2025

REPORT 4: Phase 3

'Solutions' deep dive

Project 1.3.7: Understanding how trading practices affect food loss and waste in Australia

ENDFOODWASTE COOPERATIVE RESEARCH CENTRE

Australian Government Department of Industry, Science and Resources | Cooperative Research Centres Program

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Executive Summary

Literature suggests that trading practices can significantly influence food loss and waste. In recent years, there has been a growing interest within and beyond Australia in altering trading practices to reduce food loss and waste. This is Report 4 from the project 'Understanding how trading practices affect food loss and waste in Australia'. The project investigates how trading practices impact on food loss and waste in Australia and what are the solutions to situations where trading practices are causing food loss and waste. Report 4 provides findings from a regulatory analysis of solutions to the trading practices identified in Report 3 as potential contributors to food loss and waste. In particular, this report provides the following findings:

1. When compared with EU regulation and the findings contained in Report 3, there are gaps in the current regulation of trading practices provided by the Horticulture Code and the Food and Grocery Code that, if addressed, could mitigate trading practices identified in Report 3 as potential contributors to food loss and waste
2. Various options exist to improve data transparency in horticultural supply chains and there are specific legal, economic, and cultural factors to consider when pursuing a particular approach
3. While research is limited, whole of crop purchasing has potential to reduce food loss and waste in Australia, however, how it is implemented requires careful consideration of competition law and the specifics of the crop and actors involved.

Overall, this report provides insights into specific pathways for regulators and industry stakeholders to collaboratively reduce food loss and waste related to trading practices in Australia.

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1. Introduction

This report is the fourth report of a total of five reports that were written for Project 1.3.7, which aimed at understanding trading practices affecting food loss and waste (FLW) in Australia. Specifically, this report focuses on Phase 3 of the project, in which three potential solutions are investigated for addressing the key issues associated with market imbalances and identified and discussed in Report 3. These issues were: (1) contractual arrangements with demand and/or facilitated overproduction, oversupply and/or FLW; (2) lack of data and/or transparency; and (3) lack of alternative markets.

This report is structured as follows:

Section 2 explores the strengths and limitations of industry codes, particularly the Horticulture Code and the Food and Grocery Code, as a means to address market imbalances and issues with contracting (see Sections 3.1 and 3.2 of Report 3). In this section, the Codes are also compared with the EU *Directive on Unfair Trading Practices* (Directive 2019/633 of the European Parliament and of the Council of 17 April 2019 on Unfair Trading Practices in Business-to-Business Relationships in the Agricultural and Food Supply Chain, 2019) to consider the extent to which they would regulate known unfair trading practices. Conclusions are drawn between Phase 2 (see Report 3) and the extent to which the Food and Grocery Code in particular addresses the key themes noted. As noted in our earlier reports, we use the EU *Directive on Unfair Trading Practices* throughout our research because it provides a clear definition and list of unfair trading practices, unlike in Australia where we do not have a legal definition and set list of practices. We note that what is 'fair' or 'unfair' is partly dependent on cultural context, and so what is considered fair or unfair within Australia may differ from the EU, however the EU context provides a useful example of what practices could be considered unfair and what practices may be considered 'grey' or ambiguous.

Section 3 considers how data transparency could be improved (see Section 3.3 of Report 3) in a bid to reduce overproduction. It provides an overview of the issue of market transparency in Australia and highlights some existing platforms that offer data with respect to the food supply chain in Australia. Following this, two international examples are provided, as used to illustrate what could be done in Australia.

Section 4 investigates the potential of whole crop purchasing (WCP) to create an alternative market (see Section 3.4 of Report 3) and ultimately mitigate FLW due to oversupply.

For reference, the following provides an overview of the other project reports:

- Report 1 provides findings from a review of the Australian context regarding trading practices including: food loss and waste (FLW) in Australia, supply chain characteristics, the regulatory environment, and relevant government inquiries related to either trading practices and/or the food supply chain. It then goes on to provide an overview of trading practices, including defining unfair trading practices and outlining relevant aspects of Australian competition and consumer law. Attention is then given to international and Australian legislation and regulations relating to unfair trading practices in the context of agriculture and the food supply chain.
- Report 2 presents the findings from Phase 1 of the project, whereby a literature review was conducted to map trading practices that contributed to FLW, both internationally and in Australia.
- Report 3 provides findings from Phase 2 of the project, in which interviews were conducted with industry stakeholders in the Australian food supply chain to develop an understanding of relevant trading practices. This report provides an overview of the method and highlights key themes that emerged from the data, including in relation, but not limited, to market imbalances, 'contracts' that require or facilitate overproduction, oversupply and/or FLW, lack of data/transparency,

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and lack of alternative markets. This report concludes by making connections between the themes and issues that emerged during the interviews with the unfair trading practices recognised as per EU *Directive on Unfair Trading Practices* (Directive 2019/633 of the European Parliament and of the Council of 17 April 2019 on Unfair Trading Practices in Business-to-Business Relationships in the Agricultural and Food Supply Chain, 2019). Limitations of this aspect of the project are also outlined within Report 3. It is important to note here that the EU *Directive on Unfair Trading Practices* was used throughout the research because it provides a clear definition and list of unfair trading practices, unlike in Australia where a legal definition and set list of practices does not currently exist. It is recognised however, that what is 'fair' or 'unfair' is partly dependent on cultural context, and so what is considered fair or unfair within Australia may differ from the EU. Nonetheless, the EU context provides a useful example of what practices could be considered unfair and what practices may be considered 'grey' or ambiguous.

- Report 4 delivers the findings from Phase 3 of the project. This report provides a 'deep dive' of three potential solutions that may aid in addressing some of the practices and issues noted in Report 3. Specifically, it (1) explores strengths and limitations of industry codes; (2) considers how data transparency could be addressed; and (3) investigates the potential of whole crop purchasing in mitigating oversupply.
- Report 5 brings together the key insights across Reports 1-4 and provides a summary of the project. Importantly, this final report builds on insights across the entire project to offer recommendations with respect to trading practices and FLW.

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2. Industry codes

The purpose of this 'deep dive' is to consider the extent to which the Horticulture Code (Hort Code) and the Food and Grocery Code (F&GC), in the absence of provisions specifically on 'unfair trading practices' within Australia's current competition and consumer laws:

1. Regulate against unfair trading practices (UTPs) known to exist within the agricultural and food supply chain, in a manner similar to the EU *Directive on Unfair Trading Practices* (EU *Directive on Unfair Trading Practices*).
2. Address the concerns raised by participants in Phase 2 of this project (see Report 3), particularly in relation to market imbalances, including fear of negative consequences, and current practices around 'contracting'.

Of note, Report 1 of this project provides an overview of the EU *Directive on Unfair Trading Practices*, whilst Report 3 make links to the Directive based on insights generated from participants for Phase 2 of this project. For reference, Table 1 summarises the 'black' (prohibited) and 'grey' (prohibited unless agreed) unfair trading practices banned as per EU *Directive on Unfair Trading Practices*. These practices will be referred to throughout this section.

Table 1. EU *Directive on Unfair Trading Practices*

Black unfair trading practices	Grey unfair trading practices
The directive prohibits the following unfair trading practices in any circumstances: 1. payment later than 30 days for perishable agricultural and food products; 2. payment later than 60 days for other agricultural and food products; 3. short-notice cancellations of perishable agricultural and food products; 4. unilateral changes to the terms of the supply agreement by the buyer; 5. payments requested by the buyer that are not related to the sale of an agricultural and food product; 6. payments requested by the buyer for the deterioration or loss of agricultural and food products where such deterioration or loss is not caused by the negligence or fault of the supplier; 7. refusal by the buyer to provide a written confirmation of a supply agreement, despite the supplier's request; 8. misuse of the supplier's trade secrets by the buyer; 9. commercial retaliation actions by the buyer against the supplier if the supplier exercises their contractual or legal rights; 10. transferring costs for examining customer complaints to the supplier's products despite the absence of negligence or fault on the part of the supplier.	The directive prohibits the following unfair trading practices unless the supplier and the buyer have agreed to it in clear and unambiguous terms: 1. the buyer returns unsold agricultural and food products to the supplier without paying for those unsold products or without paying for the disposal of those products, or both; 2. the supplier is charged payment as a condition for stocking, displaying or listing its agricultural and food products, or of making such products available on the market; 3. the buyer asks the supplier to pay for discounts on agricultural and food products sold by the buyer as part of a promotion; 4. the buyer asks the supplier to pay for the advertising, 5. or marketing by the buyer of agricultural and food products; 6. the buyer charges the supplier for staff for fitting out premises used for the sale of the supplier's products.

Source: (Directive 2019/633 of the European Parliament and of the Council of 17 April 2019 on Unfair Trading Practices in Business-to-Business Relationships in the Agricultural and Food Supply Chain, 2019).

Of particular note is the finding from Phase 2 of this project (see Report 3, Section 4), which suggested 'unilateral changes to the terms of the supply agreement by the buyer' and 'the buyer returns unsold agricultural and food products to the supplier without paying for those unsold products or without paying for the disposal of those products, or both' were key practices specifically contributing to FLW in Australia. However, it is unclear if the way these practices actually occur within the Australian food supply

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chain would result in them being deemed 'unfair' in the EU context and whether it also would be considered as such should Australia introduce provisions that define and address unfair trading practices.

This section is structured as follows. First, an overview of the Hort Code and F&GC are provided. Then, the extent to which these Codes regulate against UTPs as per the EU *Directive on Unfair Trading Practices* is outlined. Drawing on this information, the conclusion outlines the ability of the Codes to address the key themes noted through Phase 2 of this project, namely market imbalances, including the fear of negative consequences; contractual arrangement, including grocery supply agreements and sales and return agreements; lack of data/transparency.

2.1 Overview of Codes

For context, an overview of the Hort Code and F&CG are provided below.

2.1.1 Food and Grocery Code

The Food and Grocery Code (F&GC) is an industry code under the CCA. It sits within the remit of Treasury and is enforced by the Australian Competition and Consumer Commission (ACCC). The F&GC aims to "regulate standards of business conduct", "ensure transparency and certainty in commercial transactions", "minimise disputes" by providing a dispute resolution process, and "promote and support good faith in commercial dealings" between retailers and those who supply grocery goods.[1] At the time of writing this report, the F&GC is the only code of conduct administered by the ACCC that, whilst prescribed, is voluntary and applies by election. However, in light of Dr Craig Emerson's *Independent Review of the Food and Grocery Code* in 2024 (which was required to the current 2015 version of the F&GC sunsetting in 2025) and the resulting exposure draft *Competition and Consumer (Industry Codes— Food and Grocery) Regulations 2024* ((which was before parliament at the time of writing this report), the F&GC is set to become mandatory with significant, enforceable penalties for non-compliance. Further similarities and differences between the current F&GC (2015 version) and the exposure draft regulation (labelled for hereon in as the draft FG&C, with explicit recognition that the revised/final FG&C may change post the publication of this report) include:

- The draft F&GC provides greater clarity on what business are covered by the code. In the draft F&GC, the term "large grocery business" is added, which refers to a large retailer or a large wholesaler with certain thresholds. In a similar vein to the current F&GC, the draft FG&C seeks to regulates the conduct of large grocery businesses towards their suppliers, including lawful dealings, good faith, and specific requirements for grocery supply agreements (GSA).
- The draft F&GC includes a definition of retribution and a section specifically on this topic.
- The draft F&GC includes additional protections for suppliers who supply fresh produce and outlines how large grocery businesses must communicate requirements, standards, or quality specifications for grocery products.
- The draft F&GC largely places the onus on the supermarkets to prove they have acted reasonably with respect to changes to agreed terms in the GSA. The term "reasonable in the circumstances" is frequently used with reference to large grocery businesses proving that any changes are reasonable when considering 'the benefits, costs and risks (if any) for the supplier and for the large grocery business", and the proposed change "is for a purpose that benefits both the supplier and the large grocery business". Further to this, in the event the large grocery business seeks to rely on an exception (to alter

[1] Part 1, *Competition and Consumer (Industry Codes – Food and Grocery) Regulations 2015* Schedule 1, Food and Grocery Code of Conduct.

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the GSA), the draft F&GC requires the large grocery business to prove on the "balance of probabilities" that the variation is reasonable.

