PRECISION AQUACULTURE
Fine-tuning practices to improve performance

Ridley Australian Prawn Farmers Association Symposium 2019
What about Aquaculture?

**Precision Agriculture**: is an approach to farm management that uses information technology to ensure that

I) the crop receives exactly what it needs for optimum health and productivity and,

II) to develop a decision support system for optimizing returns (profit) while managing resources (costs).

Increased Understanding = Reduced Business Risk = Predictable Profitability
What is driving the adoption?

“As digital technology permeates the everyday lives of all Australians, the technological transformation of agribusinesses is rapidly escalating.

Modelling projects that full unconstrained implementation of digital driven technologies within Australian agriculture would deliver a 25% boost to the value of this industry.

A $20.3 billion increase with all sectors benefitting”

Areas providing the greatest cross-sectoral gains identified as;

1. $7.4 billion. Labour savings from automation.
2. $2.9 billion. Genetic Gains through objective data.
3. $2.3 billion. Closer tailoring of inputs to needs.
4. $1 billion. Enhancements to biosecurity and market access.

EVIDENCE BASED REASONING FOR ADOPTION

Drip irrigation / Precision feeding

Precision planting / accurate PL stocking?

greenhouses / nursery hatcheries

Color sorting & grading /
What is in it for me through adopting precision focused practices?

<table>
<thead>
<tr>
<th>Sector</th>
<th>Potential estimated benefit to the economy (GVP) Increase (%)</th>
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</thead>
<tbody>
<tr>
<td>Rice</td>
<td>30</td>
</tr>
<tr>
<td>Grains</td>
<td>51</td>
</tr>
<tr>
<td>Cotton</td>
<td>28</td>
</tr>
<tr>
<td>Sugar</td>
<td>23</td>
</tr>
<tr>
<td>Horticulture</td>
<td>40</td>
</tr>
<tr>
<td>Beef</td>
<td>16</td>
</tr>
<tr>
<td>Sheep meat</td>
<td>17</td>
</tr>
<tr>
<td>Wool</td>
<td>18</td>
</tr>
<tr>
<td>Pork</td>
<td>5</td>
</tr>
<tr>
<td>Dairy</td>
<td>15</td>
</tr>
<tr>
<td>Eggs</td>
<td>25</td>
</tr>
<tr>
<td>Chicken meat</td>
<td>24</td>
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<tr>
<td>Wine</td>
<td>12</td>
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<tr>
<td>Forest and wood products</td>
<td>37</td>
</tr>
<tr>
<td>Livestock exports</td>
<td>4</td>
</tr>
<tr>
<td>Fruits and vegetables</td>
<td>14</td>
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<tr>
<td>Fisheries and aquaculture</td>
<td>44</td>
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<tr>
<td>Total</td>
<td>25</td>
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</table>

Table 1: Summary of potential unconstrained impact of digital agriculture to gross value of production (GVP).

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44% increase in actual production output projected for Fisheries and Aquaculture.
Atlantic Salmon has the highest level of industrialisation and the lowest level of risk compared to other aquaculture species. The size of the circles indicates volume harvested.

Atlantic salmon is relatively small in harvest volume compared to other species, it is a very visible product in many markets due to the high level of industrialisation.

What is the opportunity for farmed prawn?
Precision Nutrition / Growth Modeling / Smart Feeding

Optimized feed intake for rapid growth and better FCR
Imaging recognition software / optical sorting
Remote monitoring / GPS mapping / Visual interface analytics/ Aq aas
WHAT ARE THE PRINCIPLES BEHIND PRECISION?

Observe, Interpret, Decide and Act

Adopters

Non-adopters
THE FUTURE IS NOW

THANK YOU
SECTION DIVIDER OPTION 2
SECTION DIVIDER OPTION 3
SECTION DIVIDER OPTION 5
SECTION DIVIDER OPTION 7
SECTION DIVIDER OPTION 8
SECTION DIVIDER OPTION 10
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Level 2 – body text

- Level 3 – Bullet point 1
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Level 1 – subtitle
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<td>Subheading</td>
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THANK YOU
## CONTACT DETAILS

<table>
<thead>
<tr>
<th>Name</th>
<th>Héctor Suazo</th>
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<tbody>
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