ORC Evidence Requirements for the Honey bee Industry

Revision history

Version	Date issued	Amendment Details	
		Element(s)	Details
1.0	May 2008	All	New ORC evidence framework.
2.0	5 August 2022	All	Revised ORC evidence framework. Approved by the Australian Honey Bee Industry Council (AHBIC), all government Parties and the Plant Health Australia Board.

The honey bee industry Owner Reimbursement Costs (ORC) evidence framework only applies to Owners from the honey bee industry.

ORCs for the honey bee industry are calculated using the formula for Bees, hives, honey and associated products (*schedule 6, part 4.4.17* of the *Emergency Plant Pest Response Deed, 3 March 2022*). This formula is: **ORC = A + B + C + D + E + F + G.** A definition for each component of this formula is provided in the following table. The evidence requirements for certain components are presented in hierarchical order of use. This means that where more than one option is presented, the valuation must proceed starting with the first option and if that data is not available or relevant, progressing to the second option, followed by the third option and so on.

Regional differences will need to be taken into account throughout the evidence framework.

Key terms used in this evidence framework

Term	Definition
Authorised Person(s)	Where key variables of the ORC need to be assessed, potentially having significant financial or 'moral hazard' implications, an Authorised Person should be used in the determination of the appropriate value. Such persons: (a) should be appropriately authorised under relevant legislation and procedures (usually of the Affected jurisdiction); (b) may be involved in (without limitation) certification, audit or determination of key information as appropriate; (c) should be appropriately qualified for the specified roles; (d) need not be a government employee, but must meet relevant independence and other relevant probity requirements; (e) should be sourced from existing expertise, such as qualified agronomists or hail assessors, where possible and appropriate.
Owner(s)	Owner(s) of a Crop, Crops or sub-group of Crops, or a property, which is/are subject to a Response Plan, or their authorised representative(s). Includes any person, other than a mortgagee not in possession, having or claiming any right, title or interest in a crop or a property, or their authorised representative. Note: the definition of Crop, Crops or sub-group of Crops under the EPPRD includes plant products and forests, Fungi and also includes bees and their hives.
Relevant Parties	In respect of the taking of a decision or action, the Parties which may be affected (or, where they are an Industry Party, the members of which may be affected) by the decision or action.

Note this list is not comprehensive. Refer to clause 1.1 of the EPPRD for definitions of capitalised words/terms (excluding names) used in this evidence framework.

ORC Evidence Framework

	Definition of elements from the EPPRD	Evidence requirements (in hierarchical order)	Additional information/comments
A	Value of the particular hive destroyed	Value of the hive destroyed will be determined using the **average** prices listed in Appendix 1. Where an Owner has auditable records to demonstrate a higher price for equipment compared to the price in Appendix 1 (ie. Poly hives), specific reference to this price will be used in the calculation as appropriate.	The number of hives and hive components (including honey in the super) destroyed will be verified at the time of incursion by an Authorised Person. A Super is defined as any upper storey hive box placed over the brood chamber (bottom box containing the queen). In this instance, the "hive" is the Super (hive body) and liquid honey (yield) and wax contained within the hive. The other components of the "hive" as defined by Industry are dealt with separately. These components include: • Queen bee (refer element "B") • Colony (Workers) (refer element "C") • Frames, and Foundation (refer element "D") • Pollen traps (some States) (refer element "D") The volume of previously harvested/extracted honey (stored off hives, i.e. in bulk containers) would be dealt with at element "F" = Value of any honey stocks destroyed. The value of a production hive changes based on the number of supers that are on the hive producing honey. The value of the hive will also be contingent on the condition and type of the equipment and the condition of the contents (bees, honey, frames, wax, pollen etc.). If the beekeeper is producing comb honey this value will also be different to liquid honey. The hives are valued on the basis of the number of supers, the condition of the boxes, and the condition of the hive as a total (Appendix 1). If insecticides are used in a Response Plan: the inside would be destroyed (the hive which is the bees, frames, wax etc) and the