- Like Clause 8 of the current F&GC, Clause 19 of the draft F&GC sets out the matters to be covered by the GSA. In addition to delivery, circumstances in which grocery products can be rejected, details related to payment, quantity and quality requirements and circumstances in which the agreement may be terminated are also covered. The draft F&GC, unlike the current F&GC, requires large grocery businesses to exercise due care in forecasting the amount of fresh produce to be supplied under a GSA (see Clause 19 (7)). Here, it should be noted that with reference to Clause 19 (7), Clause 19 (8) clarifies that forecasts do not need to be included in the GSA for fresh produce. Further to this, it is unclear from the draft F&GC how due care is measured with respect to obtaining the data (to forecast), and whether there are any separate provisions (outside of the Code) that are being considered to protect growers in sharing market data.
- The draft F&CG departs significantly from the current F&GC with respect to dispute resolution process. Under the draft F&GC, Division 5 is dedicated to the new dispute resolution processes which involves investigations by a Code Mediator and provisions relating to Alternative Dispute Resolution (ADR). The new code mandates that GSAs must include clauses related to mediation to resolve disputes and may include arbitration. The intention with these provisions is to encourage the reporting of issues in a manner which addresses concerns around fear of retribution.
- Relatedly, the draft F&GC, in a significant variation to the current F&GC, requires the appointment of a Code Mediator and a Code Supervisor to handle complaints and review activities. The Code Mediator handles complaints, investigates issues, and makes recommendations for remedies, whilst the Code Supervisor is appointed to conduct independent reviews of the Code Mediator's processes. Their functions include overseeing the Code Mediator's work, conducting independent reviews upon request, and reporting on their findings.
- Like the current F&GC, the draft F&GC requires that the Code be reviewed, as per ministerial directive. The review must "assess the impact of the Code in improving commercial relations between retailers, wholesalers and suppliers; and start before the end of the period of 5 years starting at the commencement of this section".

Here, it is also important to note key definitions of the F&GC (taken from the draft code):

- A supplier means "means a person carrying on (or actively seeking to carry on) a business of supplying grocery products for retail sale to consumers by another person (whether or not that other person is the person supplied)". Further to this, "a person who is a wholesaler may be a supplier. However, a large wholesaler may not be a supplier".
- A "large retailer" and "large wholesaler" "as set out in those entities' annual accounts, prepared in accordance with generally accepted accounting principles, exceeds $5 billion for the previous financial year"
- A "wholesaler" means "a corporation to the extent that it carries on a business of purchasing grocery products from suppliers for the purpose of resale to a person carrying on a supermarket business in Australia".
- A 'retailer" means "a corporation: (a) to the extent that it carries on a supermarket business in Australia; and (b) to the extent that it carries on a business of purchasing grocery products from suppliers for the purpose of resale to a person carrying on a supermarket business in Australia.

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2.1.2 Horticulture Code

The Horticulture Code of Conduct (Hort Code), like the F&GC is an industry code under the CCA. Unlike the F&GC, it sits within the remit of the Department of Agriculture, Fisheries and Forestry, however, it is also enforced by the ACCC. The Hort Code regulates trade between growers and traders and aims to promote transparency and fair trade. Pursuant to the code, a trader is either an agent or a merchant:

- An agent sells produce on behalf of a grower to a person for a commission or fee; and
- A merchant purchases produce from a grower and resells but excludes merchants purchasing for the purpose of exporting or retailing.

Due to its mandatory nature, the Hort Code applies to all transactions that meet the requirements set out in Clause 3 of the Hort Code (*Competition and Consumer (Industry Codes—Horticulture) Regulations 2017*, Clause 3). However, several issues have been raised with the Hort Code by stakeholders within the supply chain including concerns with respect to compliance. As noted by Fresh Markets Australia, for example, compliance with the Hort Code can be costly and despite the code being mandatory, applies only where growers and wholesalers have an executed Horticulture Produce Agreement (HPA) (Fresh Markets Australia, n.d). Clause 12 of the Hort Code requires a HPA, however anecdotal evidence indicates that many growers refuse to sign and be bound by the code, and as such, wholesalers are often in breach of the code for trading with growers in the absence of a HPA (Fresh Markets Australia, n.d).

A review of the Hort Code is forthcoming, however, at the time of writing this report, a date for the review has not yet been set.

2.1.3 Coverage of the Codes

Whilst the Hort Code and F&GC cover a number of relationships within the horticultural and grocery food supply chain, there are a number of relationships that are not explicitly governed by either Code and/or it is unclear whether these relationships are governed by a code. For context, the ACCC offers a useful summary of when the Hort Code is applied.

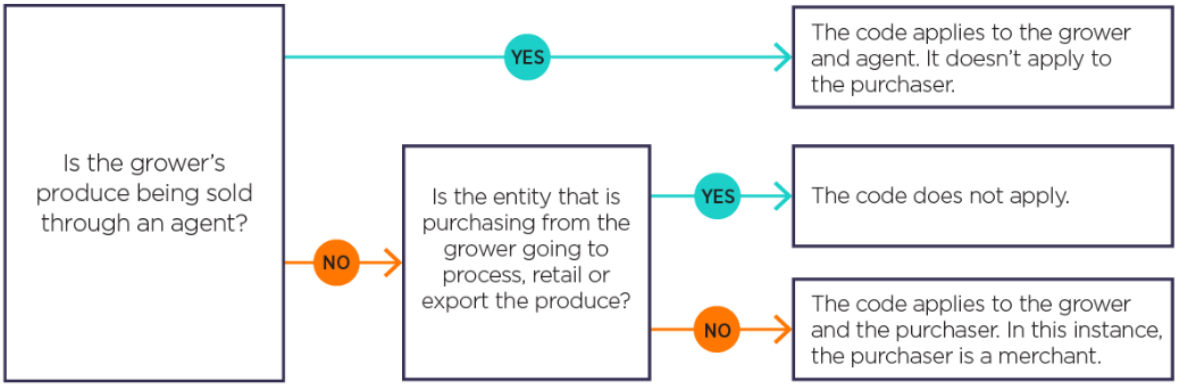

Figure 1. Application of Hort Code (ACCC, 2023a).

As Figure 1 illustrates, the Hort Code applies to relationships between growers and agents and merchants, the latter of which could also be viewed as a wholesaler. However, as per the draft F&GC, the size of the wholesaler would dictate whether the Hort Code or F&GC would apply to the grower-merchant/wholesale relationship. Where the Hort Code applies between the grower and

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merchant, the F&GC would then cover the relationships between a merchant (as a wholesaler) and a large retailer. Growers supplying directly to a retailer are covered by the F&GC.

The ACCC (ACCC, 2023a) provides some additional information with respect to "growers who supplement their produce with produce sourced from another grower" (termed aggregator here). In such instances, the ACCC states: "Whether the horticulture code applies depends on what you do with the other grower's produce. If you sell the produce on behalf of the other grower but don't take ownership of the produce, you are an agent under the code. If you take ownership of the produce and on-sell it in its unprocessed form, then you are a merchant under the code". This would suggest that the Hort Code applies to the grower – aggregator relationship, but some participants in Phase 2 of this project (see Report 3) noted this was somewhat unclear within the industry. The ACCC also provides some additional information in relation to a "grower whose produce goes through a packing house", noting that the way in which the Hort Code applies depends "on the arrangement between you and the packing house, and whether or not the packing house is a different legal entity".

While relationships between food processors/manufacturers and large retailers are governed by the F&GC, it is not explicitly clear how – or if – relationships between growers and food processors/manufacturers would be governed, and by which code (e.g., it is unclear if they fit the definition of a wholesaler as per the F&GC). Relationships with companies dealing with exports (or companies based overseas) are not covered by either Code (NB. The F&GC explicitly notes large wholesalers and retailers must be operating within Australia). Neither Code considers distribution/transport/cold chain, which is important with reference to Section 2.2.5 below regarding risk of loss and deterioration.

2.2 Comparing the Codes with the EU Directive

Using the EU *Directive on Unfair Trading Practices* Directive (Directive 2019/633 of the European Parliament and of the Council of 17 April 2019 on Unfair Trading Practices in Business-to-Business Relationships in the Agricultural and Food Supply Chain, 2019) the following provides a comparison between the prohibited EU UTPs, the practices under the current Food and Grocery Code (current F&GC), the practices under the exposure draft of Food and Grocery Code (draft F&GC) and the practices under the Hort Code.

2.2.1 Payments

The EU Directive prohibits payments later than 30 days for perishable agricultural and food products and payments later than 60 days for other agriculture and food products. Comparatively, the current F&GC does not have an express prohibition on the timeframe in which payments must be made. Pursuant to Clause 12 of the current F&GC and Clause 22 of the draft F&GC, payments to suppliers are to be delivered in line with the GSA. The terms which should be included in the GSA include within the timeframe set out in the agreement; and within a reasonable time after receiving the supplier's invoice for the products. However, no clarity is given as to what is a 'reasonable time', including in the draft F&GC. Of note, Clause 12 (1) of the current F&GC and Clause 22 (1) of the draft F&GC states that "a large grocery business must pay a supplier for *all* grocery products *delivered and accepted* in accordance with a grocery supply agreement [emphasis added]".

Similarly, the Hort Code does not set out a specific timeframe for payment. However, Clauses 12, 13 & 15 set out the requirements of a HPA and Clauses 16, 17 & 18 set out what must be included. Specifically, Clause 16 (l) states that "the payment period, for the purposes of subclause 35(2), for the delivery of horticulture produce" must be included in the agreement. There is also Clause 26 (2) which states that "[t]he payment must be made within the period specified in the HPA". Of note here, Clause 30 requires that "ownership of horticulture produce remains with the grower until the agent sells the produce". The notion of ownership is particularly interesting in the context of the Hort Code, as illustrated in Figure 2.

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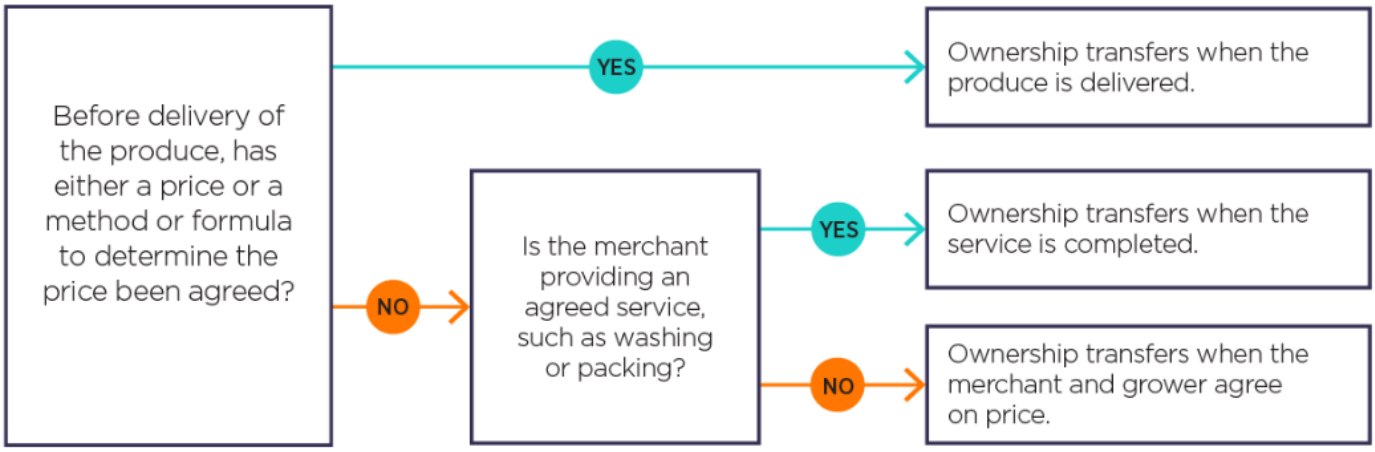

Figure 2. Ownership as per the Hort Code (ACCC, 2023a).

2.2.2 Short notice cancellation of orders

The EU Directive prohibits short-notice cancellations of perishable agri-food products. Under the current and draft F&GC there is no express prohibition on short-notice cancellations. Clause 7 of the current F&GC and Clause 19 of the draft F&GC outlines that dealings are to be made via a GSA and it must be in writing and further, all dealing are pursuant to Clause 6B of the current F&GC and Clause 17 of the draft F&GC, which outlines an obligation to deal with suppliers lawfully and in good faith.

The Hort Code has no express prohibitions related to the short notice cancellation of orders however, Clause 16 (see (c) and (d)) outlines that dealings are to be via the HPA including variations to agreements, rejections, and timeframes.

2.2.3 Unilateral contract changes

The EU Directive prohibits unilateral contract changes by the buyer. In both the current and draft F&GC, a large grocery business "must not vary a grocery supply agreement without the written consent of the supplier concerned" (see Clause 9 of the current F&CG and Clause 20 of draft F&GC). Whilst this may seem like a strong provision, it does not apply if the agreement "provides expressly for the retailer or wholesaler to make the variation… and sets out clearly the changed circumstances in which the variation can be made". Like the F&GC, under the Hort Code, Clause 16 requires that any changes to the HPA be set out in the agreement including the instances for varying the agreement (Clause 16 (f)). Thus, while the clauses in both the F&GC and Hort Code suggest alignment with the EU Directive, the additional clauses, can in effect, allow unilateral changes.

