

## 4

## Ranking

### • Wealth ranking in Sudan

This technique uses the perceptions of informants to rank households within a village or quarter of a village according to overall wealth. Researchers very often feel reticent before embarking upon wealth ranking. Wealth *is* a sensitive topic. But this game ensures that any discussion of absolute wealth does not take place with reference to specific households. Classes or groups of households may be characterised as having certain features; wealth as a whole may be discussed; but when it comes to individual households these are only compared with each other, and the discussion remains solely of relative wealth/poverty. Moreover, the game appears to be more successful if informants who are known to the team do the ranking. They may be previous interviewees, or have attended protocol meetings. Better still they may have been met and talked to *in* a very informal setting, such as in the evening.

This technique requires careful preparation: first the list of households must be prepared; second the name of head of household must be written onto separate pieces of card or paper; next the informants identified; next the interview begun with a discussion of the informant's perceptions of wealth; then the cards are sorted by the informant into piles or wealth classes; these are reviewed and changes made accordingly; and finally the informant is asked to name the principal features of each household's livelihood strategy. The ranking is cross-checked with several rankings of the same list, and the final wealth classes computed (See Grandin, B. 1988. *Wealth Ranking*. IT Publications, for detailed discussion of procedure).

This example comes from an RRA conducted in a village in Sudan.

There were no lists of households available for Faki Hashim. The team of investigators had hoped to use the sugar ration lists held by shopkeepers. These contain all the households in the immediate neighbourhood, and had the apparent advantage that people would have an incentive to be on the list, unlike tax or census lists. But on the day that the team came to collect the lists and elicit the help of a shopkeeper, the shop happened to be closed.

Instead a key informant, the supervisor of the government mango scheme and a lifelong resident of the village, was asked to name all the heads of households residing in the central part of the village. He had previously been interviewed and by this time knew the team well. From his list of about 70 a sample of 50 was taken at random, and the name of each written on separate pieces of paper. Although this may have produced a biased list through selective recollection of the informant, he did indicate that he was conducting a geographical sweep of the village to ensure none were omitted. The wealth ranking was then conducted on these 50 households.

The procedure of discussing terms for wealth and the placing of these cards into separate piles was conducted with three different informants. All three were in agreement over the features of household livelihoods that characterised their level of wealth. In general the most wealthy were thought to own agricultural land, own livestock, own transport vehicles, be involved in commercial activity or be receiving remittances from overseas. Those of middling wealth were involved in farming, but mainly as sharecroppers, and might own a few livestock; and the poorest households were those relying solely upon agricultural labouring as a source of income.

Table 1. Results of wealth ranking conducted by three informants on 50 households of Faki Hashim

HOUSEHOLDS	INFORMANTS' RANKINGS			AGGREGATE SCORE	WEALTH CLASS
	1	2	3		
1	0.72	0.4	-	-	-
2	0.29	0.2	0.2	0.69	E
3	1.00	0.8	0.6	2.40	B
4	0.43	0.6	0.4	1.43	D
5	0.72	0.8	1.0	2.52	A
6	0.43	0.2	0.4	1.03	D
7	0.57	0.2	0.2	0.97	E
8	0.29	0.2	0.2	0.69	E
9	1.00	0.2	0.6	1.80	C
10	1.00	0.8	1.0	2.80	A
11	0.86	0.6	0.6	2.26	B
12	0.72	0.4	0.2	1.32	D
13	0.14	0.2	0.2	0.69	E
14	0.43	0.2	0.2	0.83	E
15	0.72	0.8	0.2	1.72	C
16	0.86	0.8	1.0	2.66	A
17	1.00	0.8	1.0	2.80	A
18	0.72	0.6	0.2	1.52	C
19	1.00	1.0	1.0	3.00	A
20	0.57	0.4	0.2	1.17	D
21	0.57	0.2	0.2	0.97	E
22	0.29	0.2	0.8	1.29	D
23	0.86	0.2	0.2	1.26	D
24	1.00	0.6	0.8	2.40	B
25	0.43	0.8	0.2	1.43	D
26	0.72	0.4	1.0	2.12	B
27	0.72	0.4	0.4	1.37	D
28	0.43	0.2	0.2	0.83	E
29	0.72	0.2	0.4	1.32	D
30	1.00	0.8	1.0	2.80	A
31	0.72	0.8	0.6	2.12	B
32	1.00	0.4	0.4	1.80	C
33	1.00	0.6	1.0	2.60	A
34	1.00	1.0	0.8	2.80	A
35	0.57	0.4	0.2	1.17	D
36	0.43	0.2	0.2	0.83	E
37	0.57	0.6	0.4	1.57	C
38	0.43	-	0.2	-	-
39	0.43	0.2	1.0	1.63	C
40	0.43	0.6	0.8	1.83	C
41	0.57	0.6	0.2	1.37	D
42	1.00	0.6	1.0	2.60	A
43	1.00	0.6	1.0	2.60	A
44	1.00	0.2	0.2	1.40	D
45	0.86	0.6	1.0	2.46	B
46	0.57	0.6	1.0	2.17	B
47	1.00	1.0	1.0	3.00	A
48	1.00	1.0	0.8	2.80	A
49	0.86	0.6	0.2	1.66	C
50	0.43	0.4	0.4	1.23	D
No. Classes	7	5	5		