	Definition of elements from the EPPRD	Evidence requirements (in hierarchical order)	Additional information/comments
			empty boxes could then be steamed or irradiated, cleaned and reused.
B	Value of the queen bee destroyed	The value of the Queen bee will be determined using the **average** prices listed in Appendix 2. These represent industry prices during the year of the Incident as published in industry magazines. Where an Owner has recent (from the prior year) auditable records to demonstrate a higher price than that listed in Appendix 2, specific reference to this price will be used in the calculation as appropriate.	There are two types of queens depending on their genetic makeup and their value varies. • Breeder queens are very valuable. Owners would need to demonstrate (via auditable records) that the queen was applied for 'breeding'. This could be achieved through records demonstrating sale of queens or records of breeding for self use. • Production queens depreciate over time and are replaced every season or every 2 seasons. The ORC will not include reimbursement for a production queen if the value of a nucleus hive is used at element "C". This is because a nucleus hive contains a queen.
C	Value for the bee colony component	The value of the bee colony component (package bees or nucleus colony) will be determined using the **average** prices listed in Appendix 2. Where an Owner has recent (from the prior year) auditable records to demonstrate a higher price than that listed in Appendix 2, specific reference to this price will be used in the calculation as appropriate.	Beekeepers are most likely to repopulate hives using nucleus colonies (4-5 established frames containing a queen, worker bees, brood of various ages, and honey and pollen resources for the colony). If the value of a nucleus colony rather than package bees is used, then the ORC will not include the value of a production queen at element "B". Note: There is a lag time for honey production when a new hive is used. This is valued at element "G". An established hive is ready to produce honey right away.
D	Replacement value for any other capital items destroyed	The value of hive components will be determined using the **average** prices schedule listed in Appendix 1. Where an Owner has recent (from the prior year) auditable records to demonstrate a higher price than	The number of hives and hive components destroyed will be verified at the time of incursion by an Authorised Person. The value of the Super (hive body) component of the hive, liquid honey (yield) and wax contained within the hive is

	Definition of elements from the EPPRD	Evidence requirements (in hierarchical order)	Additional information/comments
		that listed in Appendix 1, specific reference to this price will be used in the calculation as appropriate.	considered in element "A". In the event of fumigation, the contents of the Supers would be discarded (frames and foundation) but the Super (hive body) would be treated and reused. The other components of the "hive" as defined by industry are listed in Appendix 1. The value of the frames and foundation is considered in this element unless otherwise valued at element "A" or element "C" (noting that a nucleus hive may contain frames and foundation and therefore care must be taken not to double count the value).
E	Any other costs incurred by the beekeeper as a direct result of the Response Plan and not normally incurred	This will depend on what the Response Plan requires and will be calculated on an Incident by Incident basis. A list of standard operating costs normally incurred by an Owner and based on industry best practice is included at Appendix 3. A schedule of costs additional to those normally incurred by an Owner that are required by the Response Plan will be developed at the time of the Incident.	Required actions/treatments by Owners need to be specifically defined in the Response Plan. The jurisdictional legislative instrument (by whatever name) needs to identify the actions/treatments required that are to be undertaken by the Owner. These are costs that are incurred through requirement of the Response Plan and may include containerising, sterilisation through cold, hot or irradiation treatment, Irradiation is normally done through Steritech Australia. Transport of hives from a site and lock up of hives may also cause extra costs to be incurred. These requirements would all need to be stipulated in the Response Plan.
F	Value of any honey stocks destroyed	The volume of previously harvested or extracted honey would be determined by inspection at the time of the Incident. The price attributed to that volume will be determined at the time of the Incident.	These honey stocks are previously harvested or extracted honey, for example, stored capped honey frames or honey in bulk containers, respectively. The value of honey within the hive will be considered at element "A". This version of the evidence framework excludes the loss of

