THE "KNOW-HOW" TO GROW!

Capability Brief

www.hortus.net.au
INTRODUCTION

Hortus is Australia’s leading independent laboratory and agronomic services company. Hortus improves the efficiency and profitability of producers by facilitating the optimal use of crop production inputs through training, testing and consulting services that represent worlds’ best practices in crop management systems.

OVERVIEW

Hortus Technical Services was established in 2009 following the acquisition of Crop Tech, founded in 1985 by John and Penny Hall, and subsequently bought out by John Deere. Hortus Technical Services also amalgamated the agronomic management component of the Hortus Complete Plant Nutrition business established by Steve McLennan in 1990 as a micronutrient fertiliser distributor. The new Hortus Technical Services combined entity is now Australia’s largest integrated agronomic consultancy firm and independent laboratory.

Hortus harnesses a broad business network and extensive agribusiness investment & management experience whose key areas of operation are outlined below.

- Planning
- Laboratory analysis
- Advisory
- Management
- Auditing
- Resource Intelligence

Hortus analytical services and management provide a technical service focused on understanding & addressing our client needs by:

- Clearly defining the project parameters, goals and objectives
- Effectively identifying and analysing constraints
- Planning to achieve highest and best use of resources
- Developing innovative and sustainable recommendations
- Implementing and Managing change
- Continually monitoring and auditing productivity, efficiency and sustainability
THE TEAM

In preparing your Customised Solution Package Hortus draws on a diverse mix of experience, education and knowledge to provide innovative, practical & realistic solutions for our clients.

A brief summary of Hortus Senior staff is below:

Jack Milbank BAppSci (Agronomy) N.Sch - Managing Director

Jack completed his formal qualifications at the University of Queensland’s Gatton Campus before taking a job at Crop Tech in 2001. Jack left the company in 2004 to further develop his capability, this saw Jack spend a year consulting in California, Florida, U.K and Kenya. On retuning to Australia Jack spent a year with Ausveg as an industry development officer and 3 years running his own intensive orchard in the Mary Valley.

Jack established a horticultural marketing company in 2005 which continues to thrive focused on premium quality fresh produce export.

Jack was awarded the prestigious Nuffield Scholarship in 2006 which saw him research horticultural production, processing and marketing using renewable energy in India, China, America and the Middle East. Jack returned to Bundaberg in September 2009 leading a consortium to purchase laboratory, consulting and research firm, Crop Tech from John Deere Water. Crop Tech was rebranded to Hortus Technical Services. As the Managing Director, Jack brings broad ranging innovation, experience, direction and purpose to Hortus with a clear vision to make Hortus, Australia’s leading independent laboratory and agronomic services company.

Trish Hawkey B.App.Sci.- Rural Technology - Administration Manager

Trish completed her Bachelor of Applied Science – Rural Technology at the University of Queensland – Gatton. She has 20+ years experience in administration and has been with Hortus Technical Services since 2004.

Trish is responsible for the development of project submissions, budgets, appraisals and allocation of appropriate resources to ensure clients’ needs are met through the efficient coordination of Hortus’s administration and human resource capability.

Patrick Nugent AD.App.Sci. - Horticulture – Horticultural Agronomist

Patrick completed his formal qualifications at the University of Queensland – Gatton passing with distinction in 1997 and then established his own consultancy, Fruitopia, advising on and developing mini and mixed orchards on the Sunshine Coast for five years. In 2004 Patrick spent two years as assistant orchard manager for an organic avocado farm of over 7,000 trees where he was responsible for successfully maintaining optimum tree health and fruit production in a totally organic environment.
He then moved to NSW to further his horticultural knowledge. Rural Funds Management engaged Patrick and promoted him to Senior Horticulturalist responsible for the health and production of 500,000 almond trees and 150,000 olive trees. He remained in this role until 2011 when he moved his family to Childers.

Patrick brings clients wide ranging specialist experience and advice for optimising orchard production on small and large scales for both organic and non-organic farming. He has particularly strong skills in farm practices for broad scale management of tree health and optimising fruit production that minimise the necessary application of chemicals and fertilisers to manage pests, disease and deliver necessary water and nutrients.

**Eddy Dunn B.App.Sci. - Production Horticulture - Orchard Agronomist**

Eddy grew up in Stanthorpe on a fruit & vegetable farm. He completed his Bachelor of Applied Science in Production Horticulture at the University of Queensland – Gatton and on completion commenced work with Hortus Technical Services in 2002.

Eddy is an active member of the Queensland Crop Consultants organisation and is widely regarded as one of the best integrated pest management consultants in the citrus, passionfruit, avocado and macadamia industries. Eddy has been responsible for servicing such clients as Timbercorp, Rewards Group, SP Exports and Moorlands Produce during his time with Hortus.