**Table 2. Major occupations of each household in the five classes produced by the wealth ranking**

Household number	
	<b>Class A – Wealthy</b>
	<b>Principal components of household livelihood</b>
5	Merchant
10	Lorry; pick-up; tractor; shop
16	Flour mill; sorghum merchant
17	Merchant
19	Farmer; brick maker; 2 lorries
30	Merchant; good agricultural land
33	Agricultural scheme
34	Army colonel
42	Big merchant
43	Army major
7	Medical laboratory owner
48	Medical assistant
	<b>Class B</b>
3	Big merchant
11	Butcher; lorry
24	Merchant
26	Lawyer; 2 lorries
31	Son in Saudi Arabia
45	Merchant; good agricultural land; shop; trailer
46	Lorry and merchant
	<b>Class C</b>
9	Supervisor of agricultural scheme, owns land and 20 cows
15	Supervisor of scheme, owns land
18	Shop, tractor, owns land
32	Agricultural scheme, owns land (owner)
7	Lorry, merchant
39	Lorry and taxi
40	Taxi
49	Lorry and taxi, son is a Doctor
	<b>Class D</b>
4	Retired army officer
6	Civil servant with agricultural land
12	Medical assistant
20	Farmer and several lorries
22	Cultivator in scheme; average farmer
23	Lorry and pedlar
25	Taxi
27	Lorry, good agricultural land and sons university graduates
29	Taxi, shop
35	Fodder shop
41	Farmer, lorry, and 2 migrant sons
44	Agricultural land, farmer, 2 migrant sons
50	Lorry; official in university
	<b>Class E – Poorest</b>
2	Small farmer
7	Poor farmer
8	Old man; small farmer
13	Street sweeper
14	Government worker, some livestock
21	Lorry
28	Not cultivating his agricultural land, migrant sons
36	Lorry

The first informant was wealthy. He began with five piles, but during checking after allocating all 50 cards he divided the pile for the richest into two. All changes then made were from richer to poorer piles. Finally he created an extra category for the very poorest, leaving seven piles in all. The second and third informants were both poor. Neither changed the number of piles from their starting five. Following the rankings the first informant was asked to name the key components to the livelihood of each household. This produced summaries such as merchant, lorry-owner, land owner in agricultural scheme, etc.

The results of the ranking are shown in Tables 1 and 2. Only 48 were eventually given aggregate scores as informants 2 and 3 were not asked to rank themselves. Informant 1 was not contained on the list. The aggregate scores for each household were then broken into 5 classes: A for 2.5-3, B- 2.0-2.49, c- 1.5-1.99, D -1.0-1.49, and E < 1.0. This exercise produced some very interesting results:

1. Clearly the majority of households rely on non-farm income sources. Very few rely solely upon farming. Those that do so are mainly in Class E.
2. The large number of merchants and owners of transport reflects the proximity and opportunities of Khartoum.
3. There are some interesting comparisons to be made between the rankings of the 3 informants. Over some households they are in close agreement: all of 17, 30, 34 and 47 are wealthy; and all of 2, 8 and 13 are very poor. But there are also some large disagreements, particularly between the rich and the two poor informants: household 44 was placed in the top pile by informant 1, but in the bottom piles by the other two. Perhaps informants 2 and 3 did not know of the two migrant sons sending remittances. Informant I may have had some special information about household 23, or just believed he was a successful pedlar.

