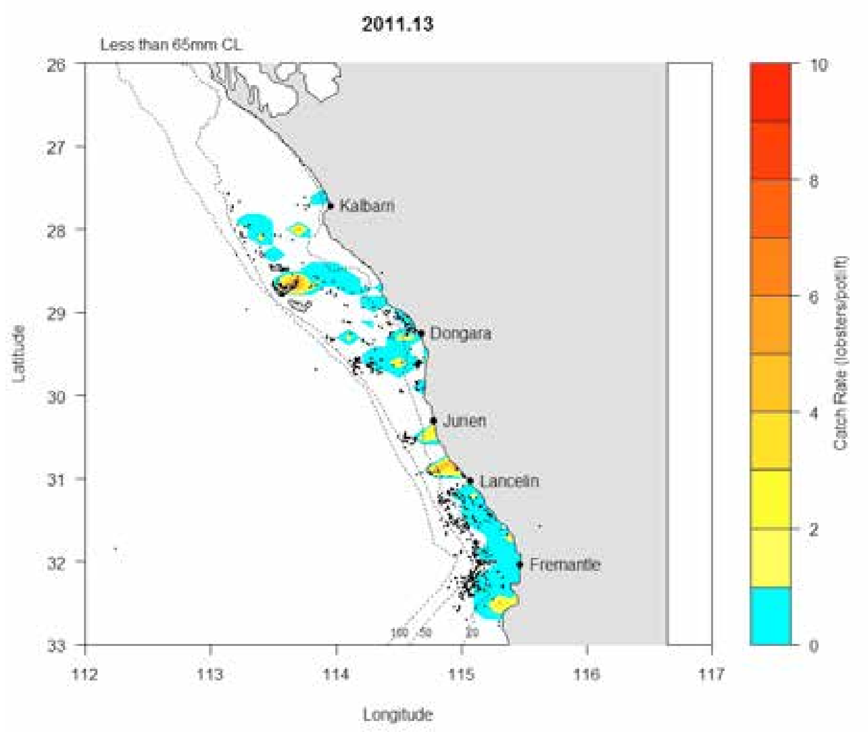


Figure 5 – Catch rate of small (<65mm CL) lobsters from along the coast for the current season.

Despite the smallest measured lobsters coming from deeper water, the vast majority of undersize lobsters are from the shallows, with decreasing amounts in the 'teens' and '20's'. There have been very few small lobsters caught in waters greater than 30 fathoms (Figure 6).

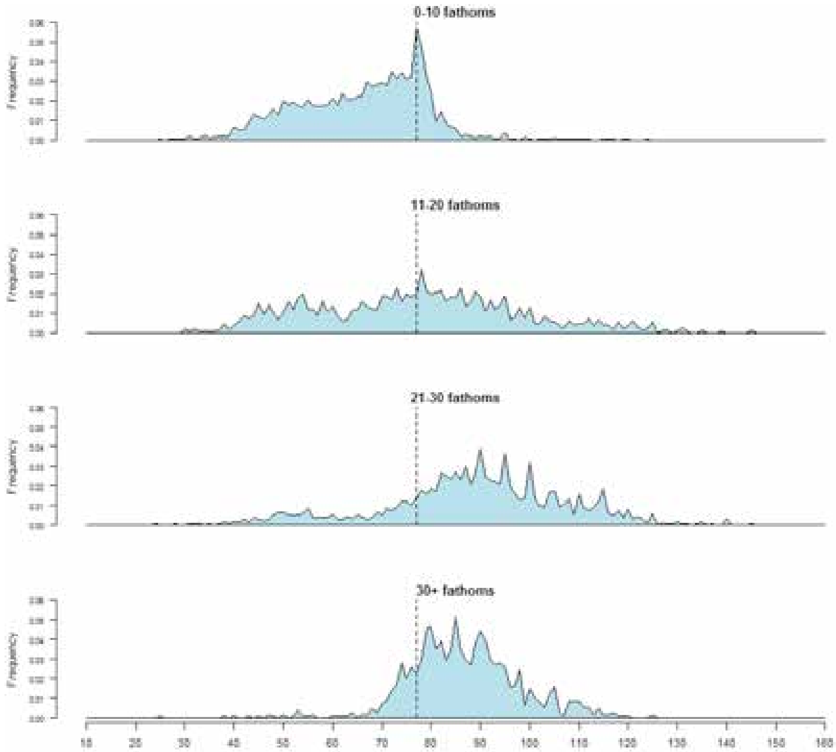


Figure 6 – Size frequency of lobsters caught in meshed pots for the 2011-13 season by 10 fathom depth categories.

