

AI Adoption Pack

Horticulture

7 ways generative AI gives you time back to grow

[National AI Centre](#) | [ai.gov.au](#)

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AI in the here and now

Most conversations about AI in agriculture end up in the same place: drones, sensors, computer vision, robotic harvesting. The technology is real and it matters, but it is also capital-heavy, integration-heavy, and some time away from being the right conversation for most horticulture operations.

Generative AI is different. It is available right now, is relatively low cost, runs on a phone or laptop, and solves the problems that take time and energy away from growing and producing.

Growers did not get into horticulture to write compliance reports, decode biosecurity updates, draft retailer emails, or support with providing an agronomist a report. Increasingly, AI can do a credible first pass on almost all of these tasks.

This pack covers 7 generative AI use cases that are working right now for agricultural businesses. Each one is practical, low cost and designed to give you time back to focus on the farm – producing the food Australia and the world loves.

What generative AI can't do

Generative AI is a language tool. It can read, write, summarise, translate and organise. It cannot look at your crop, smell your soil, feel the humidity on a frost night, or replace the judgement you've built over years of growing.

Every use case in this pack puts AI in a supporting role – structuring your thinking, saving you writing time, and helping you communicate more clearly. **The decisions stay with you.**

What are LLMs and generative AI?

Large language models (LLMs) are the engines that power a type of generative AI: tools like Claude, ChatGPT, Gemini and CoPilot run on LLMs. When we refer to AI tools in the use cases in this document, we are referring to these LLM powered tools. LLM tools are useful and user-friendly because they can read text, understand context and produce useful written outputs like documents, summaries, action plans, translations and recommendations. You interact with them in plain language, and you do not need technical skills to get value from them. You can use typing or your voice to interact with them.

What does it cost?

All public LLM AI tools have free tiers that are enough for most of the use cases in this pack. Paid plans offer longer document handling, stronger data privacy protections, and the quality of response is vastly improved. There is no hardware to buy and nothing to install.

How to use this pack

Each use case in this document follows the same structure: the problem it solves, step-by-step instructions, what you get and what tools you need.

Pick the one that fits your biggest headache right now and start there. You do not need to do all 7. Each use case is independent, and they don't build on each other. You can do one now and come back for another next month.

Anywhere you see [text in brackets], replace it with your own details before submitting the prompt.

Before you start

Using AI responsibly

The Australian Government has established 6 essential practices to guide the adoption of responsible AI use. They help organisations put appropriate governance, oversight and transparency in place. See the National AI Centre's [essential AI practices](#) for more detailed information.

Generative AI is a powerful tool, but it is not a replacement for professional advice, your own judgement or qualified expertise. Before you start using AI in your operation, read through the following guidance to get the most value while managing the risks.

Key risks to be aware of

AI can be confidently wrong. Generative AI tools sometimes produce information that sounds accurate but is incorrect, outdated or fabricated. This is sometimes called a 'hallucination'. Always verify outputs against trusted sources before acting on them, particularly for compliance, legal, chemical or financial matters.

AI is not professional advice. Outputs from AI tools do not replace advice from your agronomist, accountant, lawyer, export broker or biosecurity officer. Use AI to draft, summarise and organise – then check with the right people before making decisions that carry real consequences.

Check the tool's terms and settings. Different AI tools have different rules about whether your inputs are stored, shared or used for training. Paid plans may offer stronger privacy protections. Before entering your business information into any tool, check its data policy. Stick to general information where necessary.

Be careful with sensitive information. It is not recommended to enter personal information, confidential business data, financial account details or sensitive employee records into generative AI tools. Read and understand each tool's privacy and data policies before use.

Outputs may contain bias. AI tools reflect patterns in the data they were trained on. Review outputs critically, particularly when they involve people, hiring, workforce decisions or communication with diverse communities.

You are responsible for what you use. If you submit an AI-drafted document to an auditor, a bank, a retailer or a government program, you are accountable for its accuracy. Always review, edit and verify before sending.

