



ARGOS RESEARCH NOTE: NUMBER 10, JUNE 2005

Sketch Map Results: Kiwifruit Sector

Introduction

Part of the first interviews that the social science team completed in late 2004 included orchard sketch maps. We asked each person to draw a map, picture or diagram showing the things that were important for the management of their orchard. The sketch map activity allowed participants in ARGOS to express their situation in an unstructured, visual way. Analysis of the maps provided the basis for a comprehensive report (available on the ARGOS website) as well as this research note, which sets out the main findings.

Method

In our examination of the sketch maps, we looked at each map, developing a list of features and counting them. Then we grouped the features into categories (see Table 1, in which the frequency of features on Organic Hayward (O), KiwiGreen Hayward (KGH) and KiwiGreen Hort 16A (KGHo) orchards are presented in categories). As some maps were not well labelled (see Figure 1) we used the interview transcripts to determine what the features were. The transcripts also provided descriptions of and explanations for the features.

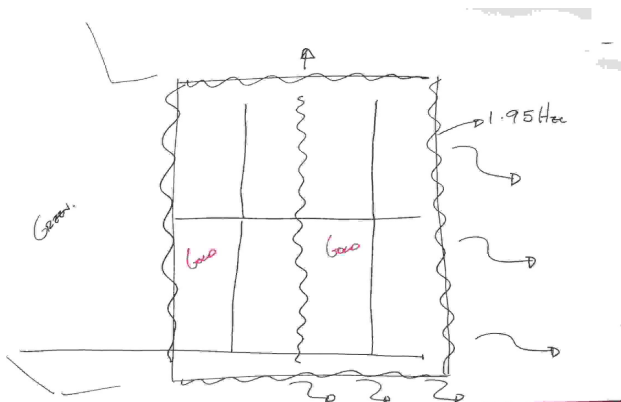


Figure 1: Example of a simple kiwifruit orchard map

Table 1: Frequency of kiwifruit map features

Category	O	KGH	KGHo	Total
No. of orchards	12	11	12	35
Spatial organisation	22	20	21	63
Blocks	11	10	11	32
Boundaries	11	10	10	31
Wind	13	17	13	43
Shelter	9	8	9	26
Prevailing winds	2	7	2	11
Wind damage	2	2	2	6
Buildings	20	18	14	52
House	11	9	5	25
Sheds	9	8	8	25
Packhouse	0	1	1	2
Transport	19	17	17	53
Roads	8	9	8	25
Driveways	10	6	7	23
Loading Areas	1	2	2	5
Neighbours	8	7	7	22
Other biota	13	7	7	27
Other crops	7	4	6	17
Other trees	4	3	1	8
Compost	2	0	0	2
Landscape morphology	13	10	10	33
Slope	5	5	5	15
Aspect	4	3	3	10
Gullies	4	2	2	8
Climate	11	11	11	33
Frost Protection	5	5	2	12
Frost Areas	4	4	3	11
Climate	1	1	4	6
Altitude	1	1	2	4
Water	20	12	6	38
Water Sources	4	4	2	10
Streams	6	1	2	9
Irrigation	3	3	0	6
Lakes & ponds	2	2	1	5
Water tanks	4	0	0	4
Drainage	1	2	1	4
Biotic context	10	6	4	20
Soils	3	3	2	8
Bush	4	2	1	7
Armillaria	3	1	1	5
Total features	149	125	110	384

Results: Kiwifruit map features

The frequencies of occurrence in each category of features were analysed statistically to see if there were any differences between the different management systems.

Analysis of the kiwifruit maps shows that the following features were important to participants:

- Biophysical aspects of the region and landscape in which the orchardists operated – slope, lie of their land, water sources and streams, climate (including frosts and wind), altitude, soils and bush.
- Boundaries and the impact of neighbours.
- Buildings and transport features.
- Organisation of the orchard - layout of the blocks and shelter belts.
- Mitigation of risks – climate managed by shelter, water for irrigation and frost protection, financial risk spread by growing other crops.

Figure 2 is an example of a map containing many features. Figure 3 shows a map with more comprehensive explanations of what was important to the management of this particular orchard.

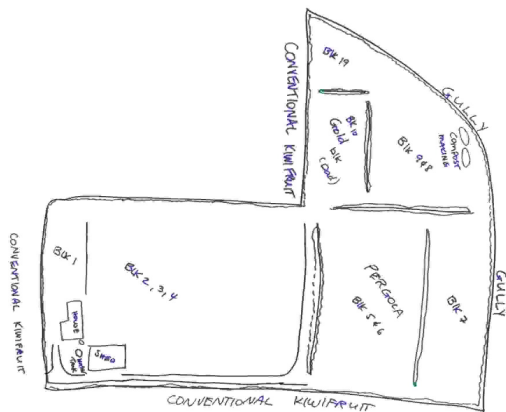


Figure 2: Example of a kiwifruit map with more detail

Comparisons of the management systems:

- Organic Hayward orchardists drew more map features than KiwiGreen Hayward orchardists who drew more than KiwiGreen Hort 16A orchardists.
- KiwiGreen Hayward orchardists were more likely to mention wind, Organic Hayward orchardists were more likely to mention biotic context and water, and KiwiGreen Hort 16A orchardists were less likely to mention buildings, water and frost management.
- Those living on the orchard reported a higher mean number of features.

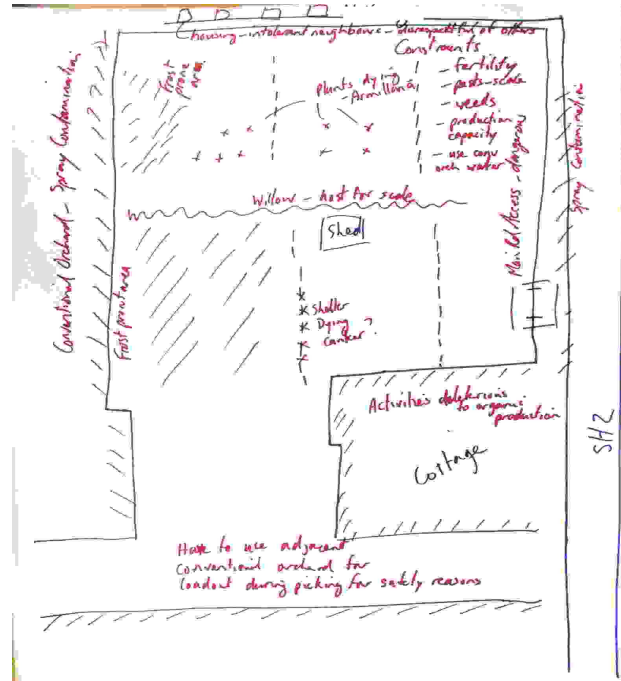


Figure 3: Map showing a greater description of features that need to be managed

Orchardist types:

The sketch map analysis allows for an expansion of the orchardist types introduced in Research Note 8. It suggests that:

- The Organic Hayward typical orchardist or orchard manager was observant, saw the operation as complex, had a concern with water, saw their house as a home and as part of their lifestyle, had an affective relationship with their orchard, and had much to say about neighbours. In some cases this relationship was problematic.
- The KiwiGreen Hayward type was similar to the Organic type but was concerned about wind and large animal pests had a utilitarian approach and a matter-of-fact relationship with neighbours.
- The KiwiGreen Hort 16A type had a simpler orchard, economic priorities, a productionist orientation, and was concerned about the climate and altitude.

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