

# Agricultural advisory services: interactive web TV for virtual meetings addressing large audiences

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## Abstract

Web TV, i.e. a TV channel over the Internet, is becoming very popular in agriculture as well as in other professional (and non-professional!) sectors. Thanks to the support of the French ministry in charge of Agriculture, within the project called "Agri Web Télé et Conférences Interactives au service du développement agricole et rural", we developed a number of interactive web TV programs in 2008 and 2009, together with the implementation of videoconferencing facilities. These videoconferencing systems are also now used as low cost video studios.

In a first part of this paper, we describe the situation of the Internet in French rural areas. We verify that low cost Internet broadband accesses are available everywhere thanks to either adsl lines or satellite connections. In this context, we believe that everybody will be able to watch the programs that we are producing.

In a second part, we present and discuss our achievements (technical aspects, programs, targeted public, produced videos, interactivity with the public, statistics of connections) and draw some lessons from our experience.

After reviewing the newsletters distributed within the French Agricultural sector, and used to promote our web TV programs, we conclude on the use of videoconferencing facilities for meetings of rather small virtual groups and interactive web TV for meetings of larger groups or informing an anonymous public. We also emphasize the two lives of interactive web TV programs: the first one being the initial real-time broadcast, the second one being the on demand access to archived contents.

Key words: agricultural web TV, information dissemination

## Résumé

La web télé, c'est-à-dire la télévision via Internet devient très répandue en agriculture tant pour des besoins professionnels que d'autres qui le sont moins. Grâce au concours du Ministère français chargé de l'agriculture, et dans le cadre du projet "Agri Web Télé et Conférences Interactives au service du développement agricole", nous avons réalisé et produit en 2008 et 2009 un certain nombre d'émissions de web télé interactives en même temps que nous mettions en place des outils de web conférence et de visioconférence.

Nous utilisons parfois les salles de visioconférence également comme des studios de web télé peu coûteux.

Dans une première partie, nous décrivons la situation de l'Internet dans le monde rural français. Nous avons vérifié que le haut débit est disponible partout grâce à l'ADSL mais aussi au satellite. Dans ce contexte, nous croyons que tous les ruraux peuvent recevoir la télévision via Internet, et en particulier les émissions que nous avons produites.

Dans une seconde partie, nous présentons et discutons les résultats obtenus : aspects techniques, émissions, public visé, vidéos produites, interactivité avec le public, statistiques de connexion, et dressons quelques conclusions.

Enfin, après avoir présenté un tableau des lettres électroniques agricoles que nous avons utilisées pour promouvoir nos émissions de web télé, nous concluons sur les usages de la visioconférence pour des groupes peu nombreux, et de la web télé interactive pour des groupes plus nombreux, identifiés ou anonymes.

Nous insistons sur les deux vies des émissions de web télé interactives, la première lors de sa

diffusion en direct, la seconde en vidéo à la demande dans la vidéothèque.

Mots clés : web télé agricole, diffusion de l'information

## Introduction

For public or professional as well as for commercial organisations, which are aimed at farmers, interest in the use of video over the Internet has grown with the extraordinary increase in the number of farmers who have a broadband Internet access (Waksman et al., 2007; Waksman & Holl, 2008)

64% of inhabitants in rural areas have an Internet access against 83% of major French urban cities. The difference between rural and urban people remains high.

Table 1 shows that a large majority of French farmers are now connected to the Internet. When meeting farmers, almost all of them say they have a broadband access using ADSL on the ordinary telephone network, while - surprisingly - connections via satellite are not widespread.

Number of French farmers	470 000
- of which number of professional farms	308 000
Number of computerized farms	315 000
Number of farms connected to the Internet	230 000
- of which professional farms	195 000
- of which (source TIC-AGRI) :	
- high broadband (over 2 Mb)	30%
- low broadband (over 512kb)	60%
- no broadband	10%

Table 1. Most of French farmers are connected to the Internet (Gentilleau, 2010)

French farmers are mostly interested in the following web sites as shown in Table 2. We see the importance of informative sites that include videos as well as the high interest in e-commerce web sites.