A good rule of thumb

Use AI to create your first draft, not your final answer. You own the words in the final copy. Always review, verify, and apply your own expertise before acting on or sharing anything AI produces.

Guidance for getting started

The National AI Centre has published foundational guidance for organisations adopting AI. It covers how to assess readiness, manage risks and build responsible practices from the start. Even if you are a sole operator, the principles apply.

Work through all 6 essential practices to establish a strong baseline for responsible AI use. You don't need to do everything at once. Adapt each practice to fit your organisation's size, use cases and risk profile. Learn about the 6 essential practices in [Guidance for AI Adoption: Foundations](#).

If you have staff who will also use AI tools, the National AI Centre provides a [free AI policy template](#) to set clear rules for your organisation – including principles for responsible use, expected behaviours and governance points.

Build your confidence with free training

If you are new to generative AI or want to sharpen your skills, the National AI Centre offers practical [guides, activities, and learning resources](#) designed for people at all levels of experience. These are free, self-paced, and built for Australian conditions.

7 Generative AI Use Cases for Horticulture

1. Compliance documentation

The problem

Your food safety plan and supporting procedures need to be current, clearly written and readable by someone who wasn't there when you wrote them. Whether that's an auditor, a new staff member or a buyer. Documents can drift out of date or stay in language that only the person who wrote them can follow.

What you do

Paste your existing documents into an AI tool and ask it to rewrite, restructure and fill gaps. The goal is clean documentation that reflects what you actually do on-farm, in language anyone can follow.

Steps

1. **Before you open the tool**, remove or anonymise staff names, supplier details, customer names, and any commercially sensitive information from the document you're working on. Paid plans for certain AI tools may offer better data privacy protections if handling detailed operational procedures.
2. Open your preferred tool (Claude, ChatGPT, Gemini).
3. Paste or attach your existing food safety plan, procedure, or standard operating procedure. and
4. Enter the following prompt: *"Rewrite this as a clear, well-structured food safety document for a [your commodity] growing and packing operation in [your state]. I'm certified under [Freshcare/HARPS/GLOBALG.A.P./specify]. Use plain language, organise it logically under headings, and make sure it would be easy for an auditor or new staff member to follow."*
5. Once a response has been generated, ask: *"Are there any sections that seem incomplete, vague, or that an auditor would likely ask me to clarify? Flag them for me."*
6. If you know your documentation has a gap (for example, no chemical storage procedure, no allergen management section, no corrective action process), describe what you actually do in practice and ask the AI tool: *"Write this up as a documented procedure that's consistent with the rest of the document. Include who is responsible, what triggers the action, what steps are followed, and how it's recorded."*
7. Review the output carefully. Make sure every statement reflects what you actually do on-farm, not what sounds good. An auditor will ask you to demonstrate your procedures. If the document says you do something you don't, that's a non-conformance, not a documentation win.
8. Ask: *"Now produce a one-page summary version of this document I can laminate and put in the packing shed for staff reference."*
9. Save the document it generates as your working document. Add a version number and date. Update it the same way next season or when practices change. Paste the current version back in with a note on what's changed and ask the AI tool to revise accordingly.

Bonus follow-ups:

- *"Compare this document against the [Freshcare FSQ4.2 / HARPS v2.0] requirements. Are there any areas where my documentation doesn't clearly address what the scheme asks for?"* (paste or summarise the scheme requirements)

- *"Write a pre-audit checklist I can use to self-assess my documentation before my next certification audit"*
- *"Rewrite the chemical handling section at a reading level suitable for workers with English as a second language"*

Important. Building from scratch: If you're developing a food safety plan for a new certification (Freshcare, HARPS, GLOBALG.A.P.), get scheme-specific guidance first. Your certification body, auditor, or industry body (such as Freshcare's own templates) will tell you what the scheme requires. Use AI to write up your procedures clearly once you know what's needed. AI improves your documentation. It doesn't replace knowing what's required. You need to check all work and are accountable for the output.

