Flair-Flow Europe: a novel dissemination project

Flair-Flow Europe is achieving its target of reaching small and medium-sized food enterprises in 17 countries with results from EU food research programmes in user-friendly form.

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Carrying out a research project normally embraces project planning, seeking funds, doing the actual research, disseminating the results and, lastly, seeking exploitation of the findings. Of these five steps, the last two are usually by far the most difficult and were the reason for setting up the ongoing (1991–6) Flair-Flow Europe project. The objective of Flair-Flow is to assist with, and improve, the dissemination of results from European Union (EU) food research programmes to end-users, and especially to small and medium-sized food enterprises (food SMEs). Flair-Flow is a co-operative project of the EU AAIR (Agriculture and Agro-Industry Research) and VALUE (Valorisation for Europe) programmes and is operational in 17 countries, that is the 15 EU states, with Norway and Iceland. The progress of Flair-Flow has been reported in a number of articles and is updated here.[1-4]

Structure of Flair-Flow

National networks are the kernel of the Flair-Flow project and are operational in the 17 participating states; each national network has a leader (see Table 1) and 15-20 members. The collective disseminating power of the 17 Flair-Flow networks through the 300 active network members and their downstream activities (for example, industry contacts) is immense and provides millions of potential contacts in Europe.

The 17 national network leaders, together with the project leader, co-opted expertise (for example, the Bureau Européen des Unions de Consommateurs), and officials of the CEU comprise an international network that discusses and steers Flair-Flow project policy, strategy and activities. The international network meets twice annually.

Dissemination routes

Virtually all of the information flow from EU food research programmes is by two routes (Figure 1). Route A is the traditional route where researchers publish their findings in journals or present them at workshops and conferences. These sources are often not used by food SMEs. Route B is the focused Flair-Flow route and is in addition to the traditional routes and not a replacement for them. Currently Flair-Flow is disseminating information from upwards of 100 transnational food research projects, involving more than 1000 scientists and technologists in the FLAIR (Food Linked Agro-Industrial Research), AAIR, FAR (Fish and Aquaculture Research), FAIR (Agriculture and Fisheries Research including food technologies and other aspects) and COST (European Co-operation in Science and Technology) programmes.

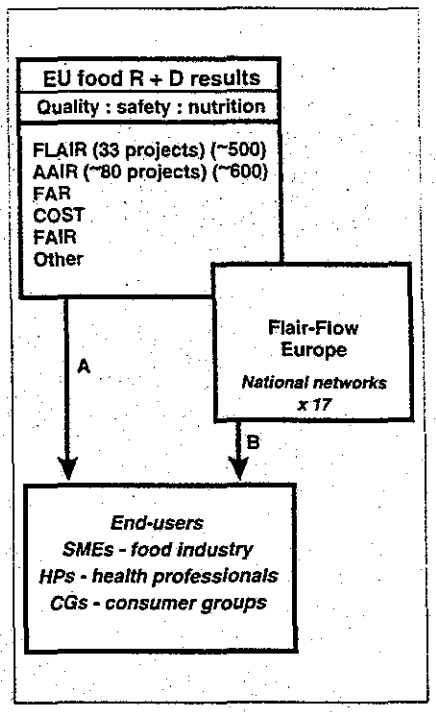

Figure 1. Dissemination routes.

Information transfer

The procedure used by Flair-Flow for information transfer is given in Figure 2 and embraces four routes, that is, one-page technical documents of research results, their reproduction in trade journals, focused workshops for food SMEs on the research results, and lastly, lectures by the Flair-Flow network leaders at workshops and conferences.

One-page documents

It was agreed at the outset of the Flair-Flow project that information from EU food research programmes for dissemination should be 'tailored' into one-page documents, written in layman's language, by the Flair-Flow project leader/management team. More than 200 of these have been prepared to

Country	Leader	Organisation	Fax
Austria	W Pfannhauser	Technical University, Graz	+43-316-837421
Belgium	I. Roze	Féd. de l'Ind. Agric. et Aliment	+32-2-7339426
Denmark	F Holm	Food Group Denmark	+45-86201222
Finland	K Poutanen	VTT Food Research Laboratory	+358-0-4552103
France (1)	J F Quillien	INRA, Quimper	+ 33-98952606
France (2)	F Molegnana	Pole Européen Agro-Alimentaire	+33-72383041
Germany (1)	W Spiess	Federal Res. Centre for Nutrition	+49-7247-22820
Germany (2)	E Blatt	Ministry of Food, Agr. and Forestry	+49-2285-294262
Greece	Y Totsiou	SPEED Ltd., Athens	+30-1-8225755
Iceland	G Valdimarsson	Icelandic Fisheries Laboratories	+354-5620740
Ireland	G Downey	The National Food Centre	+353-1-8383684
Italy	C Lerici	Universita di Udine	+39-432-501637
Luxembourg	G Schlesser	LUXINNOVATION	+352-438326
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Norway	H Russwurm	Norwegian Food Res. inst.	+47-64-970333
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Spain	J Espinosa	Instituto del Frio, Madrid	+34-1-5493627
Sweden	B Hedlund	The Swedish Food Institute	+46-31-833782
United Kingdom	S Emmett	Leatherhead Food RA	+44-1372-386228
Project Leader	*R Gormley*	*The National Food Centre*	*+353-1-8383684*
Project Secretary	*J Galvin*	*The National Food Centre*	*+353-1-8383684*