**Josh Green - Agronomic Technician**

Josh grew up in Bundaberg on a sugarcane farm, and brings to the team an unrivalled work ethic, with exceptional local knowledge. As Hortus’s longest serving member of the Technical Services team brings a wealth of experience to any new project.

Along the way he has completed a course in Plant Protection at the University of Queensland – Gatton and having been with Hortus Technical Services since 2001 has gained his qualifications by ongoing practical involvement in the horticultural industry.

Josh has been trained in Hortus’s integrated pest management methodology, nutrition recommendation writing for the client he works closely with on a daily basis. Josh’s crops of expertise are Cucurbits, Snow peas, tomatoes, capsicums and chilies. Josh is the lead inspector for Hortus’s pre-shipment inspection quality assurance program.

Hortus also liaises and works with Government and Industry agencies including DEEDI, DERM, CSIRO, HAL, AUSVEG, NGIQ, and GROWCOM to achieve the best integrated project outcomes, technical service delivery, compliance and regulatory requirements.
METHODOLOGY

The use of intellectual capital across a broad spectrum of the agribusiness and food & fibre industry, and the use of an integrated agronomic management approach is the backbone of the business.

The Agribusiness sector can’t move forward without innovation and investment. The services we’ve developed mean there’s a higher level of certainty about a return on investment in today’s difficult farming environment. We’re using those services to minimise risk to the grower, the processor, the investor and the community.

Hortus’s integrated approach provides a new benchmark for performance – giving our clients in business and government the accurate information they need for strategic planning and decision making, not only to ensure solid return on investment, good governance and cost savings, but to protect themselves from the risks associated with operating in an ever changing marketplace.

Hortus brings a comprehensive and dynamic approach to the industry based on an understanding of best practice experience in land use, analysis, food & fibre production, business development and marketing at all scales of production.

The mindset of Hortus is to identify problems, integrate innovation and design solutions for all levels of private and public participants in the horticulture industry. In providing a seamless service Hortus integrates resources, intellectual capital, information and technical expertise to ensure the best possible solution is realised.

Employing the services of expertise in a range of core professions including Software Product Development, Food Processing & Packaging; Agronomic Management; Environment & Water; Irrigation Design; Project Management; Business Development; Hortus is committed to providing a quality of service beyond the capabilities of conventional consultants or laboratories.
For an integrated approach to technical service delivery for the Horticulture industry talk to the team at Hortus

Analysis - Innovation - Integration - Delivery

Integrated Agronomic Solutions

Project Management
Managing the project from start to finish

Feasibility Assessment
Evaluating market and project potential

Constraints Mapping
Identifying and mapping constraints and opportunities in order to achieve the best possible solution

Consultation
On the ground face to face interaction to monitor and manage

Analysis
Detailed analysis of plant soil and water interactions

Project Management
Managing the project from start to finish

Database of knowledge
Providing security for landholders, financiers and investors

Approval Management
Having the Knowledge, contacts and expertise to make it happen

Auditing
Record, report and recommend products and processes to improve farm management practices

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**STEP 1 - PROJECT BRIEFING**
- Meet client
- Define goals and scope
- Establish Key Performance Indicators (KPIs)
- End Product Focus
- Needs Audit

**STEP 2 - SOLUTIONS FORUM**
- Team selection
- Identify approach and opportunities to value add
- Assess feasible solutions – time, budget, resources, risk and return
- Optimum Value Add and Benchmark Solutions
- Customised Solution Package

**STEP 3 - PROJECT PLAN APPROVAL**
- Refine solution
- Recommend to client and review
- Client amendments and Confirmation
- Confirm responsible director and project manager
- Client Focus Confirmed

**STEP 4 - SCHEDULING & RESOURCING**
- Prepare detail project plans
- Allocate resources & briefing
- Implement KPI’s & milestones
- Best Practice Management

**PERFORMANCE REVIEW**
- TEAM
- SCHEDULE
- BUDGET
- PROBLEM SOLVING
- CLIENT INTERACTION AND FEEDBACK

**STEP 5 - PROJECT IMPLEMENTATION**
- Environment, Planning, Survey, analysis, monitoring, Consultation, inspection
- Coordination of consultants
- Performance and quality monitoring
- Client Status Reporting

**STEP 6 - PROJECT OUTCOME DELIVERY**
- Outputs delivered to client
- Future action statement on deliverables
- Report achievements of KPIs
- Realisation of Value Add
- Deliverables Fit for Purpose

**STEP 7 - PROJECT EVALUATION**
- KPIs achieved?
- Areas of corrective action?
- Impassable issues?
- Opportunities for improvement?
- Action Plan to Improve

