Planning For Excess: The Future of Export Basis For Prairie Grains

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Agricultural and Resource Economics

My Objectives

- To address four Questions:
    1. What is basis?
    2. What drives export basis?
    3. What can we expect going forward?
    4. What needs be done at an industry level to increase producer income?

What is Basis?

- Basis is the difference in price of a commodity at any two locations
- **futures basis** is often the difference between a quoted cash price and a specific futures contract price. For example: If the March ICE Canola futures is $470/t and the cash bid price is $450/t, the futures basis is $470 - $450 = $20/t.

Export or Port Basis

- From a marketing performance perspective, the economically relevant basis is the difference between what the buyers are paying and the price producers are receiving.
- The difference between the prices paid FOB in the Port of Vancouver and the prices received in Saskatchewan is the "**export basis**"

Numbers important for producers

- The *law of one price* says that if a commodity is being freely traded from point A to point B the price difference **or Basis** should reflect the cost of moving the product from Point A to Point B
- When export capacity is unconstrained the export basis will reflect the cost of grain handing from the elevator pit to the boat in Vancouver
- This is a useful benchmark or reference point when deciding when to sell

Calculating an Export Basis

	$/t
Vancouver FOB Price	$400
Saskatchewan elevator bid price	$300
Export Basis	$100

An Increase in Export Basis Decreases Sask. Price

	$/t
Vancouver FOB Price	$400
Saskatchewan elevator bid price	$250 ↓
Export Basis	↑ $150

What Market Forces Drive Export Basis?

- Export Basis is driven by supply and demand for grain handling and transportation services

The supply of grain export services

- grain handing is a margin based business
- When there is adequate capacity in the system:
  - grain companies compete for business by offering a higher net price to producers
  - the export basis will reflect handling and transport costs
- Where is limited capacity:
  - basis has to get large enough to discourage delivery.

The Farmers' Demand for Grain Export Services

- Farmers harvest a quantity of grain, which is added to any stocks already in the system
- Subtracting demand for seed, feed, domestic processing, and year end farm stocks, the residual is the amount farmers will offer for sale to export grain companies
- A farmer will store grain rather than sell it for export, only when prices fall enough that farmers are willing incur the cost of storing grain into next crop year to sell at future prices
- The export basis is determined by the farmers willing to accept the lowest bids

What determines export basis

- When available exportable grain supply exceeds export capacity then access must be rationed
- This is done by lowering the bid prices, which is an increase in the export basis
- When a grain company phone keeps ringing and can not move the grain offered to them, they have a very strong incentive to increase export basis until the supply matches the available capacity
- How do hotels price their rooms? Ticket scalpers?

Where does Supply = Demand?

- When export capacity can move the crop in one year exports basis = export costs = normal basis
- When export capacity cannot move the crop year the export basis will reflect one or more years of grain storage costs → high or very high export basis

So what has happened to Export Basis?

Saskatchewan Cash – Vancouver FOB Export Basis 2012 –Dec 2015

Supply Disposition All Principal Field Crops: May 20, 2015 Forecast

	2012/13	2013/2014	2014/2015[f]	2015/2016[f]
Yield (t/ha)	2.67	3.46	2.85	2.66
Production (kt)	76,716	90,293	79,813	76,658
Beginning Stocks		9,591	17,747	14,334
Total supply (kt)	89,512	108,885	103,485	92,908
Exports (kt)	41,889	48,519	48,777	43,538
Total domestic use (kt)	38,042	40,673	40,414	40,227
Carry-out stocks (kt)	**9,591**	19,705	14,334	**9,185**

Source: Statistics Canada- AAFC

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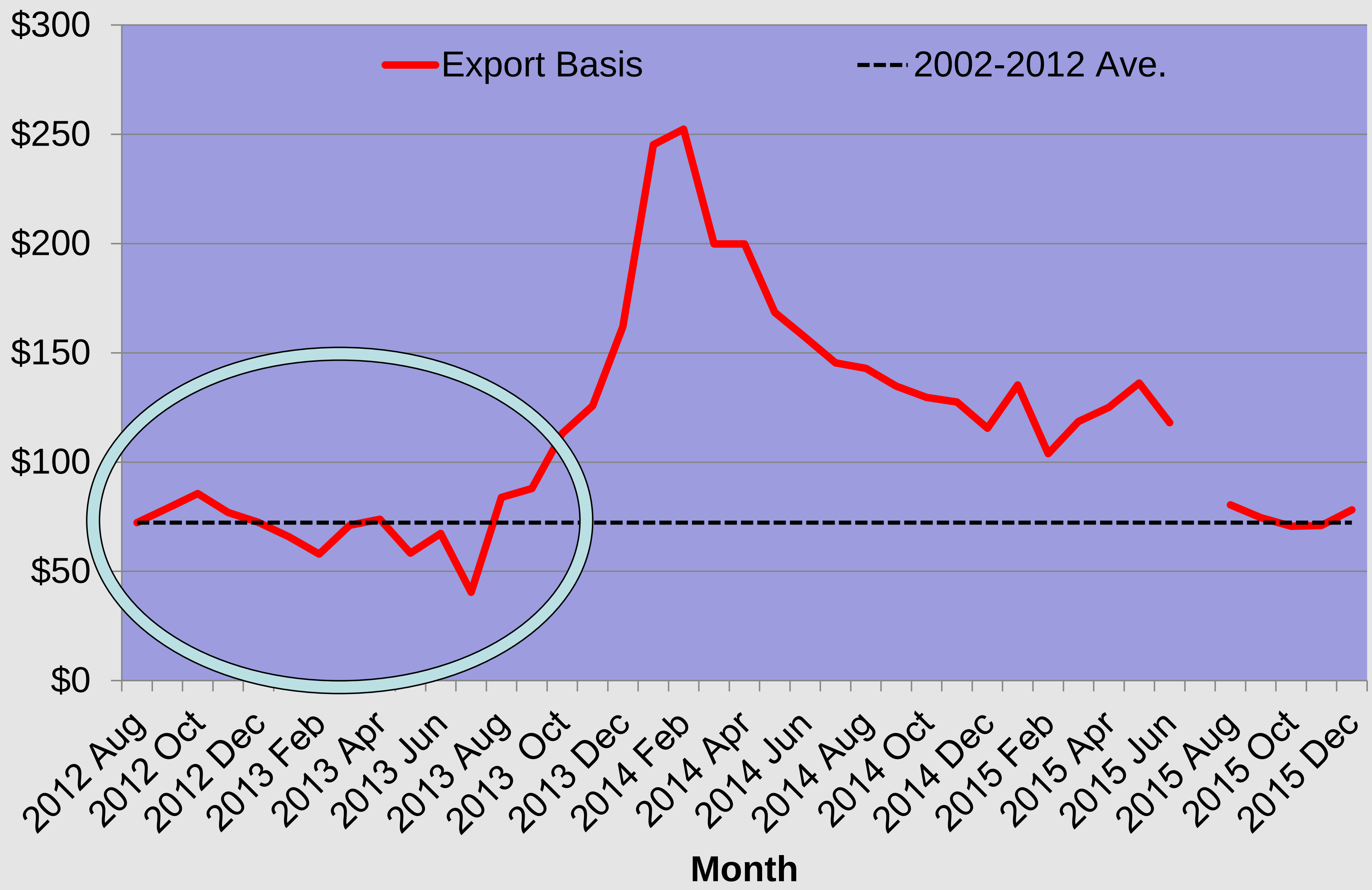