However, both the current and proposed F&GC set out terms relating to good faith, which could notionally address situations where a retailer or wholesaler varies an agreement. These good faith provisions require, among other things, that variations be made in situations where "the retailer or wholesaler has acted honestly"; "retailer or wholesaler has not acted arbitrarily, capriciously, unreasonably, recklessly or with ulterior motives"; and "the retailer's or wholesaler's trading relationship with the supplier has been conducted in recognition of the need for certainty regarding the risks and costs of trading, particularly in relation to production, delivery and payment".

Of note however, retrospective changes are not allowable under either Code.

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2.2.4 Payments not related to specific transactions

The EU Directive prohibits payments not related to a specific transaction. The current and draft F&GC prohibits several types of payments as a condition of being a supplier (see Division 3 of the current F&GC and Division 4, Subdivision B of the draft F&GC). This includes payments for: (1) shrinkage; (2) wastage; (3) as a condition of being a supplier; (4) payments for better positioning of groceries, (5) payments for ordinary business activities; and (6) funding of promotions. However, under each of the relevant clauses, both the current and draft F&GC include provisions that make such payments allowable. This includes if the (a) GSA "expressly provides for the payment"; (b) "provision of the agreement is an allowable contrary provision"; (c) "payment is made in accordance with the agreement"; and (d) "payment is reasonable in the circumstances". Of particular note here too, is that unlike the current F&GC, the draft F&GC includes a clause (Clause 29) relating to incentive schemes which applies to a buying team or category manager in large grocery business, and stipulates that these schemes must be in line with the intentions and obligations under the Code. This comes after the ACCC took action against both Coles and Woolworths for schemes designed to elicit payments from suppliers. The case against Coles resulted in a $10 million fine for unconscionable conduct (ACCC, 2014). Notably, the case against Woolworths was dismissed (ACCC, 2016), meaning it did not meet the threshold for unconscionable conduct.

Clause 11 of the Hort Code sets out the terms of trade which includes (3) (b) namely, "whether the payment of any commissions, fees and extra costs is contingent on the sale of a grower's horticulture produce or any other event or kind of event". Further, Clause 17 sets out the additional matters that are to be specified by the agents including (b) "whether payment by the grower of any commissions, fees and extra costs is contingent on the sale of the horticulture produce or any other event or kind of event".

Thus, while the clauses in both the F&GC and Hort Code suggest alignment with the EU *Directive on Unfair Trading Practices*, the additional clauses can allow these payments.

2.2.5 Risk of loss and deterioration transferred to the supplier

The EU *Directive on Unfair Trading Practices* prohibits the risk of loss and deterioration being transferred to the supplier. As noted in the previous section, the current and draft F&GC prohibits the retailer or wholesaler from requiring suppliers to pay compensation for shrinkage or wastage, however, subsequent clauses can make such payments allowable. Of note too, is the clause related to payments to suppliers (see Section 2.2.1) in that "a large grocery business must pay a supplier for all grocery products *delivered* and *accepted* in accordance with a grocery supply agreement [emphasis added]". This means suppliers bear the risk should loss and/or deterioration occur during transport. The word 'accepted' is crucial here to, in that the supplier also bears the risk related to delays processing orders at distribution centres or stores. Notably, both the current and draft F&GC state that the large grocery business can reject the produce "within 24 hours after the produce is delivered", which is ample time for the quality of highly perishable products to deteriorate if appropriate cold chain or handling practices are not performed.

There are no specific clauses related to loss and deterioration within the Hort Code, however, given the complex ownership arrangements (see Figure 2), this would not be relevant for grower-agent relationships. Theoretically however, the risk of loss and deterioration being transferred to the supplier would be relevant to the merchant relationship, particularly in instances where the merchant is providing an agreed service (see Figure 2). In these situations, ownership is only transferred when the service is completed.

2.2.6 Refusal of a written confirmation of a supply agreement by the buyer, despite request from the supplier

The EU *Directive on Unfair Trading Practices* prohibits the refusal of a written confirmation of a supply agreement by the buyer, despite request from the supplier. In line with the Directive, both the Hort Code (Clause 12, see also Clause 10 and 11) and the current (Clause 7) and draft F&GC (Clause 18) offers a provision to prohibit this UTP stating that trade can only occur if the GSA or HPA is in writing. In relation to the F&GC, of particular note is the sub-clause that "in clear terms, any quantity and quality

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requirements relating to the grocery products". What is not made clear in the F&GC, and which is also important in the context of unilateral changes, is at what point an 'agreement' is made to which the code applies, particularly with reference to perishable horticulture goods (i.e., is it when a large grocery business directs a grower to grow a specific amount, or when the business confirms the quantity of goods they will take).

2.2.7 Misuse of trade secrets by the buyer

The EU *Directive on Unfair Trading Practices* prohibits misuse of trade secrets by the buyer. Similarly, the F&GC prohibits the misuse of confidential information (if disclosed to the large grocery business) (Clause 25 of the current code, Clause 38 of the draft code). Of particular note, these clauses include pricing information disclosed by the supplier to the large grocery business, whereby the business "must not use that information other than for a purpose for which it was disclosed". The extent to whether this would prevent a large grocery business sharing pricing information in a bid to negotiate lower prices amongst suppliers is not clear. In addition to these clauses, Clause 24 of the current code and Clause 37 of the draft code requires that large grocery businesses "must respect" the IP rights of suppliers, though this is specifically in relation to branding, packaging, and advertising.

The Hort Code is silent on IP and confidential information outside of the provisions that related to trade secrets.

2.2.8 Commercial retaliation by the buyer

The EU Directive prohibits commercial retaliation by the buyer. Both the Hort Code and F&GC prohibit commercial retaliation. Under current and draft F&GC, large grocery businesses are obligated to dealing with suppliers "lawfully and in good faith" (see 6B of current code and Clause 17 of draft code). In determining whether this clause has been met, the Code stipulates this can include "whether the retailer or wholesaler has not acted in a way that constitutes retribution against the supplier for past complaints and disputes". Retribution has been defined within the draft Code (see Clause 8). As per the Code, retribution includes any of the following actions:

a. "delisting a grocery product of the supplier;
b. requiring the supplier to make excessive contributions towards promotional or marketing costs for the supplier's grocery product;
c. rejecting fresh produce from the supplier;
d. changing the location of the supplier's grocery product in store or online to the detriment of the supplier;
e. delaying restocking the supplier's grocery product in store or online;
f. varying, terminating, or electing not to renew an agreement with the supplier for the supply of an own label product;
g. reducing the volume of stock ordered from the supplier;
h. varying, terminating, or electing not to renew a grocery supply agreement with the supplier".

However, Clauses 8(2) outlines that an action is not considered retribution if "(a) the action is taken for genuine commercial reasons; and (b) the action is not taken because the supplier exercised, or indicated that it will or may exercise, a right under this Code against the large grocery business; and (c) the action is not taken because the supplier was, or may have been, able to exercise a right under this Code against the large grocery business. Additionally, as per Clause 8(4), the evidential burden on proving an action was not retribution (in line with Clause 8(2) lies with the large grocery business.

A new specific section on retribution has also been included in the draft F&GC (Clause 30, see also Clause 31 on policies and procedures to protect against retribution). This also includes substantial changes to dispute resolution process (see Division 5), however, complaints do need to go through a Code Arbiter (current term)/Mediator (draft term), who is employed by the large grocery business. Both the current and draft F&GC stipulate that the Arbiter/Mediator "must not disclose the supplier's identity to

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the large grocery business, except with the express consent of the supplier" and "must observe any confidentiality requirements relating to information disclosed or obtained in dealing with or resolving a complaint".

Under the Hort Code, Clause 8 requires traders to deal with growers in good faith. Further, Clause 9 requires that agreements must not contract out of the obligation for good faith.

Of note here is that despite the good faith provisions in both codes, the structure of the market and the market power may prevent good faith provisions and dispute resolution processes from operating to their full potential as a means to address UTPs, as was echoed by participants in Phase 2 of this project (see Report 3).

2.2.9 Transferring the costs of examining customer complaints to the supplier

The EU *Directive on Unfair Trading Practices* prohibits transferring the costs of examining customer complaints to the supplier. Both codes are silent on complaints outside of the agent/merchant/large grocery business and grower/supplier relationship. It is likely that customer complaints against growers and suppliers (as businesses), would fall within the scope of the ACCC's purview.

2.2.10 Return of unsold products

The EU *Directive on Unfair Trading Practices* permits the return of unsold products, only if it has been agreed to by both parties. Both the F&GC (current and draft) and the Hort Code do not have explicit clauses around this. However, as previously noted, the Hort Code's Clause 30 requires that "ownership of horticulture produce remains with the grower until the agent sells the produce". Thus, if an agent does not sell a product, the Code suggests this can be legitimately returned to the grower. Under the F&GC, as noted in Section 2.2.4, payments for wastage are technically prohibited, unless, in essence, agreed by both parties. Of note, is that wastage is defined as "grocery products that are unfit for sale". This raises questions about at what point a product becomes 'unfit' for sale, and how this would play out with sales and return agreements, including those within the bakery sector (see Report 3).

2.2.11 Payment of the supplier for stocking, display and listing or promotion, or marketing or advertising.

The EU *Directive on Unfair Trading Practices* permits payment of the supplier for stocking, display, and listing only if it has been agreed to by both parties. As previously noted in Section 2.2.4, the F&GC prohibits payments for better positioning of groceries, however subclauses allow for such payments under certain conditions. Similarly, Clause 18 of the current Code and Clause 28 of the draft Code prohibits the requirement of suppliers to directly or indirectly fund promotions, but again, this is allowable under certain conditions. There is also a clause (17 of current; 25 of draft) which prohibits payments as a condition of being a supplier, again however, this is allowable under certain conditions. Given the Hort Code does not apply to retail transactions, it is not surprising that it is silent on activities such as stock placement, promotion, marketing, and advertising.

2.2.12 Payment of the supplier for staff of the buyer, fitting out premises

Under the EU *Directive on Unfair Trading Practices,* payment of the supplier for staff of the buyer to fit out premises is considered a grey UTP. Whilst there is minimal information on when this type of practice is likely to occur, the payment for a fit out can only be required if it is "agreed beforehand in a clear and unambiguous manner" (European Commission, 2024a). The Food and Grocery Code is silent on fit out, but it likely falls within the scope of Clause 17 of the current code and Clause 27 of the draft code which prohibits payments for retailer's or wholesaler's business activities (or as per the wording of the draft Code "payments for ordinary business activities). This "grey" UTP is unlikely to apply to transactions involving the Hort Code, therefore it is not surprising that this provision is not referenced.

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2.3 Analysis and future directions

The following table provide a quick snapshot to highlight which unfair trading practices as per the EU Directive are addressed by the F&GC and the Hort Code. In the absence of a clause in the F&GC or Hort Code explicitly aligned with the EU Directive, it has been listed as allowable (though some practices are not technically relevant to Hort Code, as noted where relevant).

Table 2. Alignment between F&GC, Hort Code, and EU Directive

EU Directive on Unfair Trading Practices	Current or draft F&GC	Hort Code
'Black' trading practices *The directive prohibits the following unfair trading practices in any circumstances:*		
1. Payment later than 30 days for perishable agricultural and food products	Allowable	Allowable
2. Payment later than 60 days for other agricultural and food products	Allowable	Allowable
3. Short-notice cancellations of perishable agricultural and food products	Potentially allowable	Allowable
4. Unilateral changes to the terms of the supply agreement by the buyer	Prohibited	Prohibited
5. Payments requested by the buyer that are not related to the sale of an agricultural and food product	Prohibited	Prohibited
6. Payments requested by the buyer for the deterioration or loss of agricultural and food products where such deterioration or loss is not caused by the negligence or fault of the supplier	Prohibited	Allowable
7. Refusal by the buyer to provide a written confirmation of a supply agreement, despite the supplier's request	Prohibited	Prohibited
8. Misuse of the supplier's trade secrets by the buyer	Prohibited	Allowable
9. Commercial retaliation actions by the buyer against the supplier if the supplier exercises their contractual or legal rights	Prohibited	Prohibited
10. Transferring costs for examining customer complaints to the supplier's products despite the absence of negligence or fault on the part of the supplier	Allowable	N/A
'Grey' unfair trading practices *The directive prohibits the following unfair trading practices unless the supplier and the buyer have agreed to it in clear and unambiguous terms:*		
1. The buyer returns unsold agricultural and food products to the supplier without paying for those unsold products or without paying for the disposal of those products, or both	Potentially allowable	Allowable
2. The supplier is charged payment as a condition for stocking, displaying or listing its agricultural and food products, or of making such products available on the market	Prohibited	N/A
3. The buyer asks the supplier to pay for discounts on agricultural and food products sold by the buyer as part of a promotion	Prohibited	N/A
4. The buyer asks the supplier to pay for the advertising of agricultural and food products	Prohibited	N/A
5. The buyer asks the supplier to pay for the marketing of agricultural and food products	Prohibited	N/A
6. The buyer charges the supplier for staff for fitting out premises used for the sale of the supplier's products	Prohibited	N/A

It is important to caveat that while this table presents an overview for the purposes of a quick summary, as outlined in Section 2.2, the ability of the Codes to address these UTPs is considerably nuanced. Of particular note is that:

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1. While both the F&GC and Hort Codes have clauses related to payments, there is not clear stipulation around what is an acceptable payment term; and
2. For every UTP noted as prohibited under the F&GC, there are sub-clauses that make these allowable in certain circumstances.