Site	Type	Nb of connections per month	Nb of unique visitors per month
Agriaffaires	e-commerce	1 800 000	620 000
Pleinchamp	Information	1 600 000	420 000
MSA	Social Services	570 000	240 000
Agriculture.gouv	Government	560 000	390 000
Terre-net	Information	360 000	140 000
Web-agri	Information	180 000	100 000
France agricole	Ag. Newspaper	180 000	70 000
Terre-net Occasions	e-commerce	100 000	69 000
Agriavis	Opinions of farmers	100 000	57 000
Vitisphère	Information	93 000	58 000
Agram	e-commerce	85 000	62 000
Le Mag	Agricultural newspaper	84 000	32 000
Agrisalon	Information	63 000	36 000
Annonces Pleinchamp	e-commerce	58 000	39 000
TelePAC	CAP subsidies	57 000	32 000
e-Phy	Crop protection	52 000	30 000
Materiel-agricole	e-commerce	40 000	32 000

Table 2. Most popular French agricultural web sites from Google Analytics (Gentilleau, 2010)

Web TV channels are more and more active as shown in Table 3. But as far as we know, CanalAgri, a Sati.TV web channel dedicated to farmers' audience, based in Burgundy, and with which we have collaborated all along the "Agri Web Télé" project, is the only one that allows interactivity, i.e. the web spectators may participate in the debates or discuss with the stakeholders who present ideas or experiences, thanks to chat or e-mail facilities.

Channel	Update period	Type
La France Agricole	Daily	Newspaper
La télé agricole	Daily	Commercial
Terre-net	Daily	Commercial
TV Agri	Weekly	Commercial
Terre d'infos	Mainly during the Paris Ag. Show	Agricultural Chambers
Arvalis Web Télé	Not regularly (when appropriate)	R&D Institute
Sati.TV Canal Agri	Not regularly (when appropriate)	Ag. Chamber

Table 3. Well known French agricultural web TV channels

The ground idea of our "Agricultural Interactive Web TV and conferences" (Waksman & al., 2009) was to implement and to confirm the interest of the following techniques in the context of our R&D organisations:

- web conference associated with phone conference
- videoconferencing
- interactive Web TV

The main results of this two year R&D project are presented hereafter with a special emphasis on the interactive web TV.

## Results

The web conference experiences were successful even for training sessions, for software demonstrations and on-line help. The tools used were dimdim.com, NetViewer and LogMeIn solutions.

The videoconferencing experiences enable us to draw:

- specifications to be used in calls for offers, describing a network of videoconferencing facilities, to be used by organisations wishing to implement such a facility
- recommendations for organising and animating videoconference meetings.

Documents describing good practices were produced for both web conferences and videoconferences to help agricultural advisory organisations to efficiently use these tools.

However, during the project, our main efforts were dedicated to the organisation of interactive web TV programs. The objective was that each organisation participating in the project develop its own program. The organisations involved were Agricultural Chambers, especially these of Côte d'Or and Sarthe, R&D Agricultural Institutes (Cnda, Itavi, Acta), networks of farmers' groups (Trame and Fncivam), Agricultural University of Dijon and vocational training organisations of Burgundy.

To achieve this goal, we produced documents describing good practices for:

- developing a scenario with successions of videos and roundtables,
- creating and editing videos,
- promoting real time participation in the program, which may become a virtual meeting thanks to a chat window on the web site that enable people to send their questions.

Appropriate duration of programs has been much discussed. Our programs became shorter after a few experiences as shown in Table 4. The duration of our emissions remained higher than these of ordinary TV programs, but far shorter than normal training sessions or informative meetings.

We also discussed the time schedules of our programs. For organisational reasons we used to broadcast at the beginning of the afternoon, which we know not being the time where farmers have the best opportunity to sit in front of their computer.

Program	Date	Duration	Nb of connections		
			During live broadcast	On day of live broadcast	Total (live + podcast)
Short commercial circuits	02/12/2008	3h	62	98	3 124
Agro-forestry	13/03/2009	2h	91	145	990
Good practices for crop protection	19/05/2009	1h30	56	104	2 386
Agriculture and biodiversity	25/09/2009	2h10	61	96	1317
Sustainability of fish farming	08/10/2009	1h40	81	161	1193
New services, new revenues for farmers	22/10/2009	2h15	48	97	456
Beekeepers, farmers: interests that converge	17/11/2009	2h15	68	141	670
Synthesis	04/12/2009	1h30	19	?	?
<b>TOTAL</b>		<b>16h30</b>	<b>486</b>	<b>842</b>	<b>10 136</b>

Table 4. Programmes created within the "Agri Web TV" project (updated 9 February 2010)

Gathering 50 to 100 people watching a live broadcasted web TV program seems to be a good result when compared e.g. to travel cost and time savings it allows. More interesting is the larger number of times each sequence is accessed when available on demand: more than 10 000 accesses to our video sequences can be seen as a real success.

Tables 5.1 to 5.4 describe the programs performed during our two year project. The final broadcast was dedicated to the reports of participants about their achievements and conclusions. This is the only program not available on [www.sati.tv](http://www.sati.tv) but on [www.eduter.fr](http://www.eduter.fr).