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2013/2014 was a perfect storm

- With the 2012 drought in the US August deliveries were very low
- CP was lowering costs CN had been through this
- The crop was much larger than forecast. The industry was not expecting a very large crop
- It was a record crop
- It got very cold by November

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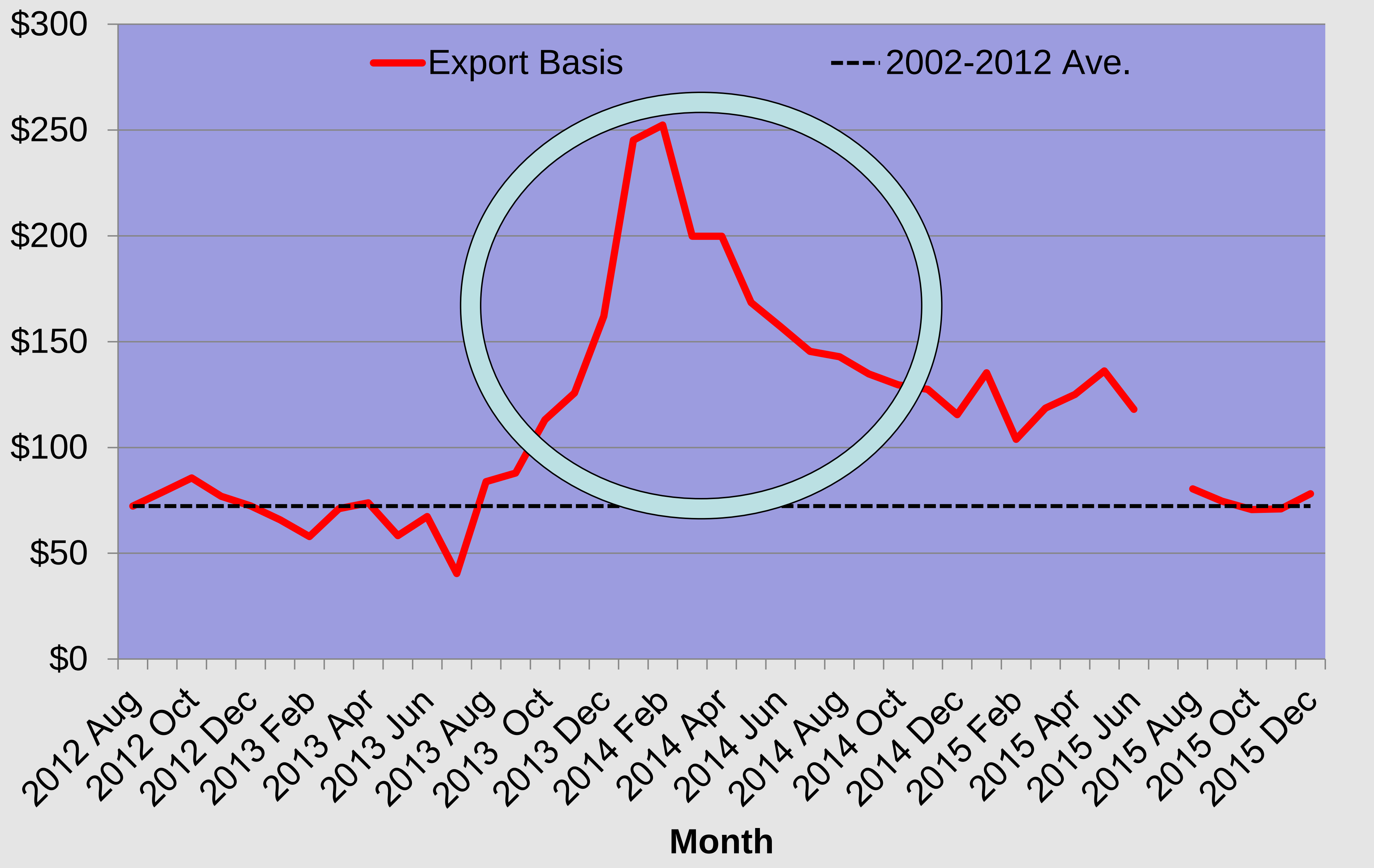