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## • Preference and direct matrix rankings, Sudan

This note is based on the experience of using ranking techniques to investigate local incentives to tree management in a RRA exercise carried out near Khartoum by members of the Institute for Environmental Studies (University of Khartoum) and representatives from various NGOs in Sudan.

Two ranking techniques were used: pair-wise preference ranking and direct matrix ranking. I will not discuss the actual techniques (information on this can be found in RRA Notes 1), but will concentrate on a comparison of their uses and some of the potential problems of their application.

### Pair-wise preference ranking

This technique was used to compare preferences for different tree species between individuals (men, women, young, old, richer, poorer etc.) and between different groups (settled residents and displaced immigrants). The ranking highlights the differences in priorities (as expressed by the ranking of the 6 species) and differences in decision-criteria used (as expressed in the list of 'good' and 'bad' properties of each tree).

Figures 1 and 2 illustrate the results from a comparison between two distinct groups in the village of Faki Hashim, north of Khartoum. These results came from two ranking exercises conducted with a few people from each group (all men). The two groups chose different trees as the most important 6; the long-term residents choosing trees that are particularly important for shade in their homes or are common along the flood retreat farming land on the banks of the Nile. The migrants chose trees significant in the common property grazing land beyond the village.

The two groups came up with a set of criteria; some elements were common and others quite distinct (Figure 2). Sidir., *Zizyphus spina-christi*, was ranked highly by the displaced migrants group (No 1), but lower (No 4) by the long-term residents. The reasons for this can be found when the criteria for choice are

investigated. The migrants use Sidir as an important component of their funeral ceremonies; it also has a valuable fruit important in nutrition. The reason the settled group do not rank Sidir highly is because of the trouble caused by kids throwing stones over the household's walls to dislodge the fruit.

### **Direct matrix ranking (DMR)**

DMR starts with the criteria for choice and ranks each item according to the different criteria. A discussion of the criteria provides a good starting point for investigating choices. DMR can be linked to pair-wise ranking by using the list of criteria generated as the basis for the ranking. Getting a full list of local criteria is a complex task - in the above example 31 different criteria were mentioned by the two groups in their choices for trees. In the Sudan study both techniques were used for ranking and a good level of comparability between the rankings was found.

The results of a DMR based on criteria generated by a pair-wise ranking exercise are shown in Figure 3.

An investigation of the local weighting of criteria can also provide useful insight. A DMR can be followed by asking a forced question: 'if you could choose only one of the trees which would you choose'. Sometimes the top ranked item is not chosen because one particular criterion outweighs the others. Another option can be to rank the criteria

themselves and assign some kind of weighting system.

### **Issues arising**

Ranking techniques provide a useful way of investigating local decision-making criteria and they provide general comparisons between different priorities. Outstanding questions about the use of ranking techniques include:

How useful are they as a quantitative method assessment? What are the dangers of combining/adding different rankings to come to a planning decision?

What is the potential for the development of ranking techniques through criteria weighting etc. or should they be treated simply as a game context for essentially qualitative interviewing?

How appropriate are the games to local cultural situations (eg forced comparisons etc.)? Are there alternative adaptations of local games that could be used as a focus for ranking discussions.

[The full report of the IES/IIED Rapid Rural Appraisal exercise will soon be available from IIED, London. It is entitled: Rapid Rural Appraisal for Economics: exploring the incentives to tree management in Sudan.]

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**Fig 3. Direct matrix ranking**