In addition, the key themes identified in Phase 2 of this project (see Report 3) and the above comparison with the EU approach suggest that the F&GC does not adequately deal with issues related to contracts raised by participants. This includes sales and return agreements, which were linked in Report 3 to the UTP of the 'buyer returns unsold agriculture and food products to the supplier without paying for those unsold products or without paying for the disposal of those products'. Further to this, while unilateral changes to contracts are technically prohibited under the F&GC, the sub-clauses can make these allowable if both parties agree. Given the known market imbalances particularly within the grocery retail sector – which was also identified in Report 3 as a significant cause of UTPs contributing to FLW – the likelihood of suppliers not agreeing to these provisions within grocery supply agreements is limited.

With respect to market imbalances specifically, theoretically, both Codes should govern this, as both ultimately seek to ensure fair trade, underpinned by good faith. In a similar vein, theoretically, both Codes prohibit commercial retaliation, with changes to the draft F&GC outlining new measures in a bid to address the fear of retribution. The extent to which these measures will actually address market imbalances and relatedly the fear of retribution remains to be seen. To illustrate this point, the new Code Mediator in the draft F&GC appears to be the same as the current code's Code Arbiter, and given this role is paid for by the retailers, this may continue to deter some suppliers from reporting for fear of retribution. Further to this, whilst the retailer has the onus of proving a behaviour listed as retribution was not retribution because of a legitimate commercial reason, under the draft F&GC (and as noted by a participant in Phase 2 – see Report 3), the sheer amount of data retailers have available means retribution can be positioned as a 'legitimate' commercial reason. However, the change to make the F&GC mandatory and the sizeable penalties involved for breaching the code may overcome some these limitations.

Finally in relation to the key theme of lack of data and/or transparency noted in Report 3, while this is not explicitly listed as an UTP as per the EU *Directive on Unfair Trading Practices*, the draft F&GC contains a new provision in relation to forecasting. Specifically, it mandates that due care must be exercised with respect to forecasting the amount of fresh produce to be supplied under a grocery supply agreement. Crucially, significant penalties can result should this not occur. It is important to note, however, that this provision does not require a forecast to be included in the agreement. The extent to which this may address the lack of data and/or transparency, and the interrelated issues noted in Report 3, remains to be seen. As it stands, the current F&GC, under the good faith provision, does prevent a retailer from acting "with ulterior motives", amongst others, and that the relationship must be "conducted in recognition of the need for certainty regarding the risks and costs of trading, particularly in relation to production, delivery, and payment", which theoretically address concerns raised by participants in Phase 2. However, as noted above, market imbalances, coupled with the fear of retribution, likely limits the effectiveness of these provisions.

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3. Data transparency

In the context of the food supply chain, governmental reports and literature suggests that improving data transparency, including data asymmetry, could mitigate some of the potential impacts of unfair trading practices (UTPs), and help to ensure a sustainable and competitive market (Emerson, 2024, p. 67 See Recommendation 8; see also, Pulker et al., 2018). Further to this, research also suggests that "better information sharing and collaboration could improve forecasting accuracy, avoid overproduction and reduce food waste" (Bradshaw & Wentworth, 2024, p. 32). One academic has even gone as far as to suggest that information sharing could be the "holy grail" for FLW (Eriksson, cited in Bradshaw & Wentworth, 2024). Crucially, the lack of data and/or transparency emerged in Phase 2 of this project (see Report 3) as a key theme, in that participants viewed the lack of data and/or transparency as being a contributing factor to FLW in Australia.

For the purposes of this section, transparency is defined as "access to non-distorted, factual, relevant, and timely information about supply chain products" (Astill et al., 2019, p. 240; Wognum et al., 2011). Implicit in this definition is the requirement that the available data be "relevant, accurate, factual, reliable, timely, and available in an appropriate quantity. Moreover, quality information must be readable, while information exchange must be reasonable and properly arranged" (Wognum et al., 2011, p. 65). Currently, access to data within the food supply chain in Australia is somewhat limited, with many participants in Phase 2 (see Report 3) noting that while retailers have access to a wealth of data, the information growers have is lacking.

For the purpose of this section, we focus on market transparency in the food supply chain through improvements to data transparency and sharing. The term market transparency is used within this context to refer to all types of data within the market for agriculture and food supply. We note that there is a wealth of literature that focuses on data for the purpose of food traceability. Whilst this is relevant to the food supply chain and issues of data transparency, it was not the focus of our investigation (Bastian & Zentes, 2013; Damoska Sekuloska & Erceg, 2022; see also Gallagher, 2022).

In Phase 2 of this research project (see Report 3), participants noted issues within Australia's current food supply chain and an overall lack of data sharing and transparency. In summary, issues raised included:

- Access to data about the market
- Cost to access data
- Lack of data on price
- Lack of data on crop size and crop locations (i.e., what is in the market?)
- Data on logistics
- Supermarket data on product sales
- Wholesale data on product sales
- Price information
- Data on waste.

The issues raised within Phase 2 were not unique to this project and reflected the broader concern with respect to market transparency and the potential negative impacts on the market's ability to function competitively (e.g., see Market Transparency in the EU's Food Supply Chain, 2019, p. 5).

In response to these issues around transparency and sustainable competitive markets, regulation, codes, and practices (that set minimum standards for data transparency in the food supply chain) have been considered in Australia and internationally, specially

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within the European Union (EU). According to the European Commission's economic analysis, *Market transparency in the EU's food supply chain*, "competitive markets require free and widely available information" as well as: "a large number of buyers and sellers…a homogeneous product, and full freedom of entry and exit of operators into the market" (Market Transparency in the EU's Food Supply Chain, 2019, p. 5).

The economic analysis, which details the history and development of strengthening market transparency within the EU, notes that the benefits to achieving market transparency include:

- Increased operator efficiency and a better functioning of the market
- Better risk management
- Increased trust between operators
- Redress unfair trading practices and asymmetries in bargaining power
- Better policy making that allows for an evidence-based regulatory approach
- Improved enforcement of competition rules
- Increased knowledge basis for analysis and research
- Informed consumer choice
- Environmental sustainability and food waste (Market Transparency in the EU's Food Supply Chain, 2019, pp. 31–48).

In order to better understand how – and within what regulatory framework – data transparency could be implemented and managed within the Australian regulatory context, this section outlines the history and context of the issue relating to data transparency in the food supply chain and the regulatory framework within Australia. Examples from overseas, including the EU model and other product specific models such as the livestock industry within the United States (US), are also outlined. In doing so, this section ultimately seeks to explore what could be done to implement, manage, and improve data transparency within the Australian food supply chain, with our current legal framework; and what kind of data could, or should, be shared.

3.1 History and context: The issue of market and data transparency in Australia

Under current Australian law, there are no specific provisions which requires data transparency in the food supply chain.

Of note however, under Part VIIA of the *Competition and Consumer Act 2010* (CCA), the Treasurer can direct the ACCC to hold a price inquiry into a particular matter. As noted by the ACCC, a "price inquiry allows the ACCC to use its compulsory information-gathering powers to collect information from the relevant parties subject to the inquiry" (ACCC, 2024b). In other words, organisations can be forced to hand over data pertaining to the inq uiry's terms that would not usually be made available and/or accessible to outside parties. The ACCC can bring proceedings in the Federal Court against organisations for alleging breaching the CCA. This could include, for example, in relation to misleading and deceptive practices, unconscionable conduct, and unfair contract terms as per Australian Consumer Law (ACL), or misuse of market power as per competition law (see Report 1 for an overview). As noted in Report 1, Australia does not currently have laws around unfair trading practices, which limits the ACCC's ability to launch proceedings where practices are 'unfair', but not to the extent that they would be considered 'unconscionable'.

In the context of data availability and transparency more broadly, in 2022, the Australian Government introduced the *Data Availability and Transparency Act 2022* (Cth). This Act sets out new practices for sharing Australian Government data only, and

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therefore does not place stipulations on industry. In particular, this Act establishes the DATA Scheme, which seeks to increase the availability and use of data. The scheme could potentially be useful as a route to publish and make available data within the food supply chain under the various state and territory agricultural bodies, but it would require a more detailed investigation that was beyond the scope of this project.

Neither the Hort Code nor the F&GC stipulates provisions around data transparency that would address the concerns of participants noted in Phase 2 of this project (see Report 3). However, as mentioned, the exposure draft to the proposed changes to the F&GC (as outlined in Section 2.2 of this report and specifically 2.3) stipulates that a "large grocery business must exercise due care in forecasting the amount of fresh produce to be supplied under a grocery supply agreement" (Australian Government, 2024). Yet, this draft provision also states that this "does not require a forecast to be included in an agreement that relates to the supply of fresh produce" (Australian Government, 2024). In relation to the Hort Code, part of the Code does require various data between agents and/or merchants and the grower to be captured. These statements are not currently, but theoretically could be, used as a basis to contribute to a wider data pool for the purpose of market transparency.

Finally, issues related to market transparency in the context of the food supply chain have been raised as a result of several recent inquiries related to the food supply chain in Australia (see Report 1 for an overview of inquiries relevant to this project) (Commonwealth Parliament, 2024; Emerson, 2024; Perishable Agricultural Goods Inquiry, 2020). Whilst there are many aspects to transparency, data related to price transparency within the food supply chain has attracted the most attention in recent inquiries[2] including the Perishable Agricultural Goods Inquiry, Independent Review of the Food and Grocery Code of Conduct, the Senate Select Committee on Supermarket Prices, and Supermarkets Inquiry (which has not been finalised at the time of writing this report) (ACCC, 2024a; Commonwealth Parliament, 2024; Emerson, 2024; Perishable Agricultural Goods Inquiry, 2020). Broadly, the points raised in these inquiries echo the concerns raised by participants in Phase 2 of this project (see Report 3). Outlined briefly below are key points raised in the Perishable Agricultural Goods Inquiry 2020, the Independent Review of the Food and Grocery Code 2024, and the Senate Select Committee on Supermarket Prices.

Perishable Agricultural Goods Inquiry

Issues related to data transparency, specifically, lack of transparency in relation to price and non-price factors was reported as an example of harmful behaviour in the final report of the Perishable Agricultural Goods Inquiry. According to the report, horticulture producers have "no forward price or contract certainty, as contracts or supply agreements are usually negotiated after planting must commence, meaning they regularly grow crops without a guaranteed buyer or price". The ACCC made several recommendations as a result of their inquiry, including to "explore measures to increase price transparency in perishable agricultural goods industries, in order to increase competition in those industries". Following on from this inquiry, government funding was given to organisations to support platforms for transparency, including Fresh Markets Australia's "FreshData" platform, due to be launched in 2025.

Independent Review of the Food and Grocery Code 2024

With respect to the Independent Review of the Food and Grocery Code 2024, submissions to this review proposed measures to improve price transparency within the market, which included:

- Guidelines or benchmarks for determining fair and reasonable pricing (Tas Farmers, 2024, p. 7);
- A price register to assist farmers to better understand market prices across fresh produce industries (Alfred E Chave Pty Ltd, 2024, p. 11);

[2] It is noted that the Digital Platforms Inquiry also considered lack of data transparency as a driver for UTP, however this was in the context of consumers and use of personal, individual data as opposed to data sharing to strengthen markets. See Australian Competition and Consumer Commission, 2019)

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- Price floors to be included in grocery supply agreements (AUSVEG, 2024, p. 18);
- Inclusion of the methodology for setting prices in grocery supply agreements, incorporating factors such as production costs, market demand, and broader economic conditions (*Freshmark Submission to the Consultation*, 2024);
- Public reporting on sale price data (*Freshmark Submission to the Consultation*, 2024; National Farmers' Federation, 2024, pp. 16–17); and
- Providing suppliers with real-time access to transaction data (National Farmers' Federation, 2024, pp. 16–17).

However, despite the support for regulatory intervention relating to data transparency within the food supply chain, concerns have also been raised regarding potential unintended consequences. As noted by Australian Fresh Produce Alliance, changes to the market, including providing greater transparency on aspects of the market such as price data, should be approached with caution (Australian Fresh Produce Alliance, 2024, p. 11). They noted:

> *…the fresh produce market operates on what is both a dynamic and fluid supply-demand model … [and] constraints on price will have an impact on both supply and demand. Therefore, any interference with the existing market mechanism must be approached incredibly cautiously to avoid unintended consequences for producers, retailers, and consumers* (Australian Fresh Produce Alliance, 2024).