**STEP 8 - PROJECT FEEDBACK**
- Client Interaction and feedback
OUR VALUED CLIENTS INCLUDE

• Large scale horticultural producers, processors and packers
• Mid size mixed family farms
• Individual & Groups of Primary Producers seeking to add value through improved agronomic performance as a result of outsourced technical service, integrated marketing, processing & quality assessment
• Innovators and Entrepreneurs seeking to commercialise and develop their concept, identify venture partners and form strategic alliances
• Corporate Agribusiness & Fund Managers seeking professional agronomic project management, planning, trials, auditing & reporting compliance
• Local, State & Federal Govt – Sustainable Regional Development
• Primary Producers seeking to move further up the value chain and establish a brand
• Expanding & Diversifying Agribusiness Enterprises
• New Agribusiness Investors seeking lifestyle, a new interest, capital gain and tax effective investments

OUR CORE SERVICES

Agronomic Consultancy

• Certified independent laboratory
• Integrated pest and disease monitoring and management
• Agronomic data handling, management and reporting software

Our consultancy services are based on industry experience and real life application across primary production, processing, distribution and marketing. Through harnessing leading industry intelligence across the entire value chain from producer to consumer we aim to benefit you by:

• Cost effectively & efficiently realizing the optimum potential for your enterprise & the things you produce.

Providing a broad experience in Agribusiness and Food we can offer advice on the following:

• Strategic Alliance Management
  - Effectively aligning production and processing businesses based on enterprise, capacity, capability, vision, service, market access
  - Efficiently and cost effectively engage contract processing in order to add value to a raw or primary processed product
• Product Development
  - Product evaluation and development strategies for food and fibre innovators and entrepreneurs
  - Product, Placement, Packaging & Distribution
  - Market Access and Strategic Marketing
  - New food & fibre concepts and design
  - Market specific portioning, packaging & flavor profiling

• Integrated Production Systems
  - Integrating leading industry knowledge and innovation with best management practice
  - Optimising production, quality and consistency in the most cost effective and efficient manner.

Analytical Testing

Provision of Certified independent Soil, Sap, Water, Solution and Hydroponic laboratory nutritional analysis services.

• Soil testing as an annual soil health assessment
• Grid reference testing for compilation of variable rate prescription files for prescription farming.
• Site assessment and suitability for deciding on development potential of farms.
• Agronomic analysis on a continuous basis as part of a nutrient monitoring program.
• Compliance testing for HACCP, Freshcare, Government and industry.

Business & Development Planning

Appraisals & Due Diligence “Where are we”?

• As an essential key to project validation for our clients we provide Property & Enterprise Appraisals and Due Diligence investigations to identify:
• Site assessment and development potential,
• Agronomic analysis
• Highest and best land use,
• Viable enterprise mix,
• Regulatory & legislative compliance,
• Productivity, current & projected value,
• Environmental and natural resource issues,
• Market trends
Strategic Planning “Where do we want to be”?  
• Production capacity, Enterprise Mix, Business Processes, KPI’s and Quality auditing, Critical Success Factors.

Business & Development Planning “How are we going to get there”?  

**Agribusiness Management**

• Implementing farm business & development plans  
• Overseeing the ongoing strategic management & planning

**The Benefits:**

• The knowledge that a technical team with leading industry expertise and experience is overseeing your investment  
• The knowledge that your Business & Development plan is being implemented efficiently and cost effectively  
• The knowledge that your account manager can review and respond to industry dynamics and realise opportunities as they arise during the course of the investment  
• The confidence that your investment is reaching its potential and that your needs and responsibilities are being met.

**Quantitative, Qualitative and Interactive Recording, Reporting and Reconciling**

• Accurately assess agronomic performance  
• Monitor and manage alternate production practices  
• Compare enterprises within your business  
• Improve your understanding of what drives productivity  
• Identifies strengths and weaknesses  
• Provide professional performance reports to 3rd parties  
• Accurately assess business and resource performance  
• Manage multiple sites and agronomic information through one, online software portal - AgPro
AgPro generates a range of performance measures targeted at specific areas of your business. These enable you to identify both strong and weak areas and to develop management strategies accordingly. Over time you can monitor trends and the effects of your decisions on key indicators.

Remote spatial data capture via the AgPro App for iphone and ipad

- **Monitor and manage alternate production practices**
  Knowing and monitoring production practices assists you to identify inefficiencies. AgPro analysis records recommendations that contribute to costs of production and expresses them in easily understood per hectare formats to enable comparison. Cost structures can be monitored over time to ensure production strategies are cost beneficial.