	Samar	Seyal	Laot	Sidir	Heglig	Sunut
1. Resist drought	1	2	6	3	4	5
2. Good for growing on hard soil	1	2	6	3	4	5
3. Fast growing	6	5	2	3	1	4
4. Best for fodder animals	1	2	4	3	5	3
5. Ease of getting pods	1	6	2	5	3	4
6. Leaves as fodder	2	1	3	4	6	5
7. Fruits as fodder	-	-	-	1	2	-
8. Unripe pods are bad	-	6	-	-	-	-
9. Low for grazing	3	6	1	2	5	3
10. Gum good	-	3	1	-	-	2
11. Best fuelwood	1	2	5	3	6	4
12. Best for burning	1	2	5	3	6	4
13. Smoke less	1	2	5	3	6	4
14. Best for slow burning	1	2	5	3	6	4
15. Best smell	1	2	6	4	5	3
16. Best for building	5	4	6	3	1	2
17. For making furniture	4	3	6	4	1	2
18. For making boats	-	-	-	-	-	1
19. Making saddles	-	-	-	-	1	-
20. For rosaries	-	-	-	-	1	-
21. For human food	-	-	1	2	-	-
22. For medicines	-	-	-	-	1	2
23. Does not attract pests	-	-	-	1	2	-
24. Providing good shade	3	2	6	1	5	4
25. Ability to regenerate from seed	4	2	5	1	3	6

Criteria derived from pairwise ranking; Informants same primary school teacher (age c. 40)

- **Ranking of carpentry skills**

See RRA Notes No.6, pages 4-12. June 1989.

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- **Using ranking in training of field level staff**

### Introduction

These notes are developed from the training of agricultural extension officers from India who are front-line workers in a project aimed at training marginal and resource-poor farmers in a balanced and economic use of fertiliser. They are employed by the extension organisation for the Indo-British Fertiliser Education Project (IBFEP), funded by the ODA, in *six* states of North and Northeast India, which is currently nearing the end of its second phase.

The training as a whole emphasises participative learning, and aims to respond to participants' needs for acquiring skills to reach rural women effectively. IBFEP has recently introduced an element into the project which requires the extension officers to actively involve women from target households in their agricultural extension training. Their ability to learn what women's existing activities, responsibilities and resources might be, across six very different states, is therefore the starting point in the training. How they monitor the progress of their women's programmes is a second important aim. A technique such as ranking was therefore identified as a useful learning process which they in turn could use in the field with different groups of women to gather first hand, relevant information.

### Constructing the direct ranking matrix

The technique was introduced in three stages. The first stage demonstrated what the technique is and how it works by showing participants a ranking of fertiliser types done in an IBFEP village by Robert Chambers in

April 1988 (RRA Notes 1, June 1988). This example provided a lot of discussion and excitement and paved the way for stage two in which participants were divided up into five groups of five members each and asked to construct their own direct ranking matrix, as if they were farmers: two groups on paddy varieties, two groups on vegetables types and one group on fertiliser. The intention was to compare- the two rankings of paddy, the two of vegetables and the fertiliser ranking with the Chambers version.

Even though the participants were using their knowledge and preferences as agronomists, it did not detract from the process of experiencing the quality of discussion required to establish the list of criteria and to score them. Reaching a consensus took longer for some groups than for others. The learning process was reinforced by the fact that each group's matrix was different.

The third stage of the exercise was to ask the participants whether they would add any further criteria if they were women farmers. Those groups ranking vegetables were able to respond to this first, by adding criteria such as 'easy to cook', 'nice taste' and 'nutritious' and this encouraged the other groups to consider similar criteria for paddy, the suitability for both growing seasons and the market price. The fertiliser group had problems and this led onto discussion of how socio-economic criteria are as important to cultivating households as the technical criteria. This awareness of different but equally valid perspectives was judged to be an important outcome and one which might not have been so effectively achieved if the participants had all been asked to role play women from the beginning of the exercise.

Again the impact might have been less if one of each set of rankings had been role played as women for comparison in stage two; during that stage trainees had to experience actually doing the ranking, to accept that their colleagues' rankings were also of value and to transpose the idea to their work situations where using the technique with farmers might lead them to useful information exchange. A final reinforcement was provided however by comparing with Chambers' other rankings done in other IBFEP villages which, by

showing the variations and the similarities, increased the participants' confidence in trying it out themselves.

### Comments

This was the first time ranking had been used in the training programme and it was received enthusiastically. For fieldworkers working with groups it does offer a concrete way of collecting data and reinforcing group solidarity. In a training situation in the UK there is a limit to how much role play can realistically be undertaken; a technique such as ranking is an opportunity for participants such as these male extension officers to begin to concern themselves with issues identified by women.

As far as training for gender awareness is concerned, techniques which enable male extension workers to learn about rural women directly are invaluable and those which provide the means for women's knowledge and judgement to be the determining factors in prioritising needs and information even more so.

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