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Nutrition and RRA

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- Using a stress calendar to plan nutrition work with community development workers in Nepal

Norwegian Save the Children (Redd Barna) wanted to know more about the food, nutrition and health situation in their community development (CD) project area before negotiating the local request for health centres. The table below evolved in the project area as I summarised food and health calendars, and my notes on conversations with villagers and with the project's Magar CD workers. The latter had 2 years' experience of Magar village life, in the project's 3 panchayats lying at approximately 2000 metres. These public, translated chats were monitored by participant audiences of children and ancients, with some shorter attention from older children, women

and men as they rested on their way to or from field/water source/fodder collecting. Much of the information was confirmed by the results of a simple nutritional status baseline survey.

Numerous references to the hungry season suggest that a diagrammatic nutritional picture should have a seasonal axis; that several major general nutritional stress factors should appear together on the other axis of the same diagram for ease of comparison; and that some indication of intensity of stress ('X's) would bring out the variation in the related problems.

The evidence of the bunching of nutritional stress factors was striking, and was confirmed by the CD workers, although they had never consciously listed all these stress factors impinging simultaneously on people's lives (Table 1).

Table 1. Periods of household stress in 1985/86 in families with children under five, in Arung Khola watershed, E. Palpa, Nepal.

	Push	Mag	Pagun	Chait	Baisak	Jesth	Ashar	Shraun	Bhadra	Aswin	Kartik	Mangsir
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Rainy season						X X	XXXXXX	X X	X X	X X		
Agr. labour peaks	XX	X X					X	XXXXXX	X X	XXXXX	X	X X
Maize harvest									XXXXXX			
Hungry season			X	X	X X	X X	X X	XXXXXXXX				
Birth peaks			X X				X X	XXXXXX	X X			
Perinatal deaths							X X	XXXX	X X			
Infant deaths	X	X	X X			X X X		X	XXXXX	X	X	
Child deaths	X					X X	XXXXXX	X		X X X		
Diarrhoea deaths (0-14)						X X	XXXXXX	X		X X		
Measles season		X X										

The result of this experience for the CD workers was a request for suggestions on how to relieve some of the disease and general household stress. We noted we had no control over the rainy season, discussed the social, economic and political constraints on agricultural change, and hit on diarrhoeal disease as one thing we could actually try to effect a change that would both benefit those affected and reduce the demands on women's energies. The pattern of diarrhoeal disease and mortality suggested pitching an all-out campaign to familiarise all members of families with oral rehydration treatment of diarrhoea, for one month before the rainy season. The technique of focussing on an actual child with diarrhoea and using the mother's own equipment to demonstrate the making of rice-meal and salt solution was to be used in this connection. We substituted locally-available rice-powder for scarce sugar

in the oral rehydration solution. We also made a plan to focus on weaning foods during the next slack period after harvest, when the raw materials would be available locally.

• **Using a stress calendar for rapid community nutrition assessment**

We (three nutrition consultants) were asked by FAG's fish-farming project, Aquaculture for Local Community Development (ALCOM), to consider how useful aquaculture can be in improving nutrition in "poor households" in Southern Africa. We started our 10 days in the pilot project area in Zambia by mapping what we perceived as nutritionally relevant factors for such households, and summarised the resulting nutrition profile in a table (Table 2).

Table 2. Food consumption calendar for Chipata Plateau, Zambia.