Table 1. List of Flair-Flow national network leaders.

date and have been disseminated (in the language of each country) through the networks, both as paper documents and on disk. They have been collated in three booklets (F-FE 114/93, F-FE 157/95, and F-FE 197/96). In addition, the one-page documents of interest to the seafood, food biotechnology, and meat sectors have been collated in Flair-Flow documents 187A/95, 190A/95 and 193A/95. These six documents are available from the national network leaders (Table 1).

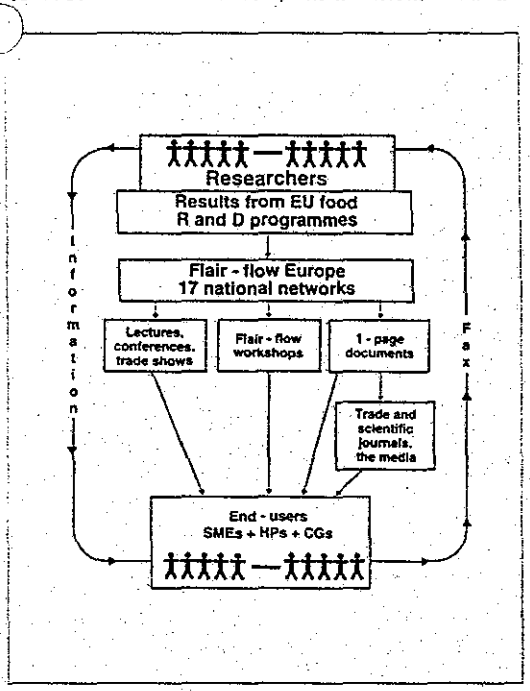

Figure 2. Information transfer.

The one-page documents are distributed (three per month) by the project leader to network leaders, then to network members and other intermediaries (for example, trade journals, scientific journals and the media) and finally to the food industry, health professionals, and consumer groups (Figure 2). Network members send the documents through their existing dissemination channels (for example, monthly newsletters) or through new routes. To-date there are about 2500 publications in trade and other journals Europe-wide, based on the one-page documents, which represents a large potential readership for the information. The mission of the one-page documents is to matchmake or generate person-to-person contacts between researcher and end-users and this is illustrated in Figure 2. The end-users are alerted to useful results via the one-page documents, and more in-depth information is then obtained by the end-user sending a fax directly to the researcher (contact names given on the one-pager), and the researcher responding directly to the end-user. All intermediaries are thereby eliminated, thus increasing speed and efficiency.

Focused workshops

Flair-Flow also operates by initiating national workshops on results from EU sponsored food research and by the participation of Flair-Flow national network members and the project leader in trade shows, food fairs, conferences, workshops and other events where information can be disseminated. The workshops involve bringing together national personnel involved in EU food research projects with representatives of food SMEs and consumer groups and health professionals. More than 120 Flair-Flow workshops have already taken place Europe-wide and are seen by national network leaders and participants alike as an excellent route for dissemination and interaction to or with food SMEs.

Flair-Flow research

While the main thrust of Flair-Flow is dissemination, it also has a research component and other activities. The research embraces identifying new dissemination routes, assessing feedback and quantification from the networks, and seeking the opinions and needs of

Source	(per cent)
In-house research	31
Suppliers[1]	21
Trade journals	13
Institutes + research centres	11
Trade shows	7
Other	6
Industry associations	5
Universities	4
EU R&D programmes	2

[1]. Suppliers of food ingredients, equipment, packaging

Table 2. Responses (per cent) of 809 food companies as to their main source of technical information.

Company size (Number of persons)	New equipment	Processes	Hygiene	Safety	Quality
1–30	63	43	35	23	47
31–100	80	58	49	35	57
101–200	80	70	45	37	72
201–500	89	74	60	46	71
>500	97	74	63	53	78
Mean	82	64	51	39	65

Table 3. Percentage of 809 food companies making large investments in new equipment, processes, hygiene, safety and quality in 1994.

food SMEs in relation to RTD (research and technological development) (see SME survey, Tables 2–4).

A night fax system (low cost) is being piloted by the Italian network leader where a large number of food SMEs are contacted directly and asked to scan a number of one-page titles and select those on which they want more in-depth information. If satisfactory, the system will be used by other network leaders.