Senate Select Committee on Supermarket Prices (Divestiture Bill)

The Committee made fourteen recommendations including extending the powers of the ACCC to investigate UTPs (Recommendation 4, 9.49) and to increase funding to the ACCC to ensure they have adequate funding to undertake the work required to investigate, regulate, and enforce competition policy matters. The Coalition Senator's Dissenting Report (which rejected the Divestiture Bill that formed a key recommendation of the final report), also included recommendations to address transparency including:

- Recommendation 3: Further, measures to support price transparency are best delivered through existing mechanisms and agencies—noting the ACCC already has significant resources and capabilities to monitor pricing.
- Recommendation 5: The ACCC should be empowered to collect, investigate, and publish long term data on prices in the food and grocery sector. The ACCC should publish regular data on horticultural and vegetable pricing from the major supermarkets to enhance price transparency and support better bargaining power for horticultural producers.
- Recommendation 6: Price transparency policies should be carefully designed to ensure maximum benefit to consumers with minimum compliance burden to companies and delivered through the Australian Competition and Consumer Commission, rather than new bodies.

3.2 Existing platforms to access data relating to the food supply chain in Australia

Platforms to access data in relation to food supply chains do exist in Australia. These include, but are not limited to:

- Department of Agriculture, Fisheries and Forestry's ABARES website (DAFF, n.d.) which "provide[s] professionally independent data, research, analysis and advice that informs public and private decisions affecting Australian agriculture, fisheries and forestry" (*About ABARES*, 2024). All information on the website is publicly available. Of note is the historical agriculture forecast database which charts forecasts versus actual volumes, however, this did not focus on horticultural crops, and was last updated in February 2023.

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- Hort Innovation's HortIQ (Hort Innovation, 2024) which is garnered towards consumer insights for horticultural goods. Users can request an account to access the reports.
- Wine Australia's Market insights (Wine Australia, 2023), which "provides a comprehensive range of statistics, data, analysis and insights on wine markets, grape growing and wine production, to assist business decision-making within the Australian wine sector". As noted on the website "some reports are restricted to winegrape levy payers and wine exporters", but can be purchased.
- Fresh Market Australia's FreshData (*FreshData*, 2024) which enables users to "[e]xplore verifiable market prices for a diverse range of crops from Australia's Central Markets". This is a subscription-based database, in which users can access different content depending on the 'tier' of their plan. At the time of writing this report, this platform had not yet been launched and the costs of subscriptions had not been published.
- Quantium, which uses data from Woolworths, provides, amongst others "in-depth analysis of brand and product performance", data to support "revenue efficiency within the supply chain".

Limited information is known about these existing platforms and the role they play (or could play) in facilitating data transparency in the Australian food supply chain in the context of price setting and forecasting. However, as outlined in Phase 2 of this project (see Report 3), participants highlighted that costs associated with platforms may be restrictive for individual users and that such data needs to consider volume and price in order to address the market imbalances within the food supply chain. Most of these platforms do not appear to engage with price and volume information. However, Fresh Market Australia's FreshData platform seems promising in terms of providing "price and quantity movement indicators", yet limited information is currently publicly available about this platform in terms of how this data is collected. This should be considered within the context of some participants' comments in Phase 2 of this project, in that they highlighted that growers are often unwilling to share data. Based on the information currently available, this platform only provides data relating to produce going through the central markets and thus does not capture data about produce going directly to retailers.

Importantly, as acknowledged in Report 1, the challenge associated with any data transparency platforms in Australia is ensuring the information provided does not breach CCA, particularly prohibitions regarding concerted practices. As per the ACCC, a concerted practice "typically involve[s] the sharing of commercially sensitive information, which in turn, can then be used by others within the industry to forecast and make pricing decisions and thus lessen competition" (ACCC, 2024e, 2024d, 2018). As exemplified by the ABARES historical agriculture forecast database, potential breaches of the CCA can be avoided by sharing historical data. Alternatively, with real time data, which appears to be the case with FreshData, careful oversight will be needed to limit the amount of commercially sensitive information shared.

3.3 International Examples

In order to better understand whether transparency could operate as a solution within the Australia food supply chain to mitigate some of the negative effects of unfair trading practices and with consideration of issues related to concerted practices, the next section considers the European model for market transparency, as well an example of improved data sharing from the US livestock market.

3.3.1 European Union and Market and Data Transparency

The EU have been working to strengthen market transparency in the food supply chain for over a decade. In 2016, the European Commission (EC) were tasked by the Council of the EU to address the issue of market transparency, specifically, "the issue of lack

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of transparency and information asymmetry in all levels of the food supply chain…including at consumers level" (Market Transparency in the EU's Food Supply Chain, 2019, p. 5). In the same year, the Agricultural Markets Taskforce (AMTF) was established, to provide "recommendations on how to enhance the position of agricultural producers in the food supply chain, in view of the Treaty on the Functioning of the European Union" (Market Transparency in the EU's Food Supply Chain, 2019). The AMTF recommended (among other things), market transparency be strengthened to ensure "competition along the chain" (Market Transparency in the EU's Food Supply Chain, 2019, p. 6).

After the adoption of EU *Directive on Unfair Trading Practice*s (Directive 2019/633 of the European Parliament and of the Council of 17 April 2019 on Unfair Trading Practices in Business-to-Business Relationships in the Agricultural and Food Supply Chain, 2019; also see Report 1 and 3 of this project) the European Parliament, Council and Commission collectively sought to:

> *…enhance agricultural and food market transparency at Union level, including by improving the collection of statistical data necessary for the analysis of price formation mechanisms along the agricultural and food supply chain, with the aim of facilitating economic operators and public authorities in making more informed choices and to improve the understanding of operators on market developments* (Directive (EU) 2019/1746 (4)).

As noted by the EC, the resulting changes of the implementation of the 2019 regulations would "require collecting price data from different operators along the chain (for example wholesalers, traders, food industry, and retailers) in particular for supply chains with highly differentiated stages and products", and contribute to the "strengthening farmers' position in the food supply chain and tackling unfair trading practices" (Directive (EU) 2019/1746, (3)). Such amendments to the EU model of transparency aimed to "address the issue of lack of transparency and information asymmetry in the food supply chain" (Directive (EU) 2019/1746, (3)).

Directive (EU) 2019/1746 came into force on 1 January 2021 and in addition to the requirements under Regulation No 1307/2013, Regulation No 1308/2013 and Regulation (EU) 2017/1185 (which require notification of production prices) requires EU Member States to monitor "price transmission along the chain" by collecting data related to price, quantity (including the source and methodology) on a weekly basis for some products and a non-weekly basis for others (Directive (EU) 2019/1756, (7) - (11)). Specifics related to the prescribed time limits and product and market information is found in Annexures I – III Commission Implementing Regulation (EU) 2019/1746 of 1 October 2019 (Directive (EU) 2019/1746, Annexures I, II and III).

The EU provides a wealth of information regarding the market for agricultural commodities and food which includes: market overviews, price data, production data, trade data and short to medium term market outlooks (see European Commission, 2024b).

The price data includes the agri-food portal and a price dashboard which outlines "a monthly summary of price data for the most representative agricultural inputs, products, and consumer prices, at both the EU and a global level" (*Price Dashboard - European Commission*, 2024). The Commission also publishes the weekly price monitoring by sector for select products (European Commission, n.d.).

Despite the improved market transparency, there are a few issues raised with the measures. These include: (1) costs to public administrations; (2) costs to operators in the food supply chain; (3) costs to price reporting agencies; (4) competition and confidentiality; (5) third country effects; and (6) data quality and data communication (Market Transparency in the EU's Food Supply Chain, 2019, pp. 49–59). Each of these issues are briefly considered below.

With respect to costs to public administration (Point 1), the EU model of market transparency operates at a national level (for each of the countries) and at the EU level (where the EU reports the overall market data). The costs associated with reporting were considered in a study, *'Monitoring of Prices and Margins in EU Food Supply Chains Existing and Alternative Approaches'* (Galen et al., 2019). The study sought to "test a set of methodologies to monitor price and margin developments along the EU food supply

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chain" and to "identify data and methodological gaps that allow policy makers and other relevant stakeholders to understand the improvements needed for a better identification of the determinants affecting price transmission" (Galen et al., 2019, p. 27).

The study found that, "[t]he costs generally tend to increase with the number of supply chain stages monitored", and varied according to the amount of data already collected and the scope of the monitoring (Galen et al., 2019, p. 76). This indicated that, the overall cost of increasing market transparency through the collection and publication of various data, ranges depending on the sector, what data is already available and the types of market information system being used.

The study illustrated that there is a "clear relationship between the scope of the monitoring in terms of *products covered* and the costs…[and] the variation in the costs is very large" (Market Transparency in the EU's Food Supply Chain, 2019; citing Galen et al., 2019). Further, the average costs ranged between EUR 2,000 to EUR 80,000 (Market Transparency in the EU's Food Supply Chain, 2019, p. 49 citing ; Galen et al., 2019). Essentially, the more detailed data collected and published, the higher the costs. Notably, the study considered "total and average costs of specific public MISs [monitoring information systems]" as opposed to the costs of collecting more data in cases where there were already monitoring information systems in operation (Market Transparency in the EU's Food Supply Chain, 2019, p. 49).

In relation to costs to operators in the food supply chain (Point 2), the report *'Costs to Operators in the Agri-Food Supply Chain of Data Reporting Related to Market Transparency'* investigated the estimated costs associated with complying with the requirements of data reporting within the agricultural food supply chain in the EU. The study included a survey, structured interviews, and categorised several benefits and potential risks associated with improved data transparency within the market. One of the risks raised was with respect to the cost of collecting and reporting data. Whilst farmers raised concerns about the costs associated with increased data requirements, it was reported that the actual cost of reporting the data to third parties was "negligible"[3] (Galen et al., 2019; Market Transparency in the EU's Food Supply Chain, 2019, pp. 50–51).

Regarding costs to price reporting agencies (Point 3), operators within the food supply chain often buy data from private agencies. In the instances that data is more widely reported, the business activities of the reporting agencies may be adversely affected. Whilst this may be a concern for the agencies, it has been suggested that there are other activities within the market (in addition to the data reporting) that they can capitalise on (such as price assessments, analysis, and real-time market news) (Market Transparency in the EU's Food Supply Chain, 2019, pp. 52–53).

On the point about competition and confidentiality (Point 4), a risk raised by participants in the EU market related to leaks of data and the potential negative impact such leaks could have on competition in the market. It was proposed in the EU's market analysis that, despite the potential risk, "the question remains of whether large companies in segments the food supply chain are highly concentrated know or not already enough about each other's buying and selling prices to be able to tacitly collude, irrespective of publicly mandated increases in market transparency" (Market Transparency in the EU's Food Supply Chain, 2019, pp. 53–55). To combat this, current legislation includes provisions to anonymise data (Regulation (EU) No. 1308/2013 of the European Parliament and of the Council Establishing a Common Organisation of the Markets in Agricultural Products1308/2013, 2013; see also, Commission Implementing Regulation (EU) 2017/1185 of 20 April 2017 Laying down Rules for the Application of Regulations (EU) No 1307/2013 and (EU) No 1308/2013 of the European Parliament and of the Council., 2022).

In regard to third country effects (Point 5), stakeholders within the EU raised concerns about increased data transparency and potential to offset the market by giving a benefit to competitors in third countries by providing them with access to data that they would not otherwise have. Despite this concern, within the EU "the type of information for publication that would be under

[3] Overall, 73% and 53% of the respondents report negligible costs or costs below EUR 10,000 for set-up and running costs, respectively (excluding respondents that did not provide or did not know the costs). For 88% of respondents set-up costs are less than EUR 50,000. Annual total running costs are less than EUR 50,000 for 83% of respondents'.

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consideration at EU level is often already available, and subject to compulsorily anonymised provisions" (Market Transparency in the EU's Food Supply Chain, 2019).

Pertaining to data quality and data communication (Point 6), under the EU model, there is the Food Price Monitoring Tool (FPMT) which uses existing data to track how price changes over time (European Union, n.d.). The FPMT includes data from agricultural producer prices; EU food industry prices; imported products; and consumer prices. Whilst the FPMT showcases a significant amount of data, there are some limitations to the 'user-friendliness' due to the high level of data attained (Market Transparency in the EU's Food Supply Chain, 2019, p. 58). In terms of quality and communication, there are some limitations due to many of the manual processes currently in use. The report noted that a shift towards automated systems could improve the quality and communication. Such systems are in use in the United States (US), in their livestock industry.