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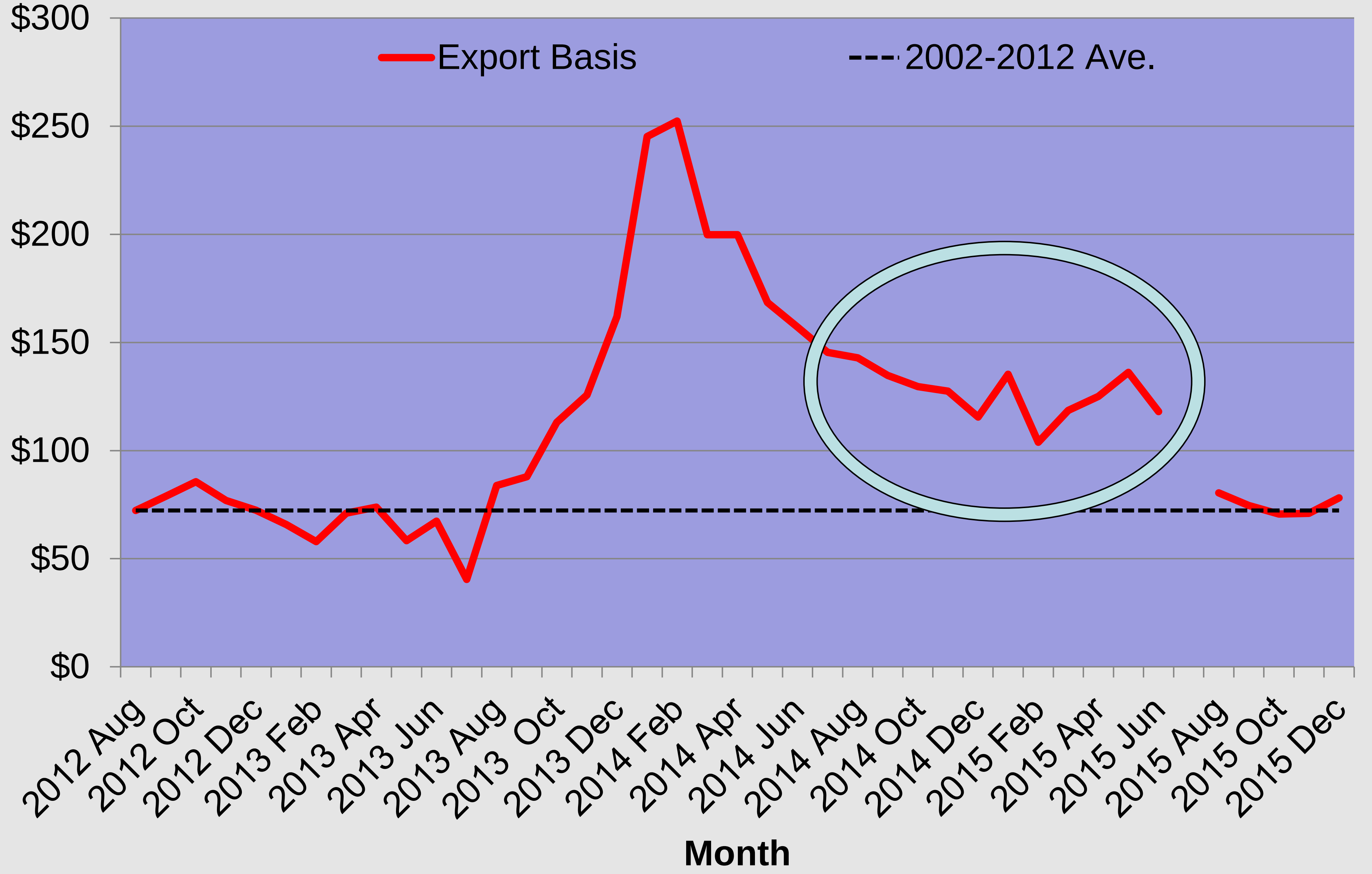

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Export Basis Levels

- Normal in 2012/13
- Increased with record crop in 2013 and peaked in Feb 2014 with slow rail movement
- Basis continued to be high in 2014/15
- Wheat basis returned to normal in the 2015/16 crop year.
- How costly were the two years?

Estimated Grain Producer Income Impact of Congestion Related Excess Basis Western Canada 2013/14 and 2014/15

	Units	2013-2014 Cropyear			2014-2015 Cropyear			
		Aug-Dec	Jan-Mar	Apr-July	Aug-Dec	Jan-Mar	Apr-July	Total
Farm Deliveries*	Million t	21.80	11.86	18.92	22.85	12.72	15.00	103.15
All Sold at Prevailing Basis**								
Ave Excess Basis	$/t	$51.49	$143.53	$77.67	48.63	59.97	34.94	64.88
$ Impact	**$Million**	$1,123	$1,702	$1,470	$1,111	$763	$524	$6,692
All sold at basis 12 weeks prior^								
Excess Basis (t -12weeks)	$/t	$6.02	$75.78	$130.82	58.62	48.48	56.82	61.21
$ impact	**$Million**	$131	$899	$2,475	$1,339	$617	$852	$6,314
80% sold at basis 12 weeks prior^^								
Excess Basis (t -12weeks)	$/t	$6.02	$75.78	$130.82	$58.62	$48.48	$56.82	0.75
$ impact	**$Million**	$105	$719	$1,980	$1,071	$493	$682	$5,051