We are very appreciative of those fishers that provide data from this program, which as you can see provides us with a lot of very useful information that would otherwise be impossible to get. This program will be running again next season so if you are interested in being part of it please contact either Eric or Jason at Fisheries Research.

2011/2013 SEASON MARKET REPORT* (SECOND HALF)

As 30 September approached, the industry at large took notice of the higher than anticipated pool of uncaught quota and the ensuing speculation about what this may mean for the remaining catch period of 15 November – 14 January.

The catalyst behind the build up, was essentially due to lower than expected beach prices from March onwards which kept fishing activity limited until the latter months of the season when it became unviable to continue fishing.

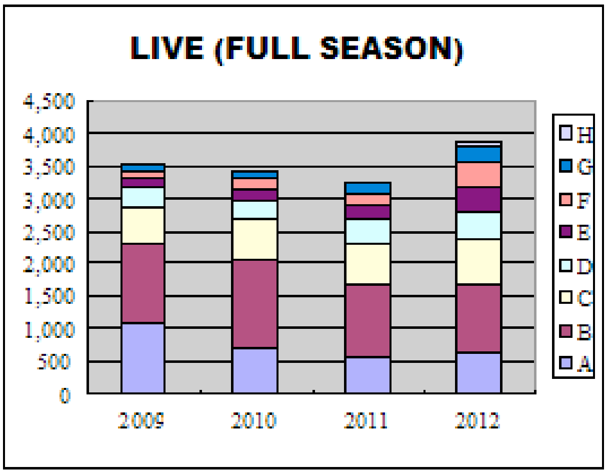
Live markets in general remained steady with higher than ever overall live production, but all at lower average prices resulting mostly from increased supplies of competing species during the middle of the year and a notable reduction in the number of Chinese importers as entry channels constricted.

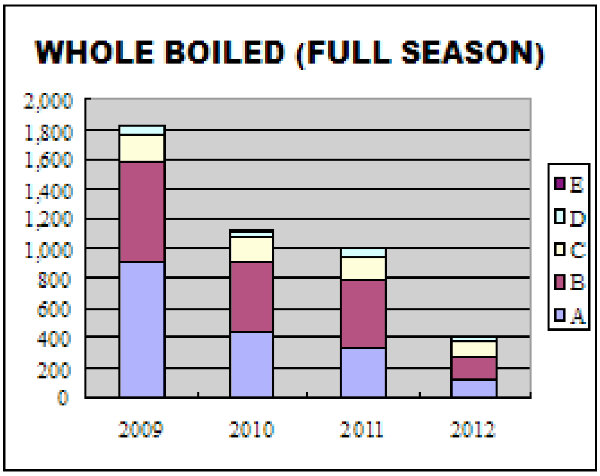
Frozen levels moved higher and higher in the face of reduced production with major buyers taking less risk. Majority of product was freighted out by air on an "as needed basis".

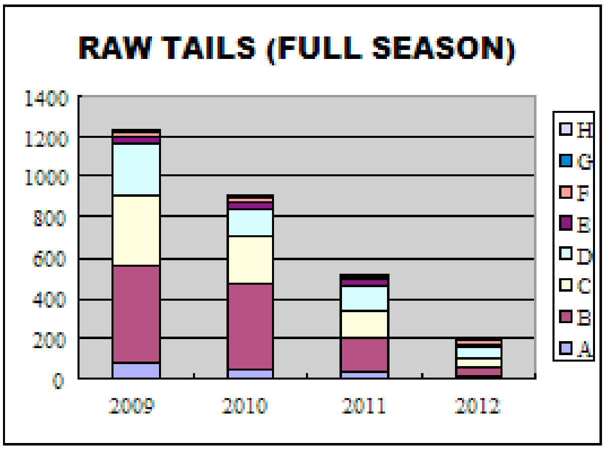
With Chinese New Year 2013 celebrating the Year of the Snake on 10 February, the outlook for live demand appears to be much similar to the previous year, although processors are making provisions for frozen product just in case the delivery from fishermen comes in too greater numbers and too early (as some are predicting).

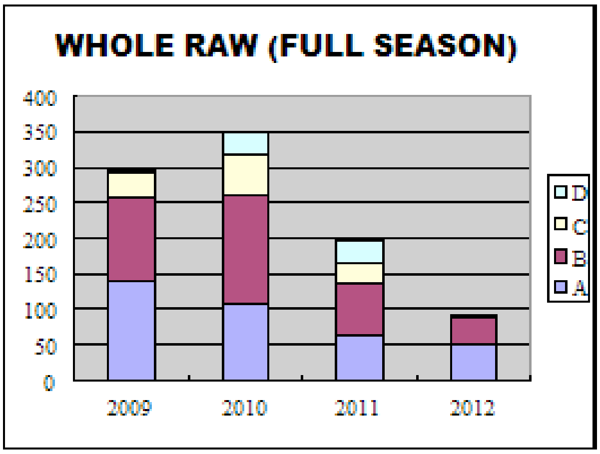
With China now taking such a massive proportion of WA production, all eyes are clearly focused on the health of one market.