Finally, it is worth acknowledging that the shift to more "digitally enhanced farming" raises issues with respect to "privacy, data protection, intellectual property, data attribution…, relationships of trust/ power, storage, conservation, usability and security (EU Code of Conduct on Agricultural Data Sharing by Contractual Agreement, 2020, p. 3). To address some of these concerns related to data sharing, the EU has released the *EU Code of Conduct on Agricultural Data Sharing by Contractual Agreement* (See EU Code of Conduct on Agricultural Data Sharing by Contractual Agreement, 2020). The voluntary code of conduct, which focuses on non-personal data, aims to encourage data sharing, trust, and transparency within the agricultural sector and provides guiding principles which seek to mitigate concerns regarding the sharing of data. Notably, personal data is covered by the General Data Protection Regulation (Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of Such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation), 2016).

3.3.2 United States Livestock Mandatory Reporting Act

As previously noted, literature on price transparency indicates that the lack of data around pricing, allows "noncompetitive behavio[u]r to go undetected and unchallenged"(Wachenheim & DeVuyst, 2001, p. 178). Further, such behaviour drives a non-transparent market which can "impose a social cost" (Wachenheim & DeVuyst, 2001, p. 178 referencing Ackerman, K. (1998) "State Trading Enterprises in World Agricultural Trade", Agriculture in the WTO, USDA, ERS, WRS-98-4, December.). To address this in the livestock market, the *Livestock Mandatory Reporting Act* (*U.S.C Title 7,* Chapter 38: Distribution and Marketing of Agricultural Products) was established in the US. The rationale for the *Livestock Mandatory Reporting Act* (LMRA), was to improve the market related information that is available to livestock producers, and to:

> *…ensure that small farmers and ranchers have a full and fair opportunity to compete in an increasingly concentrated agricultural economy. This new mandatory price reporting program will help producers by making the market more transparent, giving them better information about what is happening in the marketplace* (Market Transparency in the EU's Food Supply Chain, 2019, p. 12 Citing US' Secretary of Agriculture).

The LMRA permits the US Department of Agriculture to require mandatory reporting of certain slaughterhouses (those that met the federally inspected threshold (i.e., those that slaughter more than 100,000 hogs, 125,000 cattle, or 75,000 lambs per year). Pursuant to the LMRA, packers and importers are required to report price and quantity information and further required to submit to quarterly audits. Under the LMRA packers and importers submit purchase and sale data to the Agricultural Marketing Service, who in turn publishes "over 300 market reports each week detailing livestock and meat price trends, contracting agreements, and supply and demand conditions while protecting the confidentiality of proprietary transactions" (see *Livestock Mandatory Reporting Background - Agricultural Marketing Service*, n.d.).

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The monitoring information system used for the LMRA requires producers submit their data and, once it is received, it is then screened by an electronic reporting program. Data is subject to confidentiality and the LMRA provided prescribed circumstances under which data can be published to ensure this confidentiality. Data can only be published if:

- three slaughterhouses report 50% of the time,
- no single slaughterhouse provides more than 70% of the information; and
- no single reporting slaughterhouse may be the sole reporting entity from an individual report more than 20% of the most recent sixty-day period (Market Transparency in the EU's Food Supply Chain, 2019, p. 12).

The LMRA provides an example of how one country has improved the market transparency within a specific sector of the food supply chain.

3.4 Conclusion

Under current Australian law, there are no specific provisions which requires data transparency in the food supply chain. However, the need to increase data transparency around price and volume, particularly for horticultural goods, has been raised in a number of recent Australian inquiries, as well as by the participants involved in Phase 2 of this project, as a means to address market imbalances, particularly within the grocery retailing sector. Whilst it is noted that a number of Australian platforms provide data on horticulture goods in particular, the costs involved in accessing some data and the limited information available regarding volume and price suggests existing platforms do not provide the level of information needed to address this market imbalance. This is further compounded by the CCA, which prohibits the sharing of commercially sensitive information that could be used to forecast and make pricing decisions which ultimately lessen competition. Further challenges exist, as noted by participants in Phase 2 of this project (see Report 3) around culture – and in particular, relating to competition between growers and their reluctance to share data – and the cost of accessing the data.

The examples from the EU and the US, however, highlight how some of these issues can be overcome. Drawing on these examples, potential regulatory options to overcome the lack of data and/or transparency in the Australian food supply chain, particularly around volume and price, include:

1. Adopting a similar model to the EU

This could be done, for example, by introducing a mandatory industry code of conduct (Market Transparency in the Food Supply Chain) pursuant to Part IVB of the CCA. The code of conduct could require mandatory reporting of data, such as: (a) selling prices of operators at the first stage of the agricultural and food supply chain; (b) price data from different operators along the chain (for example wholesalers, traders, and food industry); (c) price data from retailers and supermarkets; (d) production data; and (e) trade data.

The industry code of conduct should include provisions similar to those in Regulations (EU) 2017/1185, Regulations (EU) No 1307/2013 and (EU) No 1308/2013 and Regulation (EU) 2019/1746 which specifically require weekly and, in some instances, non-weekly reporting of price data. The regulations set out by the EU model provide a working template.

Under this model, the government would then need to create a national dashboard which includes data on market observations, price data, production data, trade data and market outlooks. Guidelines for the use of data, similar to the EU Code of Conduct on Agricultural Data Sharing by Contractual Agreement, would also need to be in place. Importantly, any data that is published should be subject to anonymity processes.

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It is likely that any mandated platform under an industry code would need to be managed by the ACCC (or, alternatively, the Department of Agriculture, Fisheries and Forestry, as per the Horticulture Code). Where the ACCC has oversight, a separate task force, such as ABARES, could be appointed to specifically manage the dashboard and monitor reporting as well as ensure compliance. Such a taskforce could operate similar to that of the EU's Agricultural Markets Task Force.

This option is not without its limitations, however. For instance, there is a public administration cost involved. A government-run platform will also undermine the private investment made by actors already providing data. Consideration would also need to be given as to how this adheres to CCA and any limitations this creates; in that it may mean that: (a) only historic data can be published; (b) information is limited so that confidential information is not shared as per the LMRA, or (c) changes are needed to the CCA and/or an exemption is granted based on the view that the sharing of this data will lead to reduced levels of FLW (public good). Positively, the mandating of information requirements would address raised by participants in Phase 2 regarding growers' reticence to share data.

2. Adopting a model similar to LMRA

Under this model, regulation would likely need to be introduced[4] to permit a government department such as the ACCC or the Department of Agriculture, Fisheries and Forestry to require mandatory reporting by grocery businesses as per the definition outlined in the (at the time of writing) proposed amendments to the F&GC (this would be different to current legislation that permits the ACCC to be directed to collect certain information). Noting that: (a) participants in Phase 2 of this project (see Report 3) commented on the lack of data and/or transparency with respect to supermarket practices; and (b) Fresh Markets Australia's FreshData already exists for the central markets, this model could be limited to perishable agriculture products dealt with under the F&GC. As per the LMRA, grocery businesses would need to submit price and quantity information in a manner similar to the LMRA which protects the confidentiality of transactions. A team like ABARES (with appropriate funding) or a third-party provider (which is not without limitations, including in relation to privacy and the cost to users) could then use this data to publish reports as per the Agricultural Marketing Services in the US.

To conclude, any significant changes to market and data transparency within Australia would require a significant shift in the way the market currently collects and publishes market related data. As noted in the EU model, there are risks associated with increasing market transparency and costs associated with implementing and managing data reporting. Despite this, the current food supply chain in Australia could benefit from improved market transparency, in particular, real-time data with respect to price of products along the food supply chain and production data, particularly for perishable agricultural goods. Such improvements in market transparency may have a positive impact on competition in the market as well as assist in mitigating some of the concerns associated with UTPs.

[4] While the Treasury can be directed by the Australian Government to hold a price inquiry (as noted in Section 3.1), the extent to which these powers could be used to mimic LMRA on an ongoing basis outside of an inquiry is unclear.

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4. Whole crop purchasing (WCP)

Whole crop purchasing (WCP) is a contractual mechanism whereby retailers and/or food processors/manufacturers commit to buying a grower's entire harvest. Whilst WCP can theoretically be employed by retailers as well as food processors or manufacturers, the limited literature to date focuses almost exclusively retailers, as this section shows. In the case of retailers, where produce is surplus to need or does not meet quality specifications for fresh food markets, retailers direct that produce into other parts of their supply chain (Bradshaw & Wentworth, 2024).

Given its inherent characteristics, WCP is expected to positively impact FLW in upstream sectors of the supply chain in the following ways compared to prevailing contractual models:

- Mitigate overproduction based on grade quotas set under forecast agreements or contracts specifying minimum volume requirements.
- Eliminate rejection of product based on quality specifications.
- Eliminate order cancellations on account of forecasting changes.
- In vertically integrated operations, extend shelf life at retail and consumption stages of the supply chain (Axiö et al., 2022; European Union Committee, 2014; WWF UK, 2021).

Whole crop purchasing however, places the onus on retailers (or their third-party processors and manufacturers) to prevent food waste, by retaining produce within the supply chain and finding suitable uses and markets for the produce not suitable for fresh retail markets (Pringle, 2021). Theoretically, retailers can achieve this by processing commodities into new product lines based on quality and/or cosmetic standards (see Adam, 2015; Axiö et al., 2022; Boland et al., 2022; Feedback, 2018a):

1. Top-grade produce to be sold in fresh retail markets.
2. Retailers may choose to relax their quality and/or cosmetic standards to sell additional volumes of produce through fresh retail markets, perhaps at a reduced price.
3. Lower-grade produce to be sold to hospitality and foodservice markets (e.g., value packs or via the Yume Food platform).
4. Surplus produce to be substantially discounted or donated to food relief charities.
5. Produce unsuitable for sale in the fresh retail or foodservice markets to be upcycled into new product, (e.g., baked goods, pickled, juice, powder or pasta sauce, pet food).

This section considers the practical viability of the WCP model for growers and retailers, drawing on academic and grey literature. It highlights examples of WCP in practice, explores WCP's effectiveness in reducing FLW across the whole supply chain, and evaluates its broader market appeal. It also considers drivers and barriers of WCP. It is important to premise here that fairly limited literature currently exists on WCP, with most of the literature considering WCP in other countries, particularly the UK.

4.1 Whole Crop Purchasing in practice

Examples of WCP in practice are limited in the literature and consequently, there's limited analysis regarding its scope or efficacy. UK examples are most prominently referenced, with Tesco and Morrisons the leading examples of large vertically-integrated retailers adopting the model (Adam, 2015; Allu & Belavina, 2020; Axiö et al., 2022; European Union Committee, 2014; Feedback, 2018a, 2018b; Government Office for Science, 2017; Pringle, 2021; WWF, 2020). Other prominent retailers in the UK are

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referenced as having adopted WCP, but without further analysis of its efficacy (e.g., Mercadona, Metro Cash & Carry and Jeronimo Martins) (Allu & Belavina, 2020). In the Australian context, central market wholesalers have adopted WCP and Open Network Australia has reported findings from a WCP project conducted with small to medium retailers (Fresh Markets Australia, 2024; Rothwell, 2022; Sheridan et al., 2021). Details of these examples are provided.

4.1.1 Tesco

Tesco, the world's third largest retailer, has utilised whole crop purchasing contracts since 2013, signing three-to-five-year contracts with more than 2,500 farmers. Produce that meets the cosmetic standards is usually sold on the shelves and the rest is either used in the in-store live kitchen or converted into packets of frozen chopped vegetables to be sold as a home brand. Leftover produce is pushed to downstream players such as restaurants and food service institutions (Allu & Belavina, 2020). The literature does not provide insight into how broadly Tesco has adopted WCP across various commodities.

4.1.2 Morrisons

Morrisons has adopted WCP for fruits, vegetables, and meat, purchasing directly from UK farmers and processing the entire crop or animal through vertically integrated processes that enable them to deliver food within 12 hours in some instances (Adam, 2015). Premium items are sold fresh, lower-grade produce goes into value packs or pre-chopped offerings, and remaining items are used in ready meals like soups and salads. For meat, they process whole animal in their own abattoirs. Remaining produce is repurposed through a partnership with the community food network FareShare. Quantitative details of the efficacy of the model from a FLW perspective is not available, but using potatoes as an example, Morrisons has publicly stated that WCP has enabled it to sell 100% British produce in season, utilise 20% more of potato crops, and gain better control over their supply chain (Adam, 2015; European Union Committee, 2014).

4.1.3 Central Market Wholesalers

In its submission to the ACCC Supermarkets Inquiry, Fresh Markets Australia (May 2024) (FMA) documented the WCP approach taken by Australian central market wholesalers. It reports that a WCP model prioritises: (1) sustainability, by ensuring that every part of the harvest reaches the market, and that central markets significantly reduce waste and support environmentally friendly practices; (2) fairness, by guaranteeing growers receive compensation for their entire harvest, not just the select portions deemed 'marketable' by large supermarket standards; and (3) diversity and choice, by offering consumers access to a broader range of produce, including items that do not meet the cosmetic standards of supermarkets.