Source: Authors Calculation, Table 3 , and CANSIM Table 001-0043

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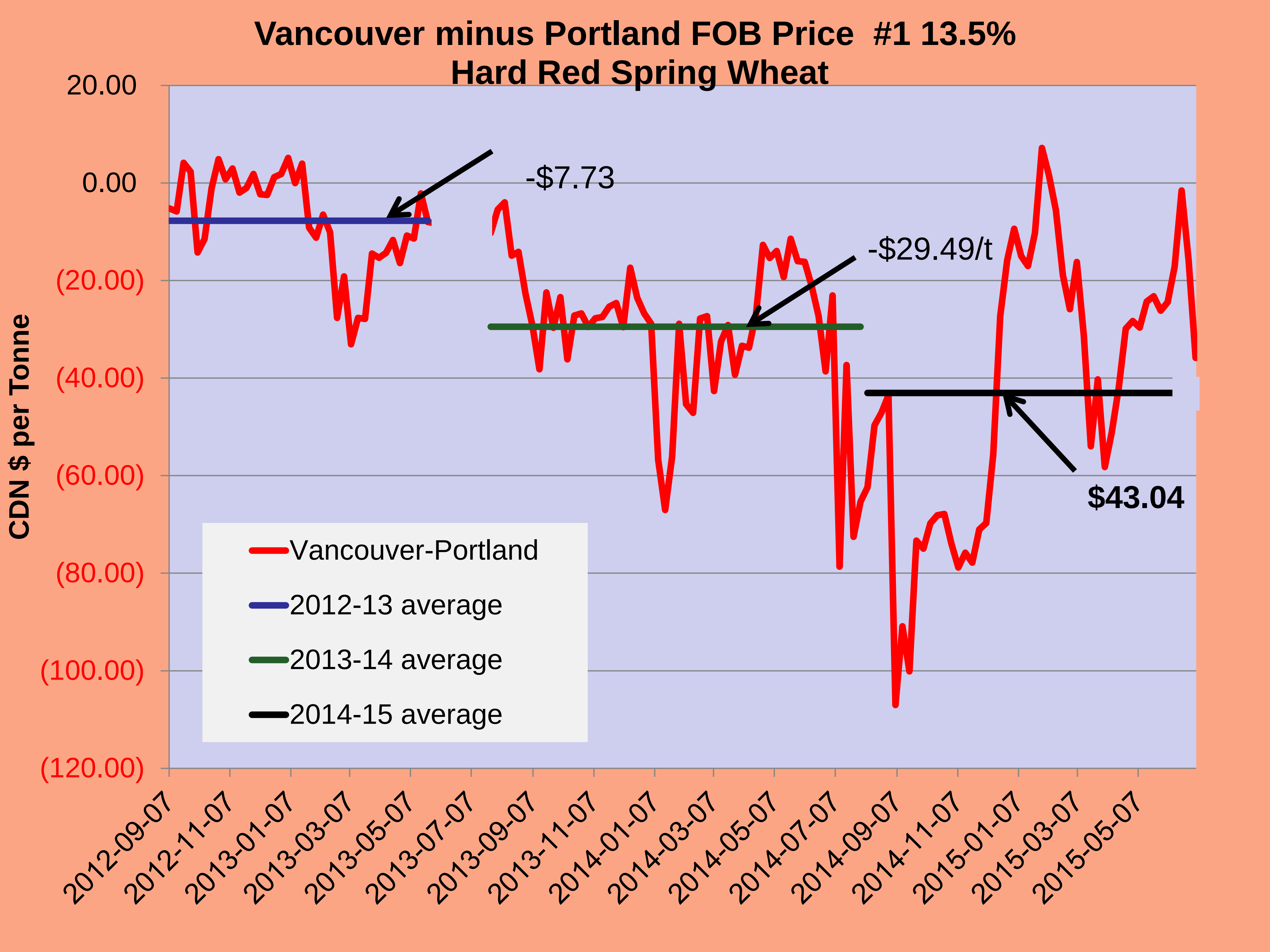
Vancouver minus Portland FOB Price #1 13.5%
Hard Red Spring Wheat
20.00
0.00
(20.00)
(40.00)
(60.00)
(80.00)
(100.00)
(120.00)
CDN $ per Tonne
-$7.73
-$29.49/t
$43.04
Vancouver-Portland
2012-13 average
2013-14 average
2014-15 average
2012-09-07
2012-11-07
2013-01-07
2013-03-07
2013-05-07
2013-07-07