	Definition of elements from the EPPRD	Evidence requirements (in hierarchical order)	Additional information/comments
			honey stocks that arise from use of miticide strips as part of a surveillance requirement. The assumption is that the value of the honey will not be destroyed as there is a withholding period which enables the honey to be sold.
G	The loss of the estimated Farm Gate Value of products foregone, less beehive operating costs, resulting from a requirement under a Response Plan that for a specified period bees be quarantined in, or excluded from, a specified area, if applicable.	The value of products forgone will be determined using the **average** price for the value for honey in one full super, per hive, as identified in Appendix 1. Where an Owner has recent (from the prior year) auditable records (gross margins) to demonstrate a higher value of products forgone, specific reference to this value (less standard operating costs) will be used in the calculation as appropriate.	Loss of production through use of a new hive will be addressed here (the lag time for the production of new honey). A nucleus hive will take an average of a few months to reach normal levels of production.

Appendix 1: Hive components and indicative price

Note: These costs are estimates. In the event of an incursion where ORCs may be paid, the values will be reviewed and updated by agreement of the Relevant Parties to allow current and case specific information to be used. Values were reviewed and updated July 2022.

Component	Average value	Lower estimate	Upper estimate
Frame assembled	$7.85	$7.60	$8.10
Super (hive body) - Full-depth	$38.25	$19.50	$56.99
Super (hive body) - Shallow-depth	$30.37	$22.75	$37.99
Hive base	$42.50	$20.00	$65.00
Hive lid	$30.49	$23.99	$36.99
Nucleus hive - Complete with lid and bottom	$52.50	$25.00	$80.00
Queen excluder	$16.68	$6.98	$26.37
Escape board	$24.25	$18.00	$30.50
Pollen traps	$27.23	$18.00	$36.46
Strap	$12.75	$10.00	$15.49
Pallet	$225.00	$80.00	$370.00
Wax in one full super (estimate of 9 frames, 250 g each, $20/kg)	$5.00	-	-
Honey in one full-depth super estimated at 16kg (9 frames, 2 kg each, $6.50 per kg)	$117.00	-	-
Honey in an ideal super estimated at 11kg	$71.50		
Honey in one manley super estimated at 14kg	$91.00		

Appendix 2: Queen and package bees prices

Note: These costs are estimates. In the event of an incursion where ORCs may be paid, the values will be reviewed and updated by agreement of the Relevant Parties to allow current and case specific information to be used. Values were reviewed and updated July 2022.

Component	Average value	Lower estimate	Upper estimate
Production queen	$37.50	$25.00	$50.00
Breeder queen - Isolated mating or artificial insemination	$600.00	$200.00	$1,000.00
2 kg Package bees - Without queen	$175.00	$150.00	$200.00
Nucleus colony - Queen, 4-5 combs with worker bees, brood and honey	$290.00	$185.00	$395.00

Appendix 3: Operating costs

Note: These costs are estimates. In the event of an incursion where ORCs may be paid, the costs and values will be reviewed and updated by agreement of the Relevant Parties to allow current and case specific information to be used.

Expenses	
Apiary and Veterinary Chemicals	
Cleaning and Pest Control	
Sugar	
Protein Supplement	
Queen Bees	
Marketing Expenses	
Accommodation and Meals	
Freight	
Machinery and Maintenance	
Building Structure Maintenance	
Hive equipment - maintenance	
Hive equipment – purchase	
Drums and containers	
Packing Materials	
Building, (vehicle) and liability insurance	
Small tools, equipment and supplies	
Rates and land rent	
Bee site rent (government)	
Bee site rent (private)	
Laboratory fees	
Protective Clothing	
Levies	
Power and Gas	
Phone	

Expenses	
Membership and Associations	
Accountancy and Legal	
Administration	
Bank Charges	
Vehicle Costs	
Labour Cost	
Owner-Operator Allowance	
Paid Labour	