4.1.4 The Open Food Network's Whole Crop Purchasing Project

A pilot project in Victoria, Australia, led by the not-for-profit Open Food Network, trialled WCP practices for small-medium scale farmers with the objective of reducing on-farm food waste and improving farm profits. The project facilitated relationships between growers and buyers, focusing on finding markets for produce that typically would not meet buyer standards. Findings included:

- An increase in produce purchases and reduced on-farm waste.
- The importance of building relationships with multiple buyers, considering factors like scale, values alignment, and pricing.
- The need for context-specific WCP agreements tailored to growers' needs and timeframes.
- The importance of establishing trusted, formal relationships before implementing WCP contracts, with memorandums of understanding serving as useful initial mechanisms.
- Focusing on increasing overall crop sales, rather than solely aiming for complete whole crop purchases, was crucial in reducing on-farm food waste.

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- Working towards improved risk sharing between farmer and buyer was challenging to incorporate into agreements (Rothwell, 2022; Sheridan et al., 2021).

4.1.5 Conclusion

While these case studies are all put forward as positive examples of WCPs potential to reduce FLW, data quantifying reduced waste is not available in the literature in these instances. Additionally, there is limited analysis of WCPs efficacy and broader implications for the supply chain in relation to these specific case studies. Benefits are, however, discussed more generally in the literature.

4.2 Benefits of Whole Crop Purchasing

Beyond reducing food waste, research indicates that WCP has the potential to deliver broader benefits across economic, environmental, and social dimensions of sustainability. These benefits are summarised below.

4.2.1 Financial and economic benefits

Overall, the literature indicates potential for WCP to offer financial benefits to both growers and retailers. For growers, the research outlines a likely increase in on-farm costs under WCP models, because of harvesting the lower-grade crops, packing the produce, storing the produce, and sending material to end uses (Axiö et al., 2022). WWF-UK (2021) suggests these costs are, however, likely offset by a reduction in input costs associated with gluts (e.g., additional harvesting labour) and underproduction (e.g., cancelled contracts if predicted yield is not delivered). On balance, studies highlight that guaranteed market access for an entire harvest attracts increased overall revenue, offsetting systemic pressures that limit the financial sustainability of long-term horticultural operations (Axiö et al., 2022; Feedback, 2018a; Hezarkhani et al., 2024).

However, in exchange for the guaranteed market access WCP affords, farmers typically accept lower prices (Allu & Belavina, 2020). The literature suggests this arrangement offers a number of potential financial benefits to retailers: (1) it reduces the cost of goods; (2) creates opportunities to diversify revenue streams through value-added food products; and (3) it may incentivise retailers to relax aesthetic standards, thereby increasing volumes to the fresh food market (Adam, 2015; Axiö et al., 2022; Boland et al., 2022; Feedback, 2018a).

More broadly, the literature suggests that WCP has the potential to attract broader economic gains, namely that the development of new products will in turn generate additional income and local employment opportunities (Axiö et al., 2022). An AgriFutures Australia case study evaluating the potential benefits of a WCP arrangement to the Australian banana industry, for example, estimated the industry could unlock an additional $75.2 million of revenue from the sale of lower-grade bananas, with an average banana plantation (32 hectares) receiving additional net revenue of $34,000 per year under these arrangements (Axiö et al., 2022).

4.2.2 Environmental benefits

Available literature consistently recommends WCP as a solution for reducing FLW in primary production (Adam, 2015; Allu & Belavina, 2020; Axiö et al., 2022; European Union Committee, 2014; Fresh Markets Australia, 2024; Rothwell, 2022; Sheridan et al., 2021). This was echoed by a participant involved in Phase 2 of this project (see Report 3), who suggested that “having to take the whole crop might incentivise the retailer to be more accurate with the forecasting”, thereby inferring that this would lead to lower levels of overproduction, oversupply, and/or FLW.

Although the examples of WCP projects outlined above provide limited quantification of FLW reductions, qualitative assessments from stakeholders widely assert that WCP can reduce FLW (Adam, 2015; Allu & Belavina, 2020; Axiö et al., 2022; European Union

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Committee, 2014; Fresh Markets Australia, 2024; Rothwell, 2022; Sheridan et al., 2021). As was noted by a participant in Phase 2 of this project (see Report 3) however, "the risk of whole crop purchasing is that retailers would end up with product that they don't know what to do with, or are not expert in dealing with". Here it was inferred that the environmental benefits associated with WCP may not be realised if relationships and systems are not in place to ensure the whole crop can be used.

The environmental benefits of reduced food waste in upstream sectors of the supply chain are well known and widely referenced in the literature addressing WCP. These include reduced demand for fertiliser, water, land, and other resources used to grow food that is wasted. The research also highlights the potential for WCP to contribute to lower greenhouse gas emissions (GHG) associated with producing food, reduced scope 3 GHG emissions and potentially enabling growers to rest fields and rotate crops (Axiö et al., 2022; Huang et al., 2022).

4.2.3 Social

The literature identifies several social benefits flowing from WCP arrangements, including:

- Stronger relationships between growers and retailers, and greater collaboration across the supply chain, including with food manufacturers.
- Increased options for consumers to buy aesthetically imperfect fruit and vegetables at lower prices, assisting with cost-of living pressures.
- Increased donations to food rescue organisations.
- The ability for retailers to demonstrate extended producer responsibility, and the ability to respond to customer and consumer concerns about food waste.
- A more balanced power dynamic between grower and retailer, with the risks and costs of surplus and food waste better shared (Bradshaw & Wentworth, 2024; Feedback, 2018a; Pringle, 2021; WWF, 2020; WWF UK, 2021).

4.2.4 Conclusion

Whether the abovementioned benefits are attained hinges on the specific structure of individual WCP agreements (WWF-UK, 2021). Moreover, these benefits alone may not offer sufficient incentive for parties to engage in WCP. For instance, Adam (2015) points out that retailers already exercise cost control and do not necessarily depend on strong relationships with producers. The following section explores the drivers and barriers likely to influence a party's decision to adopt WCP.

4.3 Drivers and barriers of Whole Crop Purchasing

The available literature broadly acknowledges that the drivers and barriers to WCP require further investigation. It nonetheless highlights several key considerations for growers and retailers when weighing up the benefits of WCP arrangements, which we have examined under four main categories: profits and costs, logistics, scale, suitable commodities and markets.

4.3.1 Profits and costs

Financial incentives are emphasised as a critical motivator for retailers in supporting the reduction of food waste. Adam (2015) notes that without these incentives, other drivers and opportunities are unlikely to convince retailers of the benefits of WCP. Adam (2015) further notes that retailer business models often profit from rapid stock turnovers, meaning the purported benefit of improved product shelf life or reduced food waste under WCP may not be regarded as beneficial from a retailer perspective at all, thereby disincentivising the arrangement. Pringle (2021) concludes that retailers are unlikely to assume the responsibility involved to make

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WCP work at scale without considerable financial incentives. With respect to small-medium enterprises, even with strong values-alignment, price could be a barrier to WCP partnerships proceeding (see Rothwell, 2022, p. 5)

Fair price negotiation is examined in the literature from both grower and retailer perspectives. For growers, additional on-farm costs associated with harvesting, packaging, storing, and transporting lower-grade crops need to be off-set by market prices that achieve income sustainability (Axiö et al., 2022). Hezarkhani et al (2024) and Huang et al. (2022) note that higher profits under spot contracts may hinder the adoption of WCP. Retailers engaging in WCP contracts may also seek to mitigate the risk of reduced grower incentive to deliver quality produce by altering prices. Contracts need to balance these considerations, in that they need to simultaneously incentivise growers to produce to supermarket specifications, while stipulating a fair price for the picking and packing of the additional crop fractions. AgriFutures Australia suggests this might involve differential pricing based on product grade, with higher prices paid for first-grade produce. It has also been suggested that WCP arrangements include rise and fall clauses to allow for price adjustments (e.g., to input prices) based on CPI or other relevant indices (Axiö et al., 2022). On this point, the notion of price associated with WCP did come up during Phase 2 of this project (see Report 3). More specifically, one participant expressed concerns with differential pricing, highlighting that grading can often be subjective, particularly when there are gluts in supply. Another participant expressed concerns about whether WCP would actually lead to fairer prices for farmers, stating that it is "just going to play into the supermarkets' hands, and they're going to actually negotiate a lower price because they're having to buy everything".

Two further costs-related considerations are briefly canvassed in the literature: transport and oversupply. With respect to transport, AgriFutures Australia (see Axiö et al., 2022) notes that depending on specific WCP arrangements, the retailer may choose to organise transport (instead of the grower). This approach can potentially lower costs through: (1) leveraging large-scale transport contracts; and (2) improving economies of scale through coordinating transport for multiple growers in a region. In such instances however, there may be a need for transparency regarding transport cost reductions so that all parties knew how much transport was costing under a new arrangement, as presumably the costs of transport would be shifted back to growers somewhat through negotiated prices. With respect to oversupply, AgriFutures Australia notes that oversupply can result in WCP arrangements resulting in lower prices for growers. They consider this a short-term risk only, however, proposing that over time, growers can reallocate resources to producing other crops or growing produce for export markets (should these be available). Presumably, also, retailers would advance their ability to use and sell more of the whole crop, which is discussed further in the next sub-section. They also highlight the potential for peak industry groups to investigate sources of financial assistance in the transitional period. Moving to WCP may also require producers altering production cycles or crops to better meet retailer needs (Axiö et al., 2022).

4.3.2 Logistics

For retailers, the literature underscores that a key challenge will lie in whether they can effectively utilise surplus produce and produce that does not meet cosmetic standards within the constraints of expiration dates (i.e., capitalise on alternative food products) (Allu & Belavina, 2020). Studies consider the two alternative pathways for retailers to achieve this: they must either (1) be vertically integrated allowing them to quickly redirect lower-grade products to alternative uses; or (2) they need to partner with facilities to manage these processes.

Vertically integrated supply chains reduce time between producer and retail by bypassing storage facilities of the suppliers, extending the shelf life at both the retail and consumption stage and thereby reducing the likelihood of food waste (European Union Committee, 2014). Allu and Belavina (2020) note, however, that while WCP is likely to be effective for vertically integrated retailers at large, it comes with logistical complications of dealing with multiple suppliers and therefore may not be applicable for all retailers. By Tesco's own assessment, "it clearly takes quite a lot of joined up thinking" to make happen (Pringle, 2021, p. 134 quoting

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interview with Tesco.). Several studies note that WCP is best suited to large, vertically integrated retailers for the following reasons (Allu & Belavina, 2020; Blanke, 2015; Huang et al., 2022):

1. Their leverage and capacity to negotiate with multiple suppliers.
2. Their geographically widespread footprint providing them ample opportunities to utilise the whole crop.
3. The requisite working capital to drive investments in necessary infrastructures such as cold storage warehouses and information sharing platforms, which are essential for the success of whole crop purchases.

As a result, Allu and Belavina (2020) found that WCP contracts more feasible to operationalise in comparison to other contractual types considered to assist with FLW reduction. It is worth noting that in Australia, the retail grocery sector includes "three main vertically integrated chains (Woolworths, Coles and ALDI), and what are commonly referred to as the independent supermarkets (such as Drakes, Harris Farms and IGA-branded independent retailers)" (ACCC, 2024a, p. 6).

In cases where vertical integration is not applicable or viable, third-party organisations (e.g., processors and manufacturers) would be required to process or add value to produce that is not suitable for fresh retail or hospitality (Adam, 2015; Allu & Belavina, 2020). While Axiö et al. (2022) highlights that developing the relevant partnerships will take time to develop (a potential barrier), Allu and Belavina (2020) argue that the networks of farmers and suppliers needed to operationalise WCP arrangements already exist in the current supply chain; all that is needed is a nudge from the retailers to modify the contractual terms under which these networks currently operate. Reconfiguring current operational partnerships also extends to growers. Pearson et al. (2019) notes that one challenge for growers adopting the WCP model would be the ecommerce and other platforms currently relied on to take surplus or lower-grade produce (rather than entire operations). Interview data obtained as part of Phase 2 of this project (see Report 3) also indicates WCP might have implications for arrangements between growers and wholesale markets, in that it might lead to lower levels of produce flowing through the wholesale markets, which in turn, leads to further market imbalances in the horticultural supply chain.

Whether retailers choose to operationalise WCP via vertical integration or third-party processing, Adam (2015) and Pringle (2021) suggest that based on the above logistics considerations, a commitment to a long-term deal is key for both parties to thrive under WCP agreements.

