



PROJECT “CYPFIRE”

Cypress windbreaks against fire: a feasible, economic and ecological solution for forest safeguard and protection in the Mediterranean countries.

Identification Number: 2G-MED09-070

Duration from June 2010 to May 2013

Objectives:

- demonstrate that the cypress barriers are a “green” way to solve many forest problems connected with fires in the Mediterranean countries
- to make aware the population of the fire risks.

As individuals and as a society, we must take responsibility for our forests and ensure that the most feasible, economic and ecological measures are taken to protect them.

We should seriously ask ourselves what is going wrong after decades of investigation in fire causes, and after having put so many efforts in fire prevention.

Until now the control of forest fires has been based on theoretical and/or traditional models, but the negative data (number of fires/year and surface burned in ha) reported by Forest Fire in Europe (2010) are asking for new studies and innovative approaches by using specific vegetation (e.g. trees) or new techniques to prevent the start and the spreading of surface fires.

The P.O.MED CypFire suggests a new approach based on the plantation of a multiple rowed barrier of cypress to reduce the impact of fire on the environment, on the rural economy and on the beauty of landscape by eliminating the anaesthetic and very expensive fire-breaks.

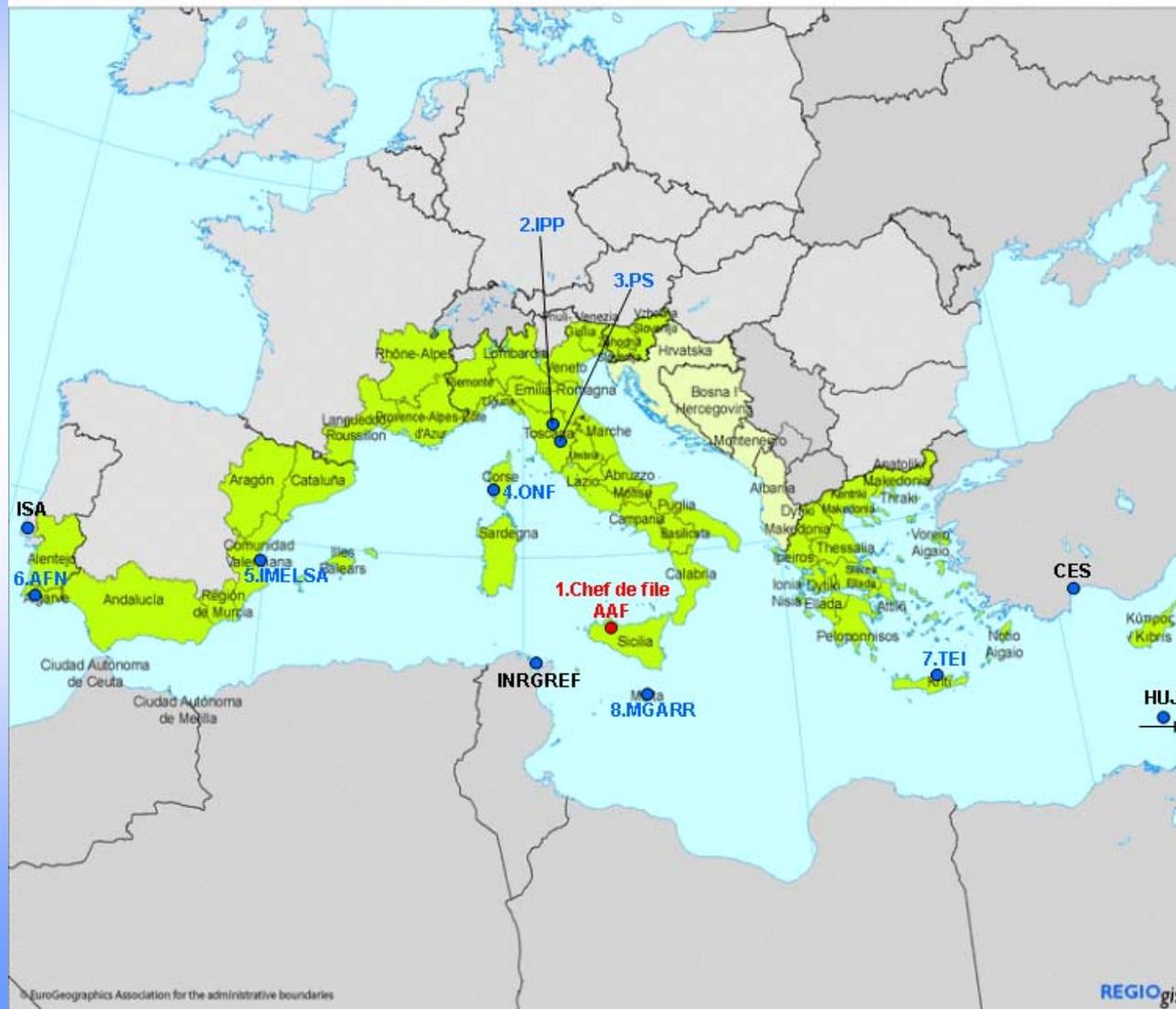
Why the choice of cypress?

- cypress is an autochthonous species of SE Mediterranean countries and naturalised in Southern Europe, tolerant to the dryness and to poor soils;
- all plant materials are flammable, but cypress is a less flammable species
- the litter of cypress is very compact and very humid, and produces an allelopathic stuff which does not allow any seed germination.

To control the fires the cypress clones must be selected for their cypress canker resistance and for their crown shape with horizontal, very thin, and long branches.



Structural Funds 2007 - 2013: Transnational Cooperation Mediterranean



■ EU27 Cooperation areas
■ Other cooperation areas

1. *CHEF DE FILE Assessorato Agricoltura e Foreste (AAF) Regione Sicilia*
 2. *Istituto per la Protezione delle Piante (IPP)*
 3. *Amministrazione Provinciale di Siena (PS)*
 4. *Office National des Forêts (ONF)*
 5. *Diputacion de Valencia (JMELSA)*
 6. *Autoridade Florestal Nacional (AFN)*
 7. *Technological Educational Institute of Crete (TEI)*
 8. *Mgarr Kunsill Lokali (MGARR)*
- Istituto Superior de Agronomia (ISA)*
- Institut National de Recherches en Génie Rural Eaux et Forêts de Tunisie (INRGREF)*
- The Hebrew University of Jerusalem (HUJ)*
- Akdeniz University (CES)*

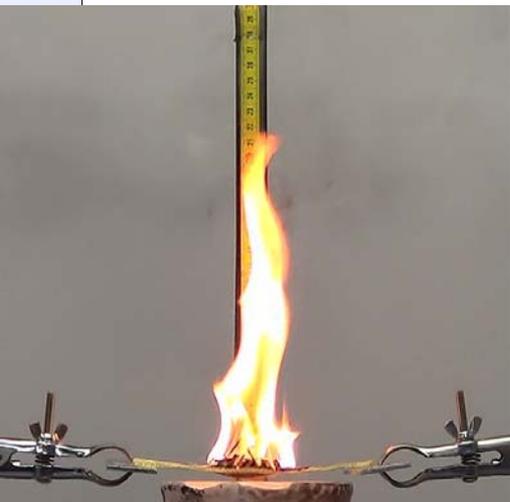