<b>Short commercial circuits and relocalisation (12 sequences) - Fncivam</b>	<b>Agriculture and biodiversity (10 sequences) - Agricultural Chambers</b>
Short commercial circuits and relocalisation... General presentation	Introduction and definition
Description of different types of short commercial circuits	Boistray marshlands
Short food circuits and relocalisation in the Lunel area (South-East of France)	Fragile areas
The AMAP network (associations of producers and consumers)	The Villard de Lans bovine breed
An AMAP in Burgundy	Conservation of livestock breeds threatened
A project of relocalisation of Agriculture in Paris area	Soil, a living environment
Short commercial circuits and new territorial dynamics in Sarthe county	The invisible biodiversity
Collective catering	North of Isère county: the biodiversity at farm level
"1+10" video: Françoise Reiller, organic producer at Herbeys	Biodiversity: a case of all
Alimenterra European programme	Conclusion
"From farm to farm" operation	
Short commercial circuits: debate and conclusions	

Table 5.1 – Programs developed by Fncivam and Agricultural Chambers

<b>Agro-forestry (6 sequences) - Agricultural Chambers</b>
When trees and crops associate, the Agro-forestry!
Agro-forestry, state of the art
Testimonies and questions about agro-forestry by farmers in Sarthe county
From bocage landscape to agro-forestry: a logical approach?
Large crops: other ways to produce?
Supporting Agro-forestry production systems

<b>Good practices for crop protection (8 sequences) - ACTA</b>
Presentation
Transporting chemicals
Storing chemicals
Controlling sprayers
Preparing spray
Management of remaining chemicals
Packaging
Conclusion

Table 5.2 – Programs developed by Agricultural Chambers and ACTA

<b>Sustainability of fish farming (6 sequences) - ITAVI</b>
What is fish farming?
The job of fish farmers
The challenges to face when fish farming
The sustainable fish farming
Idaqua simulation tool
Conclusions

<b>New services, new revenues for farmer (10 sequences) - TRAME</b>
New services: challenges and opportunities
To host tourists, a new market (1): testimonies
To host tourists, a new market (2)
To meet the requirements of local authorities (1): testimonies
To meet the requirements of local authorities (2)
New needs of families and enterprises (1): testimonies
New needs of families and enterprises (2)
Innovative commercial approaches
Farmers, producers of compost
The need for support new approaches

Table 5.3 – Programs developed by ITAVI and TRAME

<b>Beekeepers, farmers: interests that converge (9 sequences) - CNDA</b>
Honey production: the context
Reportage: The Business of beekeeper
Beekeeper, farmers: two complementary businesses
Reportage : meeting in the fields
The pollination
Reportage: the pollination
Food resources of bees
Reportage: Planting flowers for the bees
Conclusion: Which future for the honey productions?

<b>Synthesis program (9 sequences) - ACTA Informatique</b>
Agri Web TV et conférences interactives": project presentation
Videoconference: needs and usages
Videoconference: technical solutions, costs and savings
Online videos and DVD
Web TV for French Agriculture: the sati.tv example in Côte d'Or
Preparation, realisation and broadcasting of a Web TV emission
The Web TV programs developed within the project
Videoconference and videos for vocational training
Conclusion: which perspectives for the Web TV and videoconferences for rural and agricultural advisory activities?

Table 5.4 – Programs developed by CNDA and ACTA Informatique

## The marketing of web TV programs through electronic letters

During the project, we promoted our web TV programs through a weekly newsletter edited by ACTA Informatique that is sent to around 28500 e-mail addresses. The "Agri Web TV" project would not have been successful without this newsletter that enabled us to recruit participants.

The newsletters dedicated to Agriculture are really popular in France and a few of them have more than 30000 subscribers: agrisalon.com (daily), vitisphere.com, terre-net.fr and pleinchamp.com (weekly).

We have had the feeling that RSS feeds could replace newsletters. This was not the case even if the editors have no guarantee that the subscribers really read their newsletters.

A yearly survey (Gentilleau, 2009) showed that 70% of farmers subscribe a newsletter. In 2008 farmers received a mean of 2.8 newsletters per week (against 1.8 in 2007).

## Conclusion

From the results of works presented here, we can state that the interactive web TV proved to be a very interesting and successful tool to address rather large audiences of farmers and advisors.

Taking into account the high proportion of farmers connected to the Internet through high speed connections, we estimate that our agricultural R&D organisations should propose to farmers daily programs. This would be efficient and not that expensive thanks to the use of our networks of videoconference facilities that would enable to interview our scientists or technicians without asking them to travel.

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