Important: Audit transparency. Some auditors may ask how your documents were produced. There is nothing wrong with using AI to structure and draft your documentation. The key is that the content accurately reflects your actual practices. If asked, you can say you used AI as a drafting tool and reviewed the content for accuracy.

What you get

Clean, professional compliance documents that reflect your actual practices, written in language that's easy for auditors and staff to follow. A gap analysis that tells you where to strengthen your documentation before someone else finds the gaps. A reusable process for keeping documents current season to season without starting from scratch each time.

Refer to the [National AI Centre's Guidance for AI Adoption: Foundations](#) to ensure a strong baseline for responsible AI use.

Tools: Any large language model (LLM) AI tool. Paid plans can handle more/longer documents at once.

Effort to start: Low. Rewriting an existing document takes 15 to 30 minutes. Filling gaps takes longer but is still faster than drafting from a blank page.

2. Grant and funding applications

The problem

The grants exist, the money is real, and the criteria often fit your operation. But the application narrative takes longer to write than the work it funds, so most growers don't bother.

What you do

Give an AI tool the grant guidelines, program objectives, and a short description of your operation and project, and let it draft the narrative sections for you to review and personalise.

Steps

1. Find the grant you're applying for. Copy the eligibility criteria, application questions, **and the program's objectives or strategic context** (usually found on the first page of the guidelines). Common sources include Hort Innovation co-investment projects, state government agriculture grants (e.g., NSW DPI, Agriculture Victoria, QLD DAF), ARENA (for energy/solar in packhouses), AusIndustry / Research and Development Tax Incentive, and regional NLP programs.
2. Open your preferred AI tool (e.g. Claude, ChatGPT, Gemini).
3. Paste or attach the information from step 1 and enter this prompt: *"I'm applying for this grant. Here's my operation: [2–3 sentences about your farm, what you grow, your scale]. Here's what I want to fund: [your specific project]. Here's the problem it solves: [you quantify if possible – e.g., labour hours, yield loss, water cost, rejection rates]. Here are my relevant achievements or track record: [you mention anything notable]. Draft responses to each application question that clearly address the criteria, quantify benefits where possible, and connect my project to the program's broader objectives. Each response should be no more than [X number] words."*
4. Review the draft carefully. Add your specific numbers (hectares, tonnes, staff, dollars), evidence of past performance, and anything that makes it unmistakably your application. If it doesn't sound like you, rewrite those sections – assessors can spot templated language.
5. If your application includes a budget narrative, ask: *"Help me write a budget justification for these line items: [your list items and costs]. Explain why each is necessary and represents value for money."*
6. Copy into the application form. Check word and character limits – AI tools routinely exceed them.

Important: Most grant applications require you to sign a declaration that the information is true and correct. AI can structure your story – it cannot invent your evidence. Review every claim in the draft before submitting.

What you get

A credible, criteria-aligned first draft in half the time – plus a self-critique that tells you exactly where to add substance. You're editing rather than staring at a blank page. Refer to the six [Essential AI practices](#) to ensure a strong baseline for responsible AI use.

Tools: Any large language model (LLM) AI tool. Paid plans are worth considering for longer applications.

Effort to start: Low

3. Retailer and buyer communication

The problem

Responding to a category manager's spec query or writing a pitch to a new buyer requires a kind of professional writing that most growers didn't sign up for and don't enjoy. The responses that land are specific, confident, and show you understand their business – but finding those words under time pressure is hard.

What you do

Paste the email or spec sheet you're responding to into an AI tool, give it your key details, and ask it to draft a reply that sounds like a confident grower – not a salesperson.

Important – commercial sensitivity: Buyer communications often contain commercially sensitive information – pricing structures, volume commitments, exclusive supply terms. Understand how paid plans versus free tiers differ in data privacy protections. Never paste confidentiality agreement or NDA-covered content without checking your obligations.