4.3.3 Scale

The literature explores questions of scale from multiple perspectives. Allu and Belavina (2020) assert that to be effective at scale, WCP requires retailers manage multiple suppliers of multiple products, both in primary production and food processing/manufacturing, requiring a high level of coordination and vertical integration. Pringle (2021) argues that increasing the scalability of WCP would require overcoming some difficult barriers, particularly in relation to more perishable products, and would require a higher level of industry collaboration than currently appears to be the case. Adam (2015) concluded that without integrated processing and packaging facilities, it was questionable whether WCP could be implemented on a larger scale. With respect to small-medium enterprises engaging in WCP, Rothwell (2022) found that where the scale of the farming enterprise and buyer was not well-aligned, it could become a barrier in establishing a relationship. It concluded that identifying a suitable farmer that was scale matched was challenging and did not always lead to establishing a direct relationship for the buyer.

4.3.4 Suitable commodities

WCP arrangements are better suited to certain commodities according to the literature. Axiö et al. (2022) highlight suitable crops include those that have strict aesthetic standards, seasonal gluts, a short shelf life, and/or are susceptible to pest and disease impacts and/or physical damage. Despite short shelf-life being flagged here as a suitable characteristic for WCP, Pringle (2021)

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notes that significant time and investment is required to manage perishable crops under WCP arrangements. In particular, it is noted that more-perishable products harvested over longer periods with relatively short storage times are much more difficult to manage. On the other hand, crops harvested over a relatively short period and then cool-stored for long durations are better suited to WCP. Short harvesting periods coupled with long storage times mean the crop can more easily be quantified and allocated to different uses.

4.3.5 Markets

The literature indicates limited markets for lower-grade produce (Hartmann et al., 2021). Axiö et al. (2022) suggests this would require WCP arrangements to be introduced over time targeting crops where there are viable markets for lower-grade produce. Regarding developing markets, WWF (2020) flags e-commerce as a key opportunity. As growers adopt new tools to better measure surplus and loss, retailers have an opportunity to improve e-commerce platforms (such as Refresh:Food here in Australia, which was co-founded, built and launched by Woolworths Group Limited and Boston Consulting Group, Inc. “as an independent stand-alone profit-for-purpose organisation to reduce upstream food waste from farms to move a higher volume of fresh produce” (*About Refresh:Food*, 2024). By broadening their produce specifications to include “imperfect” or surplus produce, retailers could utilise a greater portion of what growers produce, while also helping retailers to meet the increasing demand for online shopping.

4.3.6 Policy

The research literature does not address potential policy issues, including those stemming from competition and consumer laws, in relation to WCP. We have reviewed the *Competition and Consumer Act 2010* (Cth) and identified potential pressure points specific to WCP arrangements that might compromise fair trading and/or consumer protections. Drawing on the information presented in Report 1 of this project, (1) anti-competitive practices, (2) unfair contract terms, and (3) the Horticulture Code and Food and Grocery Code could be potential pressure points for WCP and are discussed in further detail below.

Here, it is important to premise this section with that understanding that, at least hypothetically, WCP arrangements could take a number of forms, including:

1. Retailer purchases the entire crop from one grower, and
    a. has a vertically integrated supply chain (whereby the retailer owns the processing/manufacturing facilities) to process produce it does not intend to sell as ‘fresh produce’, or
    b. acts of a merchant by reselling produce that it does not intend to sell as ‘fresh produce’ to food processors/manufacturers to process via the use of secondary contracts.
2. Retailer purchases the entire crop from multiple growers directly, and
    a. has a vertically integrated supply chain to process produce it does not intend to sell as ‘fresh produce’, or
    b. acts of a merchant by reselling produce that it does not intend to sell as ‘fresh produce’ to food processors/manufacturers to process via the use of secondary contracts.
3. Retailer purchases the entire crop indirectly from a grower or multiple growers via an agent or merchant, and
    a. has a vertically integrated supply chain to process produce it does not intend to sell as ‘fresh produce’, or
    b. acts of a merchant by reselling produce that it does not intend to sell as ‘fresh produce’ to food processors/manufacturers to process via the use of secondary contracts.
4. Retailer enters a WCP purchasing arrangement in which it:

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a. purchases Grade A produce it will sell as 'fresh produce' from one or more growers, and then

b. acts as an agent by facilitating contracts with other food manufacturers/processors for a commission.

In the above, the terms agent and merchant have been used in line with the Horticulture Code:

- An agent sells produce on behalf of a grower to a person for a commission or fee; and
- A merchant purchases produce from a grower and resells but excludes merchants purchasing for the purpose of exporting or retailing (Emerson, 2024, pp. 17–18).

Anti-competitive practices

As outlined in Report 1 of this project, the *Competition and Consumer Act 2010* (Cth) (CCA) prohibits exclusive dealing (see Section 47). Exclusive dealing occurs when one business trading with another puts conditions on the other's freedom to choose: (1) what it buys or sells; (2) who it does business with; and/or (3) where it trades (see ACCC, 2024c). Exclusive dealing is common in business arrangements and is only illegal when it substantially lessens competition. Various aspects of WCP potentially make is susceptible to exclusive dealing, most notably its inherently exclusive nature, which binds produce to a single buyer (as would be the case in all four scenarios presented above). This may be compounded where WCP creates barriers for other buyers to access produce (e.g., platforms growers previously relied on to take surplus and lower-grade produce), as well as for stakeholders, such as new retailers, trying to enter the market.

The propensity for long-term contracts in WCP arrangements may further restrict access to supply over a protracted period thereby increasing the potential for WCP to lessen competition. These factors have the potential to increase the risk of cartel conduct (or cooperation among businesses). As noted in Report 1 of this project, cartels occurs when two or more independent businesses agree to work together, or in other words, collude. The extent to which cartel-like behaviour could apply to WCP is somewhat unclear, as it typically relates to instances where two or more competitors agree to: (1) fix prices, including, but not limited to setting minimum prices; (2) divide or allocate market share; (3) agree to control outputs, including limiting the amount of goods that will be made available; and (4) rig bids (ACCC, 2023b, 2024e, 2024f).

There are other legal ambiguities relating to situations where a retailer is engaged in WCP and has a vertically integrated supply chain[5]. Such a situation may increase the risk, especially at the food processing and manufacturing stage, that supply will be restricted and/or prices influenced in a manner that reduces competition. Where retailers contract with a third-party processor or manufacturer to process some produce from a WCP arrangement, this could potentially lead to concerns regarding cartel behaviour. However, these are legal grey areas that can be clarified by the ACCC and resolved by changes to law and policy if required and appropriate.

[5] Vertical integration is said to further increase the potential for exclusive dealings lessening competition in cases where retailers control produce across different sectors in the supply chain (which could hypothetically occur in Scenarios 1a, 2a, and 3a above, should these arrangements substantially limit the amount of produce available to other competitors). However, it is important to note that cartel behaviour does not apply when businesses acting together are owned by the same company (again, see Scenarios 1a, 2a and 3a above), however, it is unclear whether this would apply if retailers contract third-party processors or manufacturers to process produce acquired under WCP arrangements (see Scenarios 1b, 2b and 2b above). Greater clarity from the ACCC is needed on this, and consideration should be given as to the role the ACCC might need to play in writing clauses for these secondary contracts to ensure that do not run afoul of competition laws.

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WCP may also lead to situations where multiple, often smaller to medium sized, growers need to supply their whole crops to a retailer in order to meet the volume of produce needed (e.g. Scenarios 2 and 3). If these growers work together to make joint decisions around terms and conditions, who they will deal with, and pricing, they risk breaching competition law (see Collective Bargaining in Report 1). In such instances, it is essential for these growers to apply for an exemption from the ACCC prior to engaging in these behaviours.

Unfair contract terms

While not specific to WCP arrangements, market power disparity – which exists within the Australian food supply chain as noted in Report 1 and via Phase 2 of this research (see Report 3) – increases the risk of unfair contract terms under *Australian Consumer Law* (Competition and Consumer Act 2010 – Schedule 2). As WCP is most likely to be suitable for large retailers with the capacity to sell and process larger quantities of produce, this power imbalance between parties negotiating WCP agreements will likely exist. Again, this risk is increased on account of the long-term commitment recommended for WCP arrangements, which means growers could become locked into disadvantageous terms for extended periods. As highlighted in the literature above, income sustainability for farmers requires offsetting additional costs associated with harvesting an entire crop. This, combined with the inclusion of differential pricing and rise and fall clauses, adds a complexity to agreements that could expose growers to unfair terms.

Horticulture Code and Food and Grocery Code

The extent to which the Hort Code would apply to, or potentially create implications for, WCP is unclear based in the current wording (and proposed draft regulation of the F&GC) of the Codes. As outlined in Section 2 of this report, the F&GC governs behaviours between large grocery retailers or large wholesalers and suppliers, whilst the Hort Code regulates trade between growers and traders (either as agents or merchants), typically in relation to wholesale markets. In the scenarios outlined above, the F&GC would likely apply to Scenarios 1a, 2a, and 4a. Scenario 3a is somewhat unclear, though it is possible that Hort Code applies to the relationship between the growers and the agents/merchants in this situation, and then the F&GC applies to relationships between the agent/merchant and the retailer. Whether or not Scenarios 1b, 2b, 3b, and 4b noted above are allowable under the codes is unclear, nor is it entirely clear what code would apply to these relationships. Added to this, the Hort Code does not allow a trader to be both an agent and merchant under the one agreement. Whether or not 4a fits the definition of a merchant is somewhat unclear, however, if it does, this arrangement, it seems, would not be allowable under the Hort Code. Greater clarity is needed from the Treasury (who reviews the F&GC), the Department of Agriculture, Fisheries and Forestry (who administers the Hort Code) and the ACCC (who enforces both Codes) as to what scenarios are allowable and what Codes apply.

4.3.7 Conclusion

In summary, WCP is a potentially promising way to address FLW by ensuring that the full amount of food produced in a given scenario enters retail and, where appropriate, processing stages. WCP arrangements are particularly suited to large retailers that are vertically integrated, as these retailers are better able to deal with a large volume including by redirecting to food processing, and it is especially appropriate for crops with a long storage life. WCP raises some potential competition law issues, including in relation to which industry codes apply and how WCP may also be susceptible to abuses of market power. These issues can be mitigated through effective regulatory responses. While there are examples of WCP in practice, further research is required, including into the extent to which WCP can reduce FLW.

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5. Conclusion

This report has explored:

1. The alignment between the Hort Code and the F&GC with respect to the EU Directive 2019/633 'Unfair trading practices in the agricultural and food supply chain', and the extent to which these codes are likely (or not) to address issues related to market imbalances, contracting, and lack of data and/or transparency (as noted as key themes in Phase 2 of this project – see Report 3).
2. How data transparency could be improved in a bid to reduce overproduction.
3. The potential of WCP to create an alternative market and ultimately mitigate FLW due to oversupply.

In summary, with respect to Point 1, this research found that Hort Code and the F&GC effectively allow – either via sub-clauses, lack of specificity or clarity, or no equivalent provision – many of the UTPs prohibited by the EU. Based on the analysis, it was suggested that the Codes, particularly the F&GC given its relevance to the key themes noted in Report 3, are unlikely to adequately address market imbalance, including fear of negative consequences; issues with contracting, including in relation to sales and return agreements, or lack of data and/or transparency. However, it is possible that making the F&GC mandatory, with significant penalties for breaches of the Code, as per the draft F&GC, may see some change in this regard, however the extent to which remains to be seen.

In relation to Point 2, whilst it is noted that a number of platforms currently exist within Australia related to horticulture goods data in particular, there is: (1) limited information currently available about these platforms; (2) they often do not target the type of data required regarding price and volume; and (3) they tend to be costly to access. As such, they may not currently address market imbalances or provide the level of data and/or data transparency needed to address issues raised in Report 3. These deficiencies are further compounded by the CCA, which prohibits the sharing of commercially sensitive information that could be used to forecast and make pricing decisions which ultimately lessen competition. Further challenges exist, as noted by participants in Phase 2 of this project (see Report 3) around culture – and in particular, relating to competition between growers and their reluctance to share data. It was also noted that any significant changes to market and data transparency within Australia would require a significant shift in the way the market currently collects and publishes market related data. Notably, Fresh Markets Australia's FreshData platform seems promising, particularly as an option that would not require government intervention. Given this platform was not yet operational at the time of writing this report, the extent to which it will address the issues and limitations raised by participants in Phase 2 of this project (Report 3), and relatedly UTPs and/or market imbalances more broadly, remains to be seen.

Finally, on Point 3, the potential of WCP is somewhat unknown at this stage, given that few examples of WCP in practice are in the literature and consequently, there is limited analysis regarding its scope or efficacy. As per the information presented in Report 1 of this project, we identified: (1) anti-competitive practices, including exclusive dealings, cooperation amongst business, and cartels; (2) the potential for unfair contract terms; and (3) the extent to which the Hort Code and F&GC would cover hypothetical WCP business models as key considerations.

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