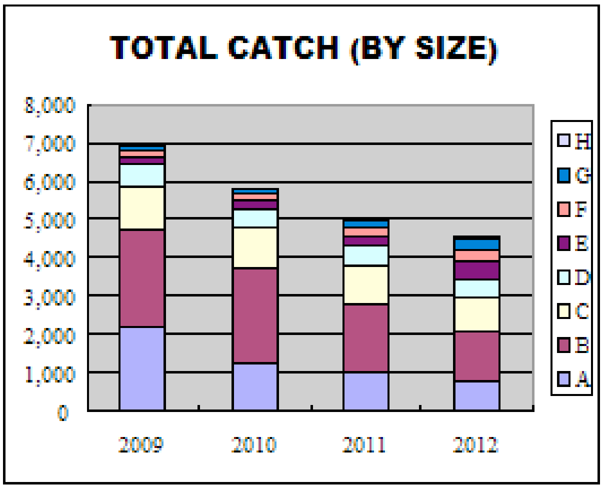
Reported WA Lobster Commercial Production (Nov – Sep) By INPUT LIVE WEIGHT (kg)				
	08-09	**09-10**	**10-11**	**11-12**
Whole Cooked	1,821,571	1,116,160	990,696	404,162
Whole Raw	295,170	349,340	197,100	94,030
Raw Tails	1,230,244	907,238	514,239	207,680
Live	3,530,661	3,393,823	3,247,307	3,862,980

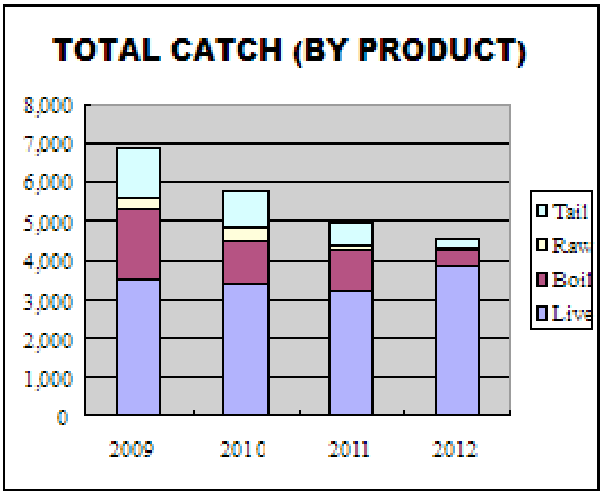

LIVE (FULL SEASON)
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
2009
2010
2011
2012
H
G
F
E
D
C
B
A


WHOLE BOILED (FULL SEASON)
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
2009
2010
2011
2012
E
D
C
B
A


RAW TAILS (FULL SEASON)
1400
1200
1000
800
600
400
200
0
2009
2010
2011
2012
H
G
F
E
D
C
B
A


WHOLE RAW (FULL SEASON)
400
350
300
250
200
150
100
50
0
2009
2010
2011
2012
D
C
B
A


TOTAL CATCH (BY SIZE)
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
2009
2010
2011
2012
H
G
F
E
D
C
B
A


TOTAL CATCH (BY PRODUCT)
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
2009
2010
2011
2012
Tail
Raw
Boil
Live

Japan

By February, Japanese wholesalers out of frozen stock were all circling for opportunities to buy frozen whole A and B raw and cooked options, but with daily production little more than the live market capacity, frozen production barely squeezed any volume out. Importers were then mostly left with options by air as they scrambled to negotiate for what was available in competition with both Taiwanese importers and Australian domestic buyers who were also applying pressure.

Whole frozen levels to Japan over the second half ranged from US$45-52/kg cost and freight (CFR) by air depending on colour and size.

With limited spot supplies and increasing prices, institutional users have given up to specialist high end restaurants and end year specialist requirements. Whilst traditional live users were largely turning towards sashimi grade lobster products harvested from local Japanese catches.

Japanese imports of all spiny lobster origins continued to slide over 2012.

Taiwan

Nothing much changed in the Taiwan market with regards to WA Lobster. Inventories were low and buyers continued to take products by air or sea as and when offered.