2013-09-07
2013-11-07
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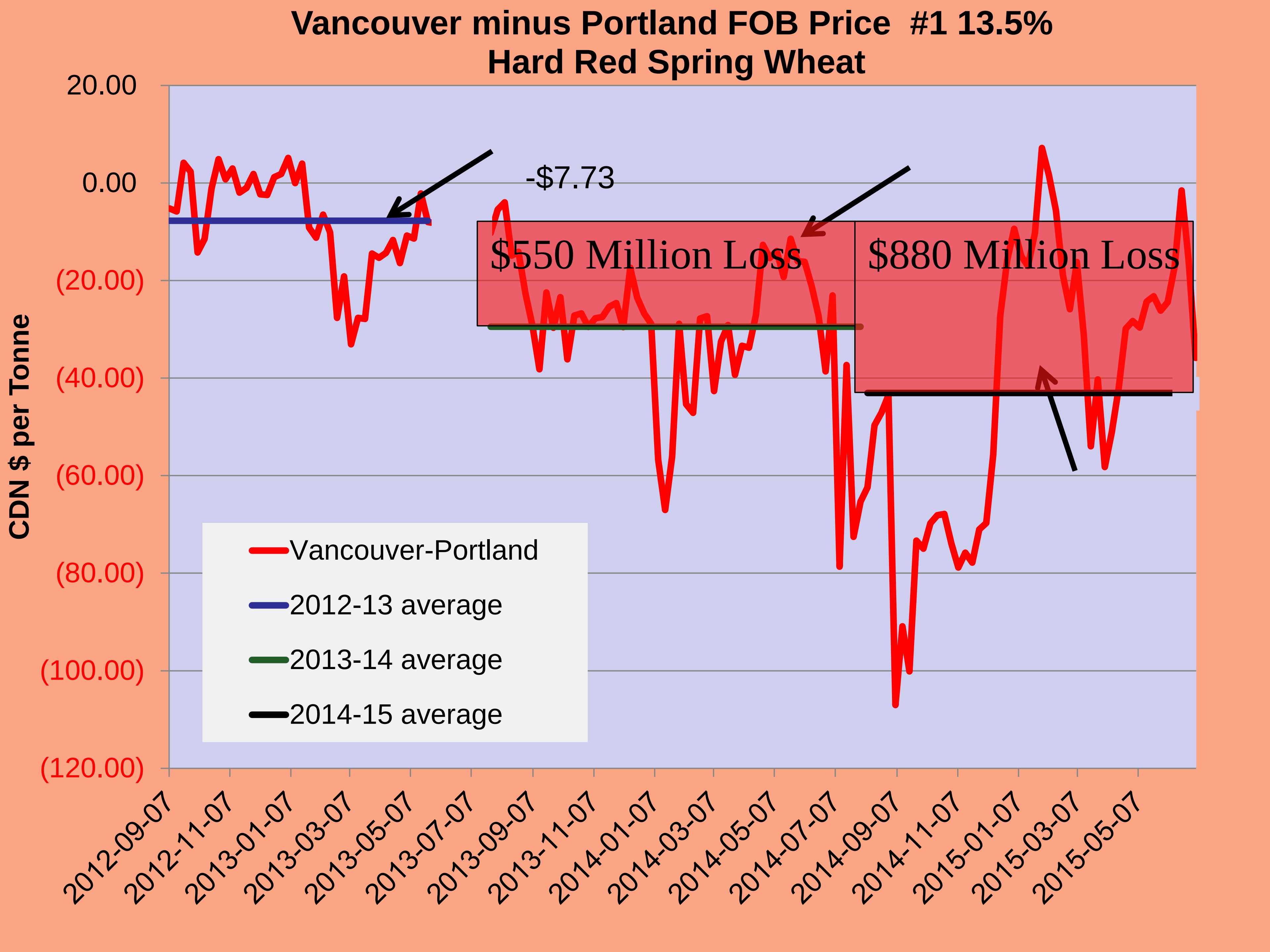
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(100.00)
(120.00)
-$7.73
$550 Million Loss
$880 Million Loss
Vancouver-Portland
2012-13 average
2013-14 average
2014-15 average
2012-09-07
2012-11-07
2013-01-07
2013-03-07
2013-05-07
2013-07-07
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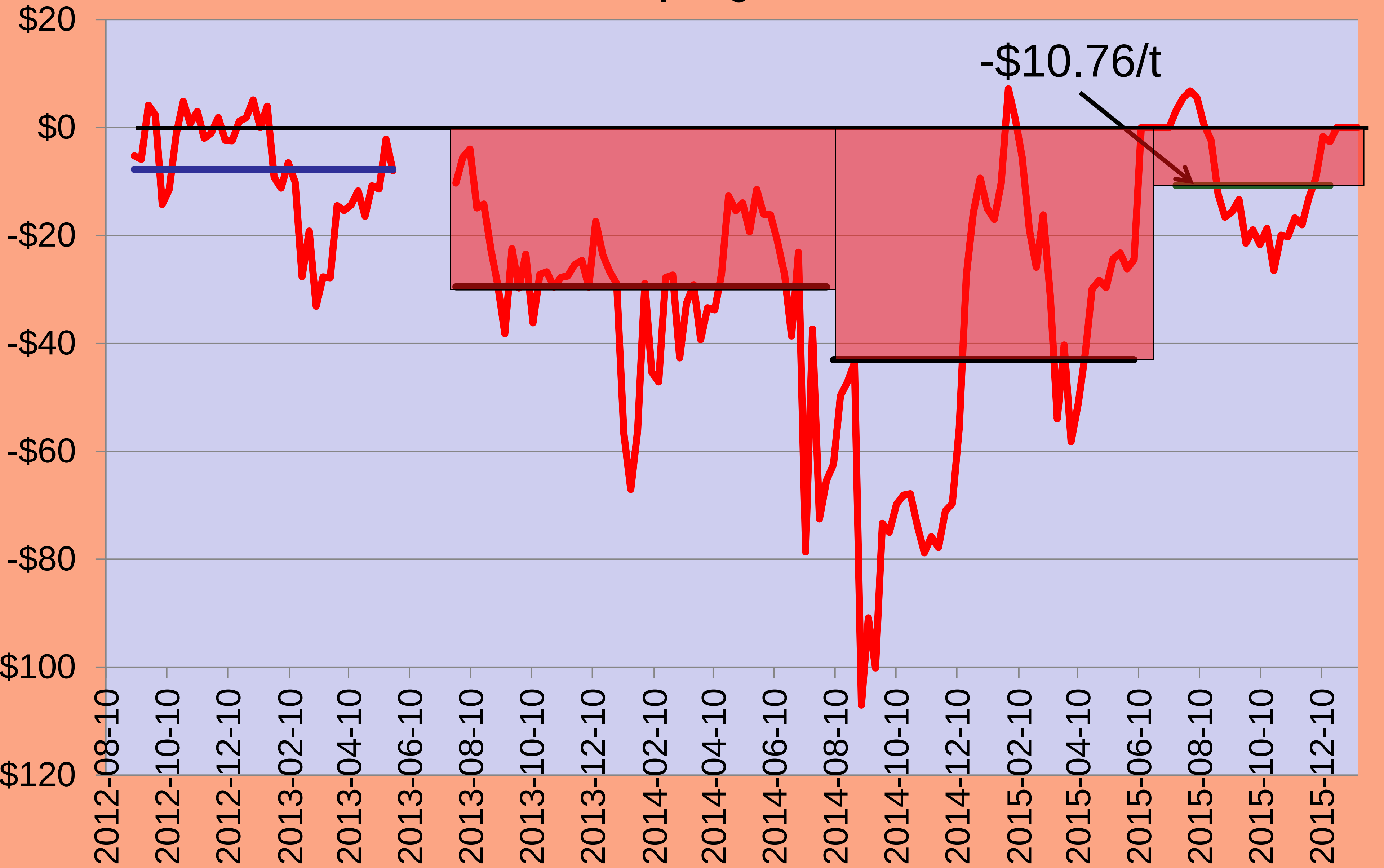