Important – accuracy: Review any claims the AI makes about your volumes, capabilities, or certifications before sending. A polished email that overpromises is worse than a rough one that's honest.

Steps

1. Copy the email or spec sheet you need to respond to. **Remove any pricing, volume, or contractual details you're not comfortable sharing with a third-party**, or use a paid plan with data privacy protections (most paid tiers exclude your inputs from model training).

2. Open your preferred AI tool (e.g. Claude, ChatGPT, Gemini).

3. Use the prompt that matches your situation:

a. Responding to a spec query or buyer email:

"I'm a [your commodity] grower in [your region] supplying [your approximate volume] per season. A category manager has sent me this query: [paste email]. Here are my actual specifications: [size profile, pack types, quality data, shelf life, certifications held – e.g., Freshcare, HARPS, GlobalGAP]. Draft a professional response that clearly confirms what I can meet, flags anything I can't, and positions my product confidently."

b. Pitching to a new buyer:

"I'm a [your commodity] grower in [your region]. I want to pitch to [retailer/food service company/export buyer]. My key selling points are: [e.g., consistency of supply, varietal range, proximity to their DC, existing certifications, willingness to do custom packing, years in operation]. Draft a concise introductory email that makes them want to take a call with me. Keep it under 200 words."

4. If the tone doesn't sound like you, ask: *"Rewrite this in a tone that's professional but straightforward – like an experienced grower who's confident in their product, not a salesperson."*
5. Review for accuracy – especially any claims about volumes, certifications, or capabilities. **You are the authority on your business, so don't let the AI overcommit you.**

6. Send from your own email.

Bonus uses once you're comfortable:

- *"Draft a one-page capability statement for my operation I can attach when approaching new buyers"*
- *"I got this response from the buyer. What are they actually asking for and what should I prioritise in my reply?"* – using the AI tool to interpret indirect corporate language is arguably more valuable than drafting replies
- *"Rewrite this email to be half the length – the buyer doesn't need the backstory"*

What you get

Professional responses that represent your operation well – in minutes rather than an hour of agonising over the right words. Over time, a library of language you can reuse: your capability statement, your standard pitch, your spec response template. Refer to the [National AI Centre's Guidance for AI Adoption: Foundations](#) to ensure a strong baseline for responsible AI use.

Tools: Any large language model (LLM) AI tool. Paid plans and a review of security settings is recommended if pasting commercially sensitive correspondence but this is not advised.

Effort to start: Low

4. Agronomist and supplier follow-up

The problem

After a farm visit you have advice, observations, and a loose list of things to do. Turning that into a clear action plan and a follow-up email usually doesn't happen, and the advice gets lost.

What you do

Paste or speak your notes into an AI tool and ask it to produce a time-prioritised action list and a follow-up email that confirms your understanding – so your agronomist or supplier can correct you before you act.

Important: technical accuracy. AI tools may misinterpret garbled product names or infer incorrect application rates. Always verify chemical names, rates, and withholding periods against the registered label. This is an action capture tool, not a substitute for the label or your agronomist's professional advice.

Steps

1. After the farm visit, type or voice-to-text your notes into your phone (rough is fine). Scan for product names, rates, and pest/disease names – voice-to-text often garbles technical terms (e.g., "chlorantraniliprole" becomes something creative, "Movento" becomes "movement oh", "botrytis" might become "bow try this"). Fix these before pasting. Many AI apps also accept voice input directly, so you can talk to the app in the ute on the way back from the block.
2. Open your preferred large language model AI tool (e.g. Claude, ChatGPT, Gemini).
3. Paste your notes and enter this prompt: *"Turn these notes from a farm visit with my [agronomist/chemical rep/supplier] into a prioritised action list grouped by urgency: immediate (next 24–48 hours), this week, monitor and reassess, and next season. Include any timing triggers mentioned (growth stage, weather events, pest thresholds). Then draft a short follow-up email to [my agronomist/the rep] confirming what we discussed and what I'm planning to do, so they can correct me if I've misunderstood anything."*
4. Follow up by asking: "Is there anything in these notes that seems incomplete or unclear – where I should go back for clarification before acting?"
5. Review both outputs. **Check product names, application rates, and withholding periods** against the label or your agronomist's written report if they provide one. Don't trust the AI to get chemical details right – it may have "corrected" a garbled voice note to a real but wrong product.
6. Send the follow-up email and save both the action list and your original notes in a dated folder (by block, crop, or issue) so you can refer back next season.

