



Report on the Pollination Services Survey sent to Growers during September 2006

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Purpose:

The purpose of the survey was to gauge what the requirements for bees are for the next five years. It was hoped to be able to identify the size of the market for pollination services including when the peak times of the year are. This information will be used to inform bee keepers who might be looking to expand or come to the Territory with a report on the type of market they might have for their pollination services.



Method:

The survey was sent to 139 growers and 24 returned the survey. It was sent to a mix of cucurbit, vegetable, rambutan, carambola, and mango growers. The survey covered the areas of Darwin, Katherine, Mataranka and Nhulunbuy. Two growers notified DPIFM that they would not be completing the survey as they don't use bees. The low number of responses was expected as most mango growers do not use honey bees for pollination. A pilot survey was carried out in early September 2006 where the major melon growers in the Katherine region were interviewed to obtain their responses.

Results:

- Of the surveys returned, nine growers indicated that they do not use honey bees for pollination due to non requirement or no perceived benefit. 11 growers indicated that they rent bees from a beekeeper and four indicated that they own hives.
- Rental cost per hive per week ranged from \$10 to \$15.
- Other pollinators used included native bees, blow flies, bumble bees, feral honey bees, paper wasps and meat ants.
- Of those growers who rent bees from a beekeeper all had a verbal contract agreement – none had written or formal agreements.
- The crops using honey bees for pollination included cucurbits, rambutan, eggplant, pawpaw, citrus, avocado and some mangoes.
- From the surveys returned the area under honey bee pollination was variable from 627ha to 695ha per year.
- The hives per ha used, ranged from two to seven with the majority of growers using three to four hives per ha.

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The months honey bees are used for pollination of crops are in the following table:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Growers using honey bees	1	1	1	5	9	12	13	13	11	8	5	3
Hectares under rented honey bee pollination				200-350	363-433	593-663	533-603	488-558	428	382	210	200
Hectares pollinated under grower-owned hives					18	22	24	24	14	12	12	
Growers identifying a peak							2	2	2			

- Of the growers renting hives, all but one stated that they were able to source a beekeeper with a sufficient number of hives in the past for their pollination requirements.
- Of the growers renting hives, all but one stated that their crop quality is better and crop production has improved as a result of honey bee pollination. One grower indicated that they didn't know if crop quality or crop production has improved due to honey bee pollination.
- Of the growers surveyed who use honey bees for pollination, five growers (33%), indicated that they would not be increasing their requirements for honey bee pollination in the next five to ten years and six growers (40%), indicated that they will increase with unknown requirements. Between four growers (26% of those surveyed), it was indicated that they will require an extra 960 to 1360 hives spread throughout the year with the bulk being required in April to December.
- The growers were asked what approach they would take if there were no honey bees available for rent. The responses from those that currently rent are listed below:
 - catch native bees, create blow flies
 - not grow
 - buy own bees (four similar responses)
 - would possibly buy hives and manage own bees, this would require training
 - obtain neucs from interstate (three growers indicated this possibility)
 - fly in a beekeeper from interstate to manage hives twice per year in conjunction with other local growers (two larger growers indicated this possibility)
 - possibly employ a staff member to manage hives
 - put out more baits to attract flies and ants
 - use blow flies
 - discontinue growing or if Quarantine allows, source bees from interstate
- Growers were asked what their ideal situation would be with regard to honey bee pollination services. The responses from those growers that use honey bees are below:
 - continue to rent from reliable beekeeper (eight similar responses)
 - have a professional beekeeper who can supply good quality bees during the growing season
 - can't think of one
 - provision of native bees
- Other comments received on the survey forms included:
 - encourage and help growers and farmers to keep their own bees
 - NT Government to supply pollinating bees

- The distance we live from any apiarists would make it hard to use a commercial bee keeper, if we had bees owned by some-one else we would have difficulty in developing emergency spray regimes ie: red banded thrips seem to appear from nowhere here and do a great deal of damage over night, if we cant attack the problem as soon as possible we would suffer greater losses. With current fire management programmes we would suffer, and do, as a result of the negligence of others, would this be our responsibility as the hirer of hives. Theft is also a major problem. I do not want to be responsible for the property of others, I also have a responsibility for hygiene on our farm so excluding entry of people from food production areas is a definite plus in reducing the introduction of pests and weeds to our farm
- The government didn't support the bee keepers that have now left the NT. In the NT it's not very economic due to long distances, ie: cost of fuel and transport. Bee keepers have lost bees due to floods
- It is a good idea to have the option to access hives if necessary
- currently setting up 10 hives to rent for pollination services next season

Summary:

From this survey it is indicated that the requirement for honey bees for pollination will increase in the next five to ten years. It is estimated to increase by approximately 1000 – 1500 hives in each year with the peak period for honey bee pollination services being the months of July, August and September. With the recent exit from the Northern Territory of two major beekeepers, growers surveyed are currently looking at a number of options for future pollination services including purchasing and managing their own hives, or employing a beekeeper from interstate to periodically manage the hives here. Most growers surveyed indicated that the ideal situation for pollination services would be to rent from a skilled and reliable beekeeper.

Attachments:

Appendix 1 - Survey questions.