The Increase in Export Basis Was Very Costly for Producers

- **How can anticipating basis improve your marketing strategy?**
- How can capacity be increased to reduce the size and duration of future events?

How can anticipating export basis improve your marketing strategy?

- Move first if your crop is larger than expected and your contacts are saying the same thing then act on your hunches.
- You can reduce the losses from a high basis by forward pricing basis in a contract or forward selling your grain – this has both production and grading risks

Hedging on wheat Minneapolis

- Prices driven Global demand and their port basis
- Canadian-US exchange rates are an additional risk
- Hedging tools for producers are very limited

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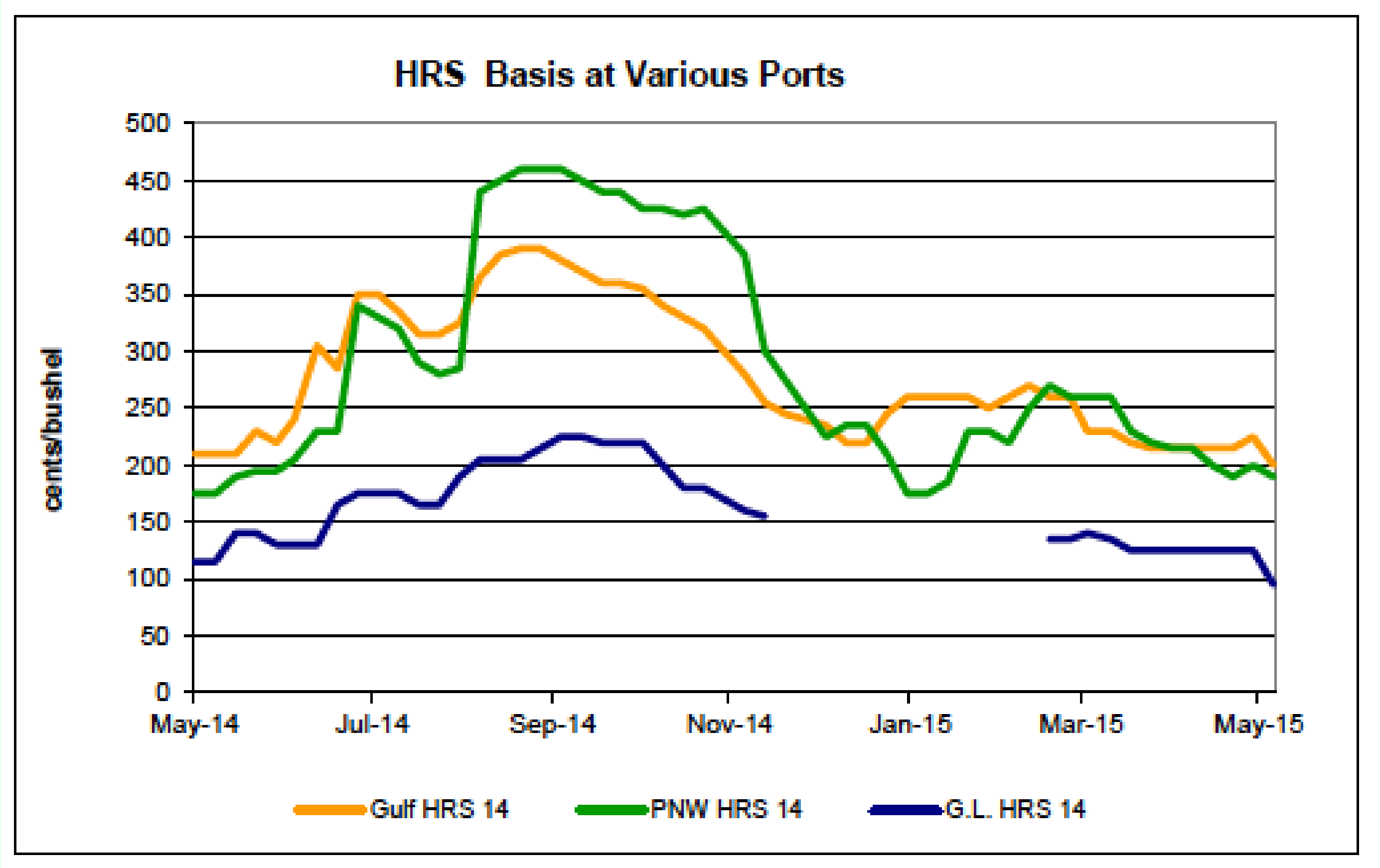
Minneapolis to Port Basis



The Increase in Export Basis Was Very Costly for Producers

- How can anticipating basis improve your marketing strategy?
- **How can export capacity be increased to reduce the size and duration of future events?**

Do we need Extra Capacity

- Is it worth the cost?

An Economic Analysis of Western Canadian Grain Export Capacity

A Technical Report Submitted to Saskatchewan Wheat Development Commission:

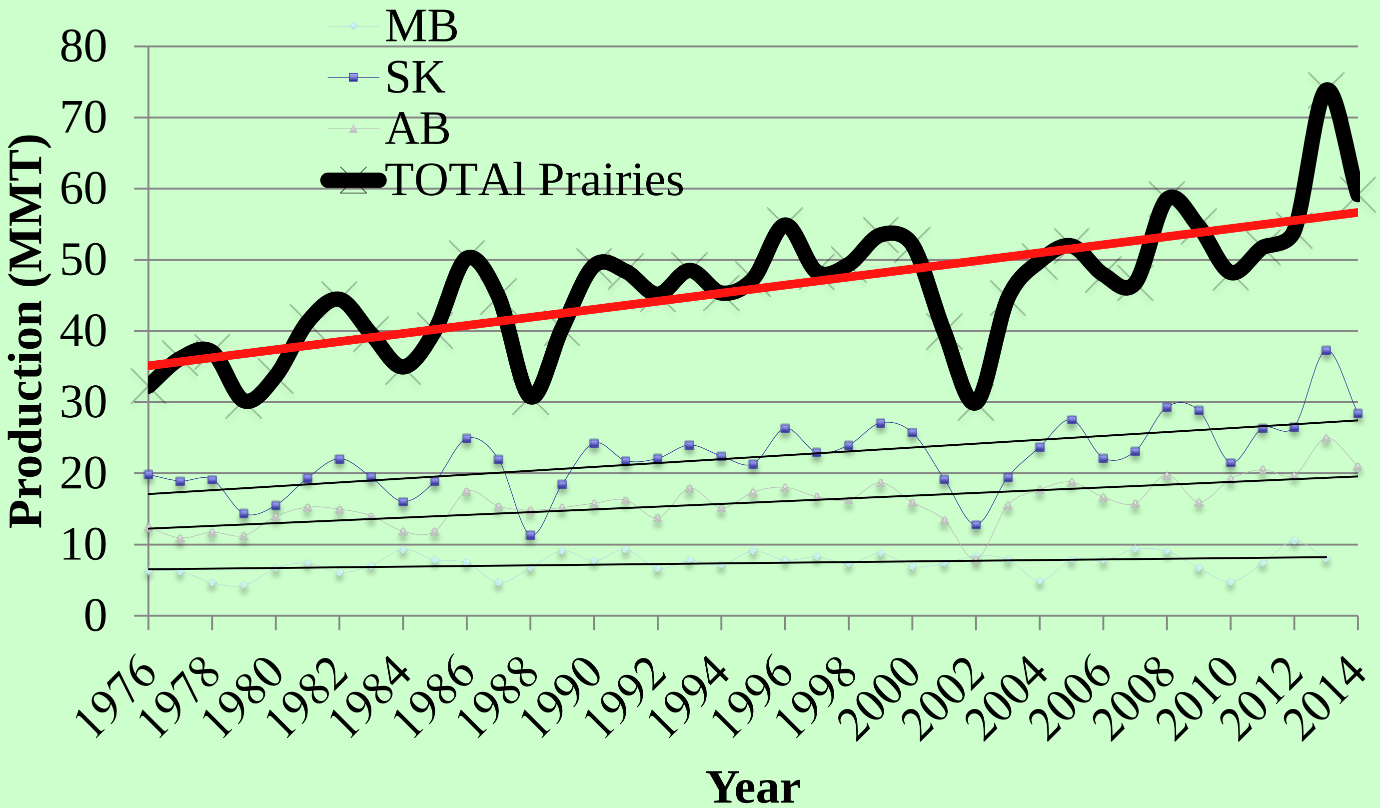
Preliminary Results

Richard Gray and Mohammad Torshizi

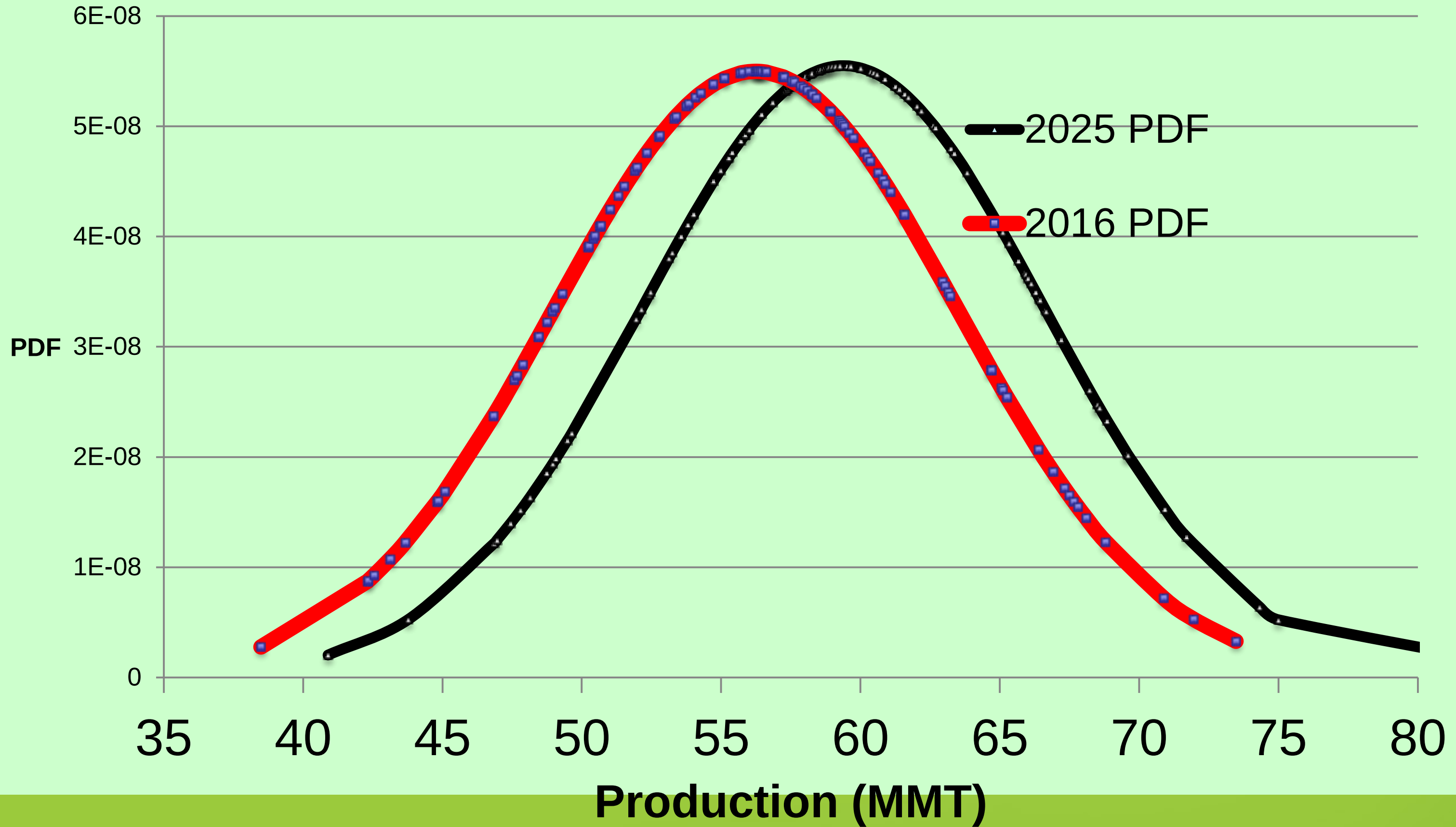
University of Saskatchewan

February 29, 2016

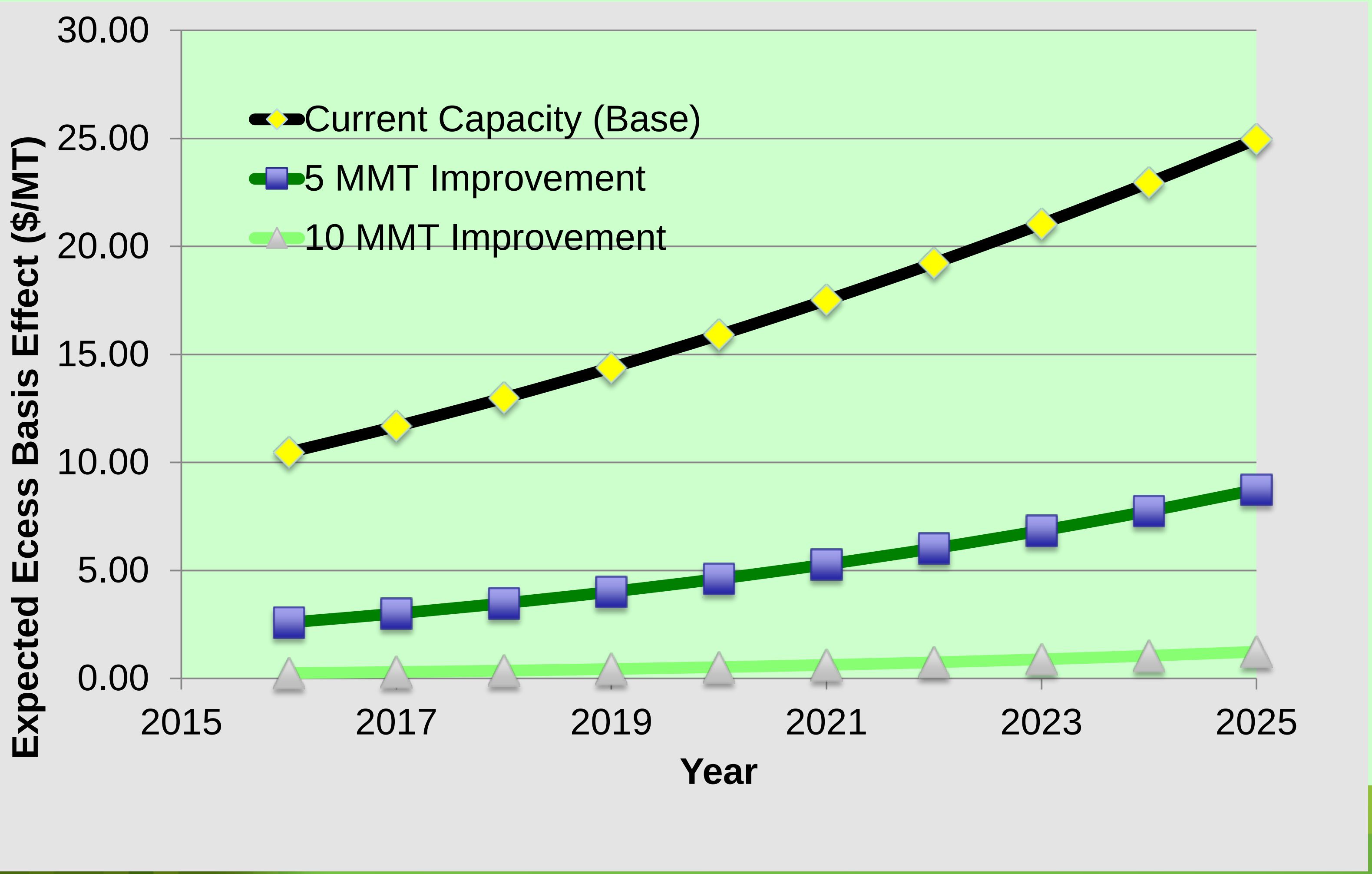
Prairie production trend 1976-2014



Big Crops are More Likely



10Mt West Coast/Rail Capacity Would Largely Fix it!



West Coast Benefit/**Cost?**

- Richardson $120 million budget to increase their export capacity by 2 MMT = $60 /t
- G3 has announced a $500 million port terminal million →least 4.5 MMT of export capacity = $110/t
- approximately $1 billion to add 10 MMTs of capacity or $100/t of West Coast Capacity

West Coast Expansion 10MMT

- 10 MMTs of West Coast Port without extra rail will result in $3 billion of cost-saving benefits for farmers → C/B ratio of 3 to 1
- If this West Coast expansion is accompanied by a similar increase in rail capacity, a 10 MMT increase in West Coast capacity will create $9 billion cost-saving benefits→ C/B = 9:1
- If the New Federal Government is interested in infrastructure – they should make sure this happens

Is Removing the Revenue Cap (MRE) an option?

- https://www.otc-cta.gc.ca/eng/qa-maximum-revenue-entitlement-transportation-western-grain
- Yes… a very bad one.
- If the MRE is removed railways can make a lot more profit by creating a capacity shortage and driving up the export basis, which they will collect.
- This is a very bad idea for producers… Perhaps a good idea for railway shareholders
- CTA review - Are going back to 1896 when it was recognized that unregulated infrastructure monopolies kill development?

Can the Rail Incentive Be Increased?