Bonus follow-ups once you're comfortable:

- *"Add a column for estimated cost and who I need to call to arrange each action"*
- *"Which of these actions should I confirm with my agronomist before proceeding?"*
- *"Summarise just the spray program recommendations in a table: product, rate, timing, withholding period, target pest/disease"*

This works for more than agronomist visits:

- Chemical or nutrition supplier reps who recommend programs during a farm walk

- Equipment suppliers after a demo or quote discussion
- Packhouse or logistics providers after pre-season planning meetings
- Biosecurity officers after a property visit or audit

What you get

Three things that compound in value over time:

1. **An accountability loop** – your agronomist can correct misunderstandings before you act on them
2. **A clear, time-prioritised to-do list** – so the urgent things don't get buried under the next-season things
3. **A searchable seasonal knowledge bank** – 12 months from now when the same issue returns, you've got a record of what was recommended and what worked

All from 5 minutes of rough notes in the ute while the conversation is still fresh.

Refer to the [National AI Centre's Guidance for AI Adoption: Foundations](#) to ensure a strong baseline for responsible AI use.

Tools: Any large language model (LLM) AI tool. For voice notes, many apps accept voice input directly. Alternatively, use your phone's dictation, Google Keep, or a transcription app, then paste the text.

Effort to start: Low - the discipline is doing it while the visit is fresh, not 3 days later.

5. Business and financial narrative

The problem

You need to talk to a bank, a government program, or a potential partner about your operation. You know your business, but it is time consuming to pull together the many inputs that make your business run.

What you do

Give an AI tool your operation details and ask it to draft a structured business narrative you can use as a master document – then tailor it for different audiences as needed.

Steps

1. Write down your basics using these categories (rough notes are fine):
 - a. What you grow (commodity, key varieties)
 - b. How much (hectares, annual volume in tonnes or trays)
 - c. Where (region, tenure – owned/leased)
 - d. Infrastructure (packing line, cold chain, irrigation, protected cropping)
 - e. Staff model (permanent, seasonal, PALM, contractors)
 - f. Main markets and channels (domestic retail, food service, export, wholesale)
 - g. Certifications held (Freshcare, HARPS, GlobalGAP, organic, etc.)
 - h. Recent investments or improvements
 - i. What you're building toward in the next 2–5 years
2. Open your preferred large language model AI tool (e.g. Claude, ChatGPT, Gemini).
3. Paste or attach your notes and enter this prompt: *"Draft a clear one-page business overview for my horticulture operation. Structure it as: (1) Operation snapshot - what, where, scale; (2) Production capability - volumes, varieties, infrastructure; (3) Markets and customers - who I sell to and through which channels; (4) Workforce - how I staff the operation year-round and in peak season; (5) Quality and compliance - certifications and accreditations; (6) Recent investments or improvements; (7) Strategic direction - what I'm building toward in 2–5 years; (8) Risk management - how I handle variability. Make it professional but not corporate - I'm a grower, not a consultant. Here are my notes: [paste your notes]"*
4. Review the result and if the tone doesn't sound like you, ask: *"Rewrite this so it sounds like a confident, experienced grower explaining their operation – professional but plain-spoken, not like a management consultant wrote it."*
5. Review for accuracy. Remove or generalise any numbers you're not comfortable sharing externally. Add anything that makes your operation distinct – long-term buyer relationships, awards, unique varieties, sustainability practices, succession planning.
6. If you need to tailor for a specific audience, ask:
 - a. For a bank: *"Rewire this for a bank lending manager. Emphasise cash flow reliability, asset position, risk mitigation, and capacity to service debt through a bad season."*
 - b. For a grant: *"Rewire this for a grant assessor. Emphasise innovation, industry benefit, and alignment with [program name] objectives."*

