RuralCat, the virtual community of the Catalan agricultural, food-industry and rural world

Promoted by
Rural Innovation Department
General Directorate of Food, Quality and Agricultural Industry
Department of Agriculture, Food and Rural Action
Catalan Government

www.ruralcat.net
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2. Main Ruralcat services
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To provide an information platform to help the Catalanian agricultural sector to grow up

- To provide timely and current information related to rural, agro-food, the farm agronomic techniques
- To provide support and resources for training, both in distance and attended
- To provide services that facilitate the work of people associated with the rural world
- To facilitate knowledge management and interaction between the rural community
### Catalonia

- **Population**: 7,475,420 inhabitants
- **Population density**: 232,8 hab/km²
- **Surface area**: 32.107 km²

### Agricultural indicators

- **27% of the surface area is for crop cultivation**
- **# of Farms**: 54,192
- **Average surface (ha)**: 21.5 hectares
- **Main crops**:
  - Cereals (wheat, barley, blat)
  - Fruit (orange, peach, apple, pear)
  - Olive
  - Legumes
  - Grape
  - Vegetables

### Water indicators

- **Water at Reservoirs**: 3,127,76 Hm³ (68.7% of total capacity)
- **Total volume of water distributed to the farms**: 1,420,633 (miles of m³)
- **Average water consumption for agricultural surface in irrigation**: 5.684,9 m³ / ha
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Services addressed to collaborate and share information between farmers with common interests (geographical, crops, ...)
On Farm Services

- Access to the Agricultural Meteorological Network stations, with on-line:
  - Temperature
  - Evapotranspiration
  - Rainfall
  - Humidity
  - Wind speed & direction
  - Others
- Hourly, daily and monthly data by station
- Access to historical series average results
- 190 meteo stations and more than 4000 variables
• Plagues status query depending on the historical data of each station.
• Calculation algorithms for the representation of plagues models.
• Implementation of Frozen hours and Day degrees for the calculation of plagues models

Carpocapsa
Mottled in pear and apple
Adoxophyesorana

Peach grapholita
Pandemis heprana
Oriental peach moth

Peacock Spot
Vinyeward mildew
Unicula nector

Pyracelariosi in rice
Potatoe mildew
Pear Estemfilios
• Importing forecasts from Weather Catalan Service
• Status visualization of risk of frost in a Catalan map divided by regions
• Frozen Forecasts for today and tomorrow
• Alert notification subscription by email and SMS
On Farm Services

Irrigation recommendation tools

It provides support to the decision of how and when to irrigate.

The tool calculates on-line the water needs of crops in a flexible and simple, using daily data obtained from the Catalonia Agrometeorological Network (XAC) from the Weather Catalan Service.

The farmer configures his crops information (type of crop, type of soil (soil data), the irrigation system and weather station). SMS and eMail are sent to the farmers weekly with their recommendations.

<table>
<thead>
<tr>
<th>Resumen de resultados</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dades climàtiques:</td>
</tr>
<tr>
<td>Evapotranspiració referència setmana anterior (ETo): 21.40mm / 214.00mm³/ha</td>
</tr>
<tr>
<td>Precipitació setmana anterior (Pi): 1.30 mm / 13.00mm³/ha</td>
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<tr>
<td>Precipitació efectiva setmana anterior (Pe): 0.00mm / 0.00 m³/ha</td>
</tr>
<tr>
<td>Característiques de la plantació i el reg:</td>
</tr>
<tr>
<td>Coeficient de cultiu de referència (kc): 1.10</td>
</tr>
<tr>
<td>Percentatge d'ombre: 11%</td>
</tr>
<tr>
<td>Coeficient de cultiu augmentat per l'ombre (kc*): 0.30</td>
</tr>
<tr>
<td>Cañal específic de reg: 2.812.50 l/ha*h</td>
</tr>
<tr>
<td>Recomendacions del reg setmanals</td>
</tr>
<tr>
<td>Necessitats hídriques de la setmana: 6.52 mm 65.16 m³/ha</td>
</tr>
<tr>
<td>Necessitats tot reg de la setmana: 7.24mm 72.40m³/ha</td>
</tr>
<tr>
<td>Hores de reg: 25.74 h</td>
</tr>
<tr>
<td>Si vols guardar nombra setmanal la recomanació de reg per aquest cultiu, el pots guardar amb el nom:</td>
</tr>
</tbody>
</table>

**CAMPAIGN 2011:**
- 30 shipments
- 9864 SMS sent // 19,499 recommendations received by SMS
- 13,923 emails // 40,959 recommendations received by mail

**CAMPAIGN 2011:**
- 52 shipments
- 1091 SMS sent // 2375 recommendations received by SMS
- 4660 emails // 9982 recommendations received by mail

Agriculture

Gardening
Process & Methodology

1. **Farmers Crop Configuration**
   - The configuration includes parameters like:
     - Crop type
     - Soil type
     - Irrigation system
     - Weather station reference

2. **Calculation process**
   - Using:
     - Crop type
     - Crop dates
     - Irrigation types
       - Superficial
       - Local
       - Sprinkling
     - Efficiency parameter