Research on quantification/feedback through the networks indicates more than 6000 enquiries from food SMEs for follow-up information to the one-pagers and almost an equal number of non-factory enquiries, that is from academia and nutritionists. The quantification enables a project 'popularity' list to be drawn up based on the number of enquiries. To-date the HACCP/HURDLE, Flair-Flow, sensory analysis, dietary intake and food composition, and upgrading fish waste projects, are the most requested.

Flair-Flow also assists with the exploitation of results from EU-sponsored food research; it co-operates with the network of EU Relay Centres, and it publishes summary documents on EU-research programme results, that is Flair and the European Consumer (F-FE 152/94), and Flair and the European Health Professional (F-FE 153/94).

SME surveys

The needs and opinions of European food SMEs in relation to RTD was obtained in 1994, as part of the Flair-Flow project, by way of two questionnaires issued in 16 European countries, and the findings have been published recently.[5] The first was a spread wide questionnaire with six questions (809 food SMEs replied), and the second a 22-item questionnaire embracing 105 person-to-person interviews.

The main sources of technical information (Table 2) for food companies are in-house research, suppliers, and trade journals, while EU research programmes were cited by only 2 per cent of companies as their principal source. This is an alarmingly low figure and shows the size of the dissemination challenge facing everyone involved in EU research.

Data for large investments by food SMEs in new equipment, processes, hygiene, safety and quality are presented in Table 3. The term 'large investment' was not quantified, as a large investment by a small company would probably not be considered so by a big company. As might be expected, small companies were less likely to invest than large ones (Table 3). Of particular note is the lack of investment by companies in hygiene and food safety, with only 23 per cent of small companies investing in the latter. On a company product-type basis, only 23 per cent of beverage and drinks companies, and 25 per cent of fish companies invested in food safety in the last year. In contrast, 62 per cent of dairy companies and 53 per cent of meat companies invested in food safety.

Hygiene and food safety are classified separately (Table 3) with the former referring to simple hands-on hygiene training and the latter to more specialised microbiology, residue testing and other aspects.

The areas where companies most need RTD are given in abbreviated form in Table 4 and include food quality, product development, improvement, modification, and new technology. Together these account for 51 per cent of the replies. Inspection of the total data suggests that most RTD needs are in applied areas, most of which have been researched already. The requirement now is for dissemination and technology transfer. Many of the quality requirements are in the area of raw material quality; this is an ongoing problem which tends to get overlooked in the planning of food RTD programmes but is of key importance to processors. The second area is own-product quality; many of the companies replied that their most pressing RTD need was to improve the quality of their product range.

The training needs of the 105 food companies were extensive and the five most-cited items were: specialised focused courses for company needs (cited by 26 per cent of companies); hygiene (21 per cent); quality assurance and quality systems (12 per cent); courses on new technology (11 per cent); and HACCP (hazard analysis of critical control point) (10 per cent).

A proven model

Flair-Flow is now in its sixth year and the success of its procedures and output are well proven and recognised. Evolutionary operations are practised routinely by the network leaders and management team, i.e. the project is in a continuous state of review and refinement in order to enhance its performance and make it more comprehensive. There are frequent enquiries as to whether the Flair-Flow model can be used for dissemination in other fields of science. The answer is, of course, that it can, subject to certain restrictions such as scale. A dissemination blueprint (F-FE 115/94) has been produced based on the Flair-Flow experience which cites the core elements and satellites of the project.

Percentage of responses.[1]	
Food quality	20
Product development, improvement, modification	18
Technology	13
Food safety	8
Packaging	7
Shelf-life extension	7
Testing and evaluation	5
Nutrition	5
Additives	3
Automation	2
Other	12

1. 105 food companies were interviewed

Table 4. Food company research, development and technology and needs opportunities.

Aspects relating to the core elements are as follows: *personnel* must be carefully chosen and highly motivated; a *network* is a dynamic entity and network renewal is a feature of the project; *information* must be user friendly; *dissemination* routes must be practical and simple; information for *end-users* must be selective; the researcher end-user gap is bridged by *matchmaking*; *follow-through* refers to the critical importance of the availability of good follow-up information to the one-pagers; *feedback* relates to listening to the comments of end-users; Flair-Flow is *reviewed* by its international network on an ongoing basis; *benefits* relating to end-user, and network leader satisfaction are quantified.

The project satellites relate to *motivation* of Flair-Flow personnel; *pressure* and *control* to ensure project efficiency and deliverables; *dialogue* with other parties who impinge or have a common interest with the Flair-Flow project; *scale* is of critical importance as a network matrix can only handle a finite amount of information; *simplicity* is key in terms of a straightforward direct message to end-users and a contacts system based on fax or phone which is fast, simple and effective.

Conclusions

The success rate of Flair-Flow is excellent, with food research results being disseminated widely throughout Europe. The Flair-Flow dissemination model is comprehensive and well proven, and has application in many technical fields. Flair-Flow will continue until the end of 1996 and a new follow-on dissemination project (to the end of the millennium) will be proposed to the EU Commission. The information generated by Flair-Flow is available from the National Network Leaders (Table 1). ■

Acknowledgements

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