- c. For a partner or investor: *"Rewire this for a potential business partner. Emphasise growth trajectory, scalability, and competitive advantage."*
- 7. Incorporate specific numbers as needed: add actual figures - production volumes, hectares, staff, revenue range, yield trends, recent capital investment. Use them as evidence to strengthen the narrative rather than just making claims. This commercial-in-confidence information is not advised to be put into the AI tool – enter it yourself manually.
- 8. Save as your master business narrative. Update annually or after significant changes (new plantings, infrastructure, market access, staff). Draw from it whenever you need to tell your story.

Bonus follow-ups once you have your master narrative:

- *"Now write a 3-sentence version I can use as an introduction in emails or on a website"*
- *"Draft the financial summary paragraph a bank would want - focusing on cash flow reliability and risk mitigation"*
- *"What's missing from this overview that a lender or investor would want to see?"*
- *"Turn this into a capability statement I can attach to buyer pitches or tender responses"* (links to Use Case 3 Retailer and buyer communication)

Important: financial sensitivity. This use case involves sharing operational and financial details about your business. Use a paid plan with data privacy protections (ensure the settings are turned to not training the model). Don't paste actual bank statements, tax returns, or loan documents – give the AI tool summary numbers and let it structure the narrative. **A specific crop + region + volume combination can sometimes identify a single operation.**

What you get

A confident, structured business narrative. Write it once, then draw from it for years: loan applications, grant narratives, partnership discussions, award nominations, buyer pitches. Each version takes minutes to tailor instead of hours to write from scratch.

Refer to the [National AI Centre's Guidance for AI Adoption: Foundations](#) to ensure a strong baseline for responsible AI use.

Tools: Any large language model (LLM) AI tool. Paid plans and a review of security settings is recommended when inputting financial or operational details.

Effort to start: Low - producing the first draft takes under an hour. Keeping it updated annually makes it a living asset rather than a one-time output.

6. Understanding your Hort Innovation levy

The problem

You're paying a levy every season but navigating what research and programs you're actually entitled to use takes time. Your commodity's Strategic Investment Plan (SIP) sets the priorities for how your levy money is invested over 5 years – it's developed with industry input and aims to reflect what growers like you actually need. The value is there. AI just helps you extract it faster.

What you do

Take a Hort Innovation research report, your commodity's Strategic Investment Plan or an Annual Investment Plan and ask AI to pull out what's relevant to your operation – and what you should do with it.

Steps

1. Go to horticulture.com.au and find your commodity fund page (e.g., Avocado Fund, Citrus Fund, Strawberry Fund). Locate the **Strategic Investment Plan (SIP)**, latest Annual Investment Plan, or any Final Research Reports relevant to your operation.
2. Download or open the document. **For long documents (30+ pages), start with the executive summary and key recommendations sections.** Paid AI tool plans can often handle full PDF uploads; if using a free tier, paste the most relevant sections rather than the entire document.
3. Open your preferred large language model AI tool (e.g. Claude, ChatGPT, Gemini).
4. Paste or attach the relevant documents/sections and enter this prompt: *"I'm a [your commodity] grower in [your region]. [Brief context - e.g., 40ha, export-focused, moving to protected cropping, main challenges are labour cost and fruit fly pressure]. I've just read this [Strategic Investment Plan / research report / Annual Investment Plan]. In plain language: (1) What research outcomes from this can I apply on my operation now? (2) Are there any trials, extension programs, or tools I can access or participate in? (3) Are there any funding or co-investment opportunities relevant to me? (4) What's coming in the next 2–3 years that I should be aware of or try to influence?"*
5. Follow up by asking the AI: *"Summarise the key investment priorities in a table: priority area, what it means for growers like me, current projects, and any gaps."*
6. If you have an industry meeting, Hort Innovation consultation, or advisory panel conversation coming up, ask: *"What are the three most important questions I should ask based on this plan?"* or *"Based on this SIP, where is my levy money going that doesn't seem relevant to growers in my region? What might I want to raise?"*
7. Save the output and use it to brief yourself before your next industry meeting or Hort Innovation contact.