3. **Recommendation Delivery**
   - Delivery Channels:
   - Mesures (Station: CABAN):
     - ETO: 16.4, PRECIPITATION: 3.2
     - SMS: olives: 14,48 m³/ha, 0,01 h
Facilitates fertilization planning for major crops in Catalonia

Recommendation types:
• Fertigation: Implementation of fertilizers with irrigation water, for productive purposes
• Tanning

Sends email and SMS notifications based in farmers options and geographical localization
Based in the soil properties, the irrigation water characteristics, the crop type and land size

The calculation of the fertigation recommendation is based on needs of the crop fertilization (No withdrawals!) . For example:

- Cover with soil?
- Organic fertilizers added previously?
- Nitrogen content in the soil in nitrate, phosphorus and/or potassium form
- Analysis of nitrate in water + volume of irrigation water for irrigation applied to the crop

Gives recommendations for the N, P, K
Peach

Most varieties are in the stage G - H - I

Grafolita: remain high flying first generation. Should treat the farms where they capture more than 15 adult ones.

Arrufat: observed symptoms of the disease, we recommend maintaining plantations protected during period.

Smoke: to avoid damage to the fruit should be treated with sulfur sensitive varieties.

Aphid green: plantations must monitor and treat, where observed the formation of new collective lónia.

**PERERA**

Psil below: started the birth of second generation larvae. We recommend reviewing the deal and plantations where there are myriads of psil.
Process & Methodology

1. Farmers subscription to phytosanitary alerts
   The configuration includes parameters like:
   - Station
   - Crop type

2. Notification process
   Check list of farmers that are subscribed in that station

3. Alert notification delivery
   Delivery Channels:
   - Station: La Tallada d’Empordà
   - Crop type: Apples and pears
   - Pests: Mottled and Carpocapsa
### Pesticides [Edition 9]

**Course level skilled manipulator and applicator of pesticides**

This course is designed to respond to the training of agricultural professionals who are required to obtain a driver's handler and applicator of pesticides level qualified. Students will do the distance learning course (except for the practical examination), via Internet, through the portal RuralCat, where they find content and course activities.

### MACHINERY

Operation and maintenance of machines and tractor driving (Edition 1)

### FERTILIZATION

Agricultural fertilization (edition 5)

### ECOSYSTEM

Water, soil fertilization. Ecosystems. (Edition 1)

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- Publication of the training provided by the Agricultural Schools of the department
- Training agendas, course contents and resources are published.
- Application and Internet courses are accessible in the private area
On-line inscripción to the on-line courses

Courses are coordinated by the agricultural schools

In 2011:
- 17 courses were given / 45 editions
- 78 on-line classrooms
- 1,649 students

Forecast 2012:
- 20 courses are planned
- 95 on-line classrooms
- More of 2,500 students
- Technical conferences are conducted all over the territory in order to transfer and share technological knowledge among all the sector, organized by the Agricultural department.
- An agenda of the conferences and the materials are available on-line.
- In 2011, more than 160 conferences were conducted and more than 550 lectures have participated.
• The irrigation office promotes, organizes and coordinates all the services and activities offered by RuralCat related to irrigation. From technology transfer, training, recommendations, technical information to personal advice in irrigation.

• The irrigation office was opened in 2012 and has a physical office in Tarrega, where a group of technicians give personal advice to farmers and coordinate all the irrigation activities and services.
• Personal area that allows the user to have access to all the personalized services & to be in contact with other members.
• Groups with common interests or working together on a project.
• Services can be configured from a service catalogue with:
  - Wiki
  - Forum
  - News
  - Agenda
  - Activity notification
  - Library
• Each sub-community is managed by a leader that accepts new members and manages user rights form the sub-community.
• Started in May’2010

• Actually, subcommunities working on:
  - Agricultural strategy group
  - Agricultural Irrigation group
  - Wine group
  - Strategic Plan agrifood R + D in Catalonia
  - Community of advisors
- Presence in the main virtual communities

- RSS Service

- “I like” Facebook button integration

Followers on Twitter: 854
Fans on Facebook: 1.237
• Daily news published
• Weekly report emailed to subscribers with the week activity
• Most read news and most send news sections
### Agenda

**Through each of the following areas can consult the program and the documentation has the seminars conducted under the 2011 PATT:**

**Index of topics:**
- Agritourism and Rural Development
- Beekeeping
- Rice
- Poultry
- Summer Cereals
- Winter cereals
- Citrus
- Rabbit
- Energy saving and renewable energy
- Forage, and oilseed proteaginases
- Fruit
- Nuts
- Soil management and fertilization

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>12 MAR</strong></td>
<td><strong>BARCELONA</strong>&lt;br&gt;CAP reform: subsidies to income</td>
</tr>
<tr>
<td><strong>12 MAR</strong></td>
<td><strong>PALS</strong>&lt;br&gt;Traditional varieties in garden</td>
</tr>
<tr>
<td><strong>13 MAR</strong></td>
<td><strong>BELLÀQUAJOCA</strong>&lt;br&gt;Days of irrigation in southern scrub: irrigation strategies in olive</td>
</tr>
<tr>
<td><strong>13 MAR</strong></td>
<td><strong>MALGRAT DE MAR</strong>&lt;br&gt;FDO crochet bean - crop varieties and</td>
</tr>
</tbody>
</table>