Food	Processing	J	F	M	A	M	J	J	A	S	O	N	D
Local maize	pounded					x	x	x	x	x	x	x	x
Hybrid maize	meal	x	x	x	x	x	x	x	x	x	x	x	x
Sorghum	flour					x	x	x	x	x	x	x	x
Finger millet	beer					x	x	x	x	x	x	x	x
Sweet potato	fresh												
Cassava	fresh	x	x	x	x	x	x	x	x	x	x	x	x
Groundnuts	fresh					x	x	x	x	x	x	x	x
Groundnuts	dried												
Cow peas	" & fresh												
Beans	fresh	x	x	x	x	x	x	x	x	x	x	x	x
Beans	dried												
Pumpkin	fresh	x	x	x	x	x	x	x	x	x	x	x	x
Okra	fresh	x	x	x	x	x	x	x	x	x	x	x	x
Okra	dried												
Veg leaves	fresh	x	x	x	x	x	x	x	x	x	x	x	x
Veg leaves	dried	x	x	x	x	x	x	x	x	x	x	x	x
Wild leaves													
Mango	fresh	x	x	x	x	x	x	x	x	x	x	x	x
Banana	fresh	x	x	x	x	x	x	x	x	x	x	x	x
Wild fruits													
Meat		special occasions											
Bush-meat & mice		x x x x x x											
Poultry		o c c a s i o n a l l y											
Eggs		o c c a s i o n a l l y											
Fish	fresh	o c c a s i o n a l l y											
Fish	dried	o c c a s i o n a l l y											
Milk		o c c a s i o n a l l y											
Caterpillars	fresh												
Termites		x	x										x
Sunfl. & gr'nut oil													
mushrooms, fresh & dried		x	x	x	x	x	x	x	x	x	x	x	x
Sugar-cane		x	x	x	x	x	x	x	x	x	x	x	x

This table was presented to the project in Chipata and at a wind-up meeting in Lusaka with the project and members of the newly-formed national Nutrition and Aquaculture Committee. We re-emphasised that the basic food problem among the poor was adequate staple food supply (i.e. maize), which fish could only help indirectly through any income generated, or as barter. We also used the table to build on the project's understanding of seasonality (seen in the varying labour available to dig ponds), to raise awareness of the times of year fish might make a significant contribution to diet. These were:

- directly, through family diets, at the end of the dry season and early rainy season; and,
- indirectly, as cash, during the hungry season; or whenever mealies are actually available at reasonable prices on the market (currently a movable feast the way Zambia's maize policy is working). The technical implications centred on whether the life cycle of tilapia could be modified so that the fish mature at these 'right' times.

• Discussion

The technique is to plot by nutrition factor and by month when the factors have a potential negative effect on nutritional status. Use one 'X' for some potential stress, and bunch the 'X's' for more or evident stress.

The advantages of summarising relevant information in this way are:

- reading across the calendar gives an idea of when each factor is most crucial and therefore to be acted on if possible;
- reading down the month columns gives an idea of when people might have extra energy to indulge in new activities, as well as when they are too stressed to think of anything but their own survival;
- flexibility: any factors thought relevant can be introduced and others discarded as investigations proceed;

- it can involve anyone or more ways of getting information: documentation, administration, project staff, field workers and focus groups among the population;
- simplicity: only qualitative local knowledge is needed; data is a bonus;
- it makes use of existing data/information, with the potential of throwing new light on existing knowledge;
- gives explanatory force to any nutritional status data; and,
- you can choose whether to emphasise the time stress for a single factor affecting nutrition, or for a number of factors.

The main advantage of the stress in relation to planning is that it shows when the impact on different negative factors needs to have taken place. The main limitation is that it does not indicate exactly how to effect a change or solution. This can be addressed by continuing focus group discussions and consulting others with relevant experience.

Development of the stress calendar is needed to weight factors for importance, even if changing them is difficult. If you have data, either in a research or a programme/project context, you can assign comparative values, e.g. 1-5, to each factor for each month, ensuring that the values representing the potentially most negative effect on nutritional status get the highest score, i.e. 5 in a 1-5 range. Adding up the total for each factor (i.e. along the line) gives higher scores for more negative factors, i.e. a picture in the resulting final column of the relative importance between the factors in the overall picture. Adding the values for each month (i.e. down the months) gives a monthly weighting for nutritional stress. The problem here is how to assign values so that no factor is weighted disproportionately... I'm trying to work it out with the (partial) Nepal data.

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