Bonus follow-ups:

- *"Are there any final research reports from the last two years that I should read based on these priorities? What would I search for on the Hort Innovation website?"*
- *"I'm going to a grower consultation next month. Draft three short talking points I could raise about how this plan does or doesn't reflect what growers in [my region] need."*
- *"Compare this SIP's priorities to what I've told you about my operation. Where am I aligned and where are my challenges not being addressed?"*

Important: currency. SIPs are typically updated every 5 years and Annual Investment Plans annually. Check the date on the document you're reading. If it's nearing the end of its cycle, a new version may be in consultation – which is your opportunity to have input.

What you get

A plain-language read of what your levy is funding, what applies to you, what's worth pursuing, and where the gaps might be. Fifteen minutes instead of an afternoon – and you walk into industry conversations knowing your ground, asking informed questions, and getting more value from the investment you're already making.

Refer to the [National AI Centre's Guidance for AI Adoption: Foundations](#) to ensure a strong baseline for responsible AI use.

Tools: Any large language model (LLM) AI tool. Free tiers are often enough for executive summaries and short reports. Paid plans recommended for full-length research reports or PDF uploads.

Effort to start: Low

7. Weather and on-farm decision making

The problem

The Bureau of Meteorology (BoM) or your chosen weather application forecast tells you what the weather will do. It doesn't tell you whether to spray, when to pick, or whether frost risk is real enough to act on. That translation still happens in your head, under pressure, with incomplete information – and getting it wrong is expensive.

What you do

Paste the forecast into an AI tool with your crop stage and the specific decision you're facing, and ask it to help you think through the factors systematically. The AI doesn't make the call – it structures your thinking so you can pressure-test the reasoning before committing.

Steps

1. Go to bom.gov.au and get the forecast for your location. For spray and frost decisions, use the hourly or 3-hourly forecast (MetEye or BoM app) rather than just the daily summary – include wind speed, humidity, and overnight minimums. These drive the decision more than "partly cloudy, 22°C".

- Open your preferred large language model AI tool (e.g. Claude, ChatGPT, Gemini).

Paste the forecast and enter this prompt to describe your situation: *"I'm a [your commodity] grower in [your region]. My crop is currently at [growth stage – e.g., full bloom, fruit set, veraison, 2 weeks from harvest]. I need to decide [specific decision – e.g., whether to spray fungicide tomorrow, whether to bring harvest forward, whether to run frost protection tonight]. Here's the forecast: [paste]. Here's what I'm considering: [relevant factors – e.g., product to apply, days since last irrigation, current disease pressure, withholding period needed, frost protection infrastructure available]. Help me think through this decision: what are the key weather factors I should weigh, what's the risk of acting vs. waiting, and what would I watch over the next 24–48 hours before committing?"*

- a. For **spray decisions**, add: *"The product label requires [X hours rainfast / maximum wind speed of X km/h / Delta-T between X and X]. Based on the hourly forecast, when is my best spray window in the next 3–5 days, and what's the risk for each option?"*
 - b. For **frost decisions**, add: *"My crop's critical damage temperature at this growth stage is approximately [X°C]. I have [frost fans / under-tree sprinklers / no active protection]. The forecast minimum is [X°C]. What factors should I consider when deciding whether to activate protection? What would change my decision?"*
 - c. For **harvest timing**, add: *"The forecast shows [rain/heat event] in [X] days. What are the trade-offs between picking early (lower maturity) vs. risking weather damage? What would I need to see in tomorrow's updated forecast to change the call?"*
2. Review the response and ask the AI: *"What would change this decision? What should I watch for in tomorrow morning's updated forecast before I commit?"*
 3. Read the response. **Challenge the reasoning** – does it account for your site's microclimate, your specific product label conditions, and your crop at its actual stage? Your frost hollow doesn't behave the same as the BOM station 12km away.
 4. Use the output as a structured second opinion alongside your own experience, your agronomist's advice, and the actual conditions on the morning. Always check the updated forecast before acting – Day 3–7 forecasts shift significantly.