**DIES DE REG AL GARRIGUES SUD<br>ESTRATÈGIES DE REG EN OLIVERA**

**Jornades tècniques**

- **Main events agenda for the sector around Catalonia:** Conferences, technical seminars, courses and activities, agricultural fairs
- **All the documentation of the technical seminars organized by the agricultural department is available on-line**
Technical dossier is a publication of the Department of Agriculture, Livestock, Fisheries, Food and Natural Environment, destined to spread the food industry technical aspects of topics. As a monograph, discusses the highlights of the agricultural production and processing from the contributions of specialists in the Department itself and RITA, universities and the productive sector.

**Hunting management**

**Winter Cereals**

**Machinery for pesticide application**

- Technical magazine published by the Agricultural Department with actual or season topics
- Specialists from Universities, scientific innovation governmental departments, productive sector enterprises contribute
"We need to reassess the forest and forest products"

The proclamation of 2011 International Year of Forests, by the United Nations, represented an opportunity for universal protection and valorisation of forest areas. In Catalonia, the heads drafted the Declaration of Montserrat were organized various workshops, activities and areas of participation and promoted RuralCat, but we wanted to interview Rosseend Castellon, president of the Forestry Consortium of to know a bit more reality in forestry and forest owners in our country.

Forestry and Natural

INTERVIEW

"The primary sector has reduced its weight as a consumer of energy in Catalonia"

The year 2012 has been proclaimed the International Year of Sustainable Energy for the Organization of the United Nations, in an attempt to generate and improve energy efficiency and needs of life and the environment worldwide. This overview, a sector of Catalonia, like any other sector, needs to consume energy and, in this interview, Mate Masia, director of the Catalan Institute of Energy explains what existing policies and their objectives and their consequences the food sector and rural

Rosseend Castellon, has a degree in economics and chair the Forestry Consortium of Catalonia (CFCA), the association of forest owners in Catalonia, which currently has 500 members. The main objective of the Consortium is to express the interests of forest ownership, representing the front of forest owners and social partners, to improve the economic conditions and the environment and forest owners, and promote joint pro-Administration. The training, knowledge transfer and all associated legal and other technical aspects are managed by the Association of the Rural and forest companies. The association also develops educational activities and publicize the real sector of the population in general.

INTERVIEW

Mate Masia
Director of the Catalan Institute of Energy

Rosseend Castellon
Chairman of the Forestry Consortium of Catalonia

• Interviews with people of different agro-food sector and rural areas.
• During 2011 have posted a total of 21 interviews

Related Links
1. Forestry Consortium of Catalonia
**General information**

TECHNICAL INFORMATION contains documents and information such as statistics, studies, tests and recommendations that go beyond the strict present. This section includes the following sections:

- **PLANT HEALTH**
  - The Plant Health Service of AMD through RuralCat, aims to improve the dissemination of information to detect, identify, fight and control the various pests and diseases of our crops. You can find information about:
  - Fruits
  - Horta
  - Vinya i M.
  - Espais Vells

- **R & D**
  - Researchers from the UDL "patented" four new plant varieties
  - Researchers at the University of Lleida (UDL) have achieved in the last year four "patents" for new varieties of pears, asparagus, peas and corn. This is exactly the title plant variety and...

- **Latest Monthly Notices Phytosanitary**
  - MARCH 2012

**Technical information & resources**

- **Agriculture production technical information**
- **Production factors**
  - best practices, and resources (legislation, consultancy services & funding):
    - Energy
    - Fertilization
    - Irrigation
- **Business Management services**
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2 main processes are managed:

- **Operation process**: ensures the correctly day to day operation of the portal and the services:
  - Help Desk to the users
  - Content, services and information management
  - Computing infrastructure maintenance (24x7)

- **Dinamization process**: ensures the evolution and the update of the portal:
  - Based on a 3 month defined plan, with the users & DAR managers input requirements
  - Performance and success indicators are follow up monthly in order to improve and measure the portal & services performance and use
Team Project based in two separated teams coordinate by the project manager and an advisor chapter made up of agricultural and technology experts.
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• Logical systems architecture designed taking into account scalability, reliability & performance criteria

• Based in 100% open source software:

  [Liferay logo] Portal management
  [Moodle logo] eLearning platform
  [Zimbra logo] eMail
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- New **agrometeorological information services**
- **GIS services integration**, like GIS viewer to access to some data applications, or localize the agenda events, etc.
- **Incorporate location services** to actual services based on the farm geographical position (Ex. Meteo service, irrigation recommendation, service, ..)
- **Mobile apps** to main RuralCat on-farm services
- Become an **eCommerce platform**, where farmers can offer and sell their products directly to the consumer or other agricultural stakeholders
- Specialized and **thematic portals**, like the Cheese Virtual Community
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Main 2011 statistics

- Total registered users: 17,352
- Total number of visits: 365,752
- Total number of page views: 1,905,404
Thank you for your attention...  
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