- **Compare Enterprises Within Your Business**
  Comparing the performance and profitability of different enterprises within a business can assist you in allocating your resources between options. AgPro will assist you to determine if you have the right mix of enterprises, or if some other allocation might be more suitable in your situation.
• **Record and Monitor Trends Over Time**

By monitoring crop performance over a number of periods you can begin to see where you’re heading in certain aspects of your business. Monitoring trends can confirm that your management strategies are taking you where you want to go, or can draw attention to undesirable changes before they become a major problem.

• **Benchmark Performance Against Industry and Regional Optimal levels**

AgPro draws on a database of performance indicators to provide some feedback on where your business sits in relation to others in your region and/or industry. This assists you in determining priorities for action and draws your attention to those areas where your business could potentially perform better.

• **Improve Your Understanding of What Drives Profit**

Our graphical reports not only present useful information, but also carefully explain all the indicators used to ensure you get full benefit from the analysis. By studying our reports, which focus on your own data, you will improve your understanding of what drives profits in your business.

• **Provide Professional Performance Reports to Third Parties**

The professionally presented and informative AgPro reports are suitable for use in any business meeting, and will prove useful in negotiations with financiers, partners, directors, or even prospective purchasers.

• **Corporate Reporting – Listed & Unlisted Agribusiness Companies, Private Equity Funds, Managed Investment Schemes**

AgPro provides a comprehensive set of reports for simply communicating the performance of the agribusiness to company boards, responsible entities, and company investors.
Resource Intelligence

- Hortus provide a comprehensive consultancy service by mapping and evaluating natural resources to achieve production objectives.
- Hortus provides business and environmental solutions through a range of performance-oriented products and services.

The products include:
- Vegetation mapping using satellite imagery (native vegetation type and condition, crop type and condition)
- Land use and condition mapping using satellite imagery (fire and fire hazard, floods, land use, infrastructure, soil wetness)
- Soil property mapping at regional and paddock scales using airborne geophysical imagery and ground sampling
- Geochemical mapping & subsurface structure using satellite and airborne imagery
- Terrain analysis for water yields and cold air drainage
- Climate surfaces for temperature, rainfall and frost
- Crop type and variety Homoclimate analysis

The services include:
- Land-use capability assessment and enterprise site selection
- Strategic planning and policy development
- Management strategies for regional sustainable development (‘triple bottom line’)
- Environmental impact and risk assessment
- Environmental monitoring, evaluation and reporting
- Groundwater bore location; Dry land salinity; Waste water disposal
- Development and support for environmental management information systems
- Development and support for spatial data management
- Research and development; Expert advice and evidence
BUDGET ESTIMATES & TIMELINES

Hortus calculates a budget estimate in order to identify, implement and oversee the agronomic or project management of each new client. This required detailed discussion in some cases. However a sample budget estimate associated with activity is outlined below to give an idea of a typical scenario.

<table>
<thead>
<tr>
<th>Process</th>
<th>Action</th>
<th>Timeline</th>
<th>Person Responsible</th>
<th>Cost</th>
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<tbody>
<tr>
<td>1</td>
<td>PROJECT BRIEFING</td>
<td>1 week</td>
<td>Technical Director</td>
<td></td>
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<tr>
<td>2</td>
<td>SOLUTIONS FORUM</td>
<td>2 weeks</td>
<td>Departmental heads</td>
<td></td>
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<tr>
<td>3</td>
<td>PROJECT PLAN APPROVAL</td>
<td>4 weeks</td>
<td>Managing Director</td>
<td></td>
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<tr>
<td>4</td>
<td>SCHEDULEING AND RESOURCESING</td>
<td>8 weeks</td>
<td>Administration manager</td>
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<tr>
<td>5</td>
<td>PROJECT IMPLEMENTATION</td>
<td>12 months</td>
<td>Technical team</td>
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<tr>
<td>6</td>
<td>PROJECT OUTCOME DELIVERY</td>
<td>4 weeks</td>
<td>Project Manager</td>
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<td>7</td>
<td>PROJECT EVALUATION</td>
<td>2 weeks</td>
<td>Departmental heads</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>REFINE PROJECT IMPLEMENTATION FOR NEXT TERM</td>
<td>ongoing</td>
<td>Managing Director</td>
<td></td>
</tr>
</tbody>
</table>
SUMMARY

- Hortus provide a range of services to assist agribusiness operators, investors and food chain coordinators to take full advantage of the opportunities on offer.

- Assist rural property owners & agribusiness investors realise the Highest and Best land use through the implementation of innovative concept design, effective planning and management through an ongoing sustainable management approach.

- Our aim is to improve the efficiency and profitability of producers by facilitating the optimal use of crop production inputs through training, testing and consulting services that represent worlds’ best practices in crop management systems.

- If you require assistance and are interested in discussing the engagement of our services please contact us so we can better understand your needs and produce a detailed quotation for your review.

CONTACT US

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