Bonus follow-ups:

- a. *"I have three spray jobs to schedule this week: [list products and target crops]. Based on this forecast, what order should I prioritise them in and why?"*
- b. *"What's the risk/reward of waiting 48 hours for a better window vs. spraying in marginal conditions tomorrow?"*
- c. *"Create a reusable decision checklist I can use at 5am on a potential frost night: what do I check, in what order, and what triggers action?"*

Important: limitations. AI tools have no access to real-time weather data, no knowledge of your site's microclimate, no product label database, and no way to assess forecast confidence (Day 1–2 forecasts are far more reliable than Day 5–7). They also don't know your cumulative context – yesterday's irrigation, existing leaf wetness, your remaining water allocation. The better the context you provide, the better the thinking framework you get back – but you still make the call.

Important – spray compliance: Spray decisions are governed by label conditions, not just weather. Delta-T, wind speed, buffer zones, temperature ranges, and rainfall periods are all label-specific legal requirements. The AI can help you structure the timing logic, but always verify against the registered product label.

What you get

Your forecast translated into a structured decision framework – with the key factors surfaced, the risks made visible on both sides (act vs. wait), and trigger points identified for the next forecast update. Particularly powerful for spray windows, frost calls, and harvest timing where the cost of getting it wrong runs into thousands. Over time, you can build reusable decision checklists for your most common weather-dependent calls.

Refer to the [National AI Centre's Guidance for AI Adoption: Foundations](#) to ensure a strong baseline for responsible AI use.

Tools: Any large language model (LLM) AI tool. A free tier is often enough. For more granular forecast data, MetEye (BOM), Weatherzone Pro, or BOM API feeds can provide the detailed hourly inputs that make this most useful.

Effort to start: Low – five minutes of structured thinking that can save thousands in avoided misjudgement.

Resources and links

National AI Centre

- The National AI Centre – ai.gov.au
- Guidance for AI Adoption: Foundations ai.gov.au/staying-safe-and-responsible/essential-ai-practices/guidance-ai-adoption-foundations
- AI policy template for your organisation ai.gov.au/staying-safe-and-responsible/essential-ai-practices/create-ai-policy
- Practical guides and learning activities ai.gov.au/practical-guides-and-learning

AI Adopt Centres

If you're seeking support to implement AI in your business, the AI Adopt Centres can provide in-person support:

- [SMEC AI](#) - SMEC AI supports businesses in agriculture, clean energy, medical and enabling industries.
- [ARM Hub AI Adopt Centre](#) - ARM Hub AI Adopt Centre focuses on AI and robotics in manufacturing.
- [ARAIN](#) - Australian Regional AI Network (ARAIN) supports regional business with a focus on agriculture, forestry, fisheries and renewable technologies.

Start with one – with you at the centre

You don't need to use all 7 use cases. Pick the one that solves your biggest time problem this week. Spend 15 minutes on it. See what comes back. That first experience of getting a credible first draft from rough notes is what shifts your thinking about where this tool fits in your operation.

All outputs should be verified by yourself and trusted advisors before being acted upon and it should be made clear that AI was used to support any information that you do send out.

Then come back for the next one when you're ready.

Feedback and contact

For feedback on this document and it's use, contact Adrian Cullen, Industry Program Manager, Industry Growth Team, National AI Centre adrian.cullen@industry.gov.au

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Produced by the National AI Centre (NAIC) to support AI adoption in Australian horticulture. For more resources visit ai.gov.au