As supplies tightened and in competition with other markets, Taiwan prices quickly moved towards US$50/kg CFR by air, but capacity for larger frozen cooked counts such as 15-19pc (per 10kg) had largely disappeared. Demand for whole raw however in any size remained silent.

Overall economic activity in Taiwan was reported by most importers as quiet with a very lackluster outlook.

Having been frustrated with a lack of supply and continuing high prices (in comparison with other species), the majority of traditional WA Lobster importers, live or frozen have moved their attention now to other products.

Live demand from Taiwan was almost non existent and was generally only offered during times of congested Chinese channels.

Looking forward and recognizing the focused competition from Japan over the limited reds catch, Taiwan importers are being suggested by processors to focus more attention on the less demanded whites production for a competitive opportunity.

HK/ China

Live sales from post Chinese New Year celebrations in February 2012 which saw selling levels in the $70’s, and the accordingly high beach prices were soon gone and by March prices were back averaging again in the high $40’s and low $50’s.

Demand, although at times moved the price back into the $60’s+, during some short peaks, never really fired back up as fishermen waited and waited before committing the extra effort.

With increasing average sizes, and specific size demand from China, processors are still being caught holding high volumes of larger lobsters without sales and being forced to tail at significant price discounts creating huge beach price gaps.

Overall live consumption volumes during the season were breaking records as was the percentage proportion of the monthly industry catches. In future there appears nothing to suggest that live volumes will decrease over the March – October periods. Capacities for average price improvement in the long term do still appear very promising, however short term volatility remains high.

With lighter monthly productions and random periods of live supply shortages, there are still opportunities developing for high quality whole raw frozen, especially for the higher demand B type sizes. As packers have become more confident of this surfacing demand, the base line minimum pricing for live sales is improving.

November Chinese economic data released showed a marked improvement in both retail spending (14.1% in first 10 months of 2012) and industrial output (9.6%). They also noted an increase this year of 20.9% of capital investments across China and an inflation at just 1.7% (3 yr low). Although some may argue the validity of the figures, as a general view China is still a very healthy customer.

Other recent observations;

Chinese Government announces it’s vision to embark on a major stimulus plan to fire up the domestic Chinese economy

Direction for increased attention to stamp out Government corruption across all sectors.

USA

Held over inventory again appears in the major production sizes of 10-14oz, although volumes are said to be negligible with US consignee receivers holding little more than a container each and trickle releasing to the markets.

WA tail selling levels remained finely balanced between high $30's and low $40's (per pound) and struggling to move higher in lieu of other species or category options.

B and C tails remained strongest and well undersupplied due to their higher returning whole frozen options, whilst the biggest production sizes of D and E were steady but in high competition for a limited market space.

Caribbean lobster species again started production in competition with ex-store sales ranging from low $15's and now back into the $17's/lb (ex-store) with very good demand and it would appear rapidly diminishing inventories as major producers such as Brazil and Honduras suffer production shortages.

US seafood restaurants and supermarkets are gaining momentum in 2012 with significantly lower prices on a range of crustaceans such as Snowcrab, King Crab and American Clawed Lobsters. American and Canadian prices being the most notable with a 20-30% drop in pricing and some record breaking landings.

Europe

Frozen sales over the reds into Europe were almost a non event as prices continued to be pushed higher and higher from Asia and for a wider spread of sizes.

All eyes are on Cuba and Florida for fresh chilled supplies who now are in competition with live Chinese markets over the pre-Christmas period.

Australia

Domestic markets were steady through winter and although the market was unable to buy enough of the preferred A and B sizes, there was good support for the larger C sizes as a replacement. This was especially fortunate for processors who had little traction in Taiwan for the same piece counts.

Prices of imported lobsters fell around 20% globally, but appeared to have little impact on the domestic market competition with WA other than a gap filler, although rumours of supermarket readiness to move away from the traditional volume WA Lobster purchases at these high prices were abound.

With an expected higher December production of non-live products, domestic markets do continue to provide some good breathing space for processors who will be looking at a short-term supply increase for frozen and chilled.

DISCLAIMER

***This information was provided by Mr Greg Hart and Mr Ben Patton of Wild Oceans Pty Ltd, Suite 4, 18 Parry Street Fremantle, WA 6160 ph: (08) 9433 6785 fax: (08) 9335 8478.**

Except where acknowledged, the information in this bulletin has been supplied by the FISHERIES RESEARCH DIVISION of the DEPARTMENT OF FISHERIES (WA). Contact Mr Eric Barker or Mr Mark Rossbach ph: (08) 9203 0111 fax: (08) 9203 0199.

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