- Yes
- Adjust the MRE to create incentives for:
  - Fall movement
  - Winter movement
  - Other policy priorities/quality of service
- Could be a task force of grain producers and railways who must agree on any improvements to MRE.

Summary

- Excess supplies relative to capacity increases the export basis
- This is risk any time the crop is very large, or larger than expected, or capacity has an unanticipated drop
- It is likely to happen again
- Changes to CTA is a risk/opportunity

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Conclusions

- Know the numbers - monitor export basis levels **ask for more port price reporting and data – they have it in the US**
- Protect yourself through contracts and hedging when you can – recognizing the other risks this can create.
- Basis issues could return and might get worse in the future
- There are solutions but they require policy action – push for them – <u>before</u> the next crisis


Thank you

Additional Price Information

- US Associate's Weekly Price Reports of average FOB Portland Grain Prices http://www.uswheat.org/prices
- USDA daily FOB Portland Grain Prices:http://www.ams.usda.gov/mnreports/jo_gr111.txt
- (AAFC) Weekly Price Summary FOB Vancouver Grain Prices:
- http://www.agr.gc.ca/eng/industry-markets-and-trade/statistics-and-market-information/by-product-sector/crops/crops-market-information-canadian-industry/weekly-price-summary/?id=1378745200250
- The Saskatchewan Minister of Agriculture Market Trends Cash bids for grain: http://agriculture.gov.sk.ca/MarketTrends
- North West Terminal Limited NWT Cash Bids #1 13.5% CWRS, Unity Sask: http://www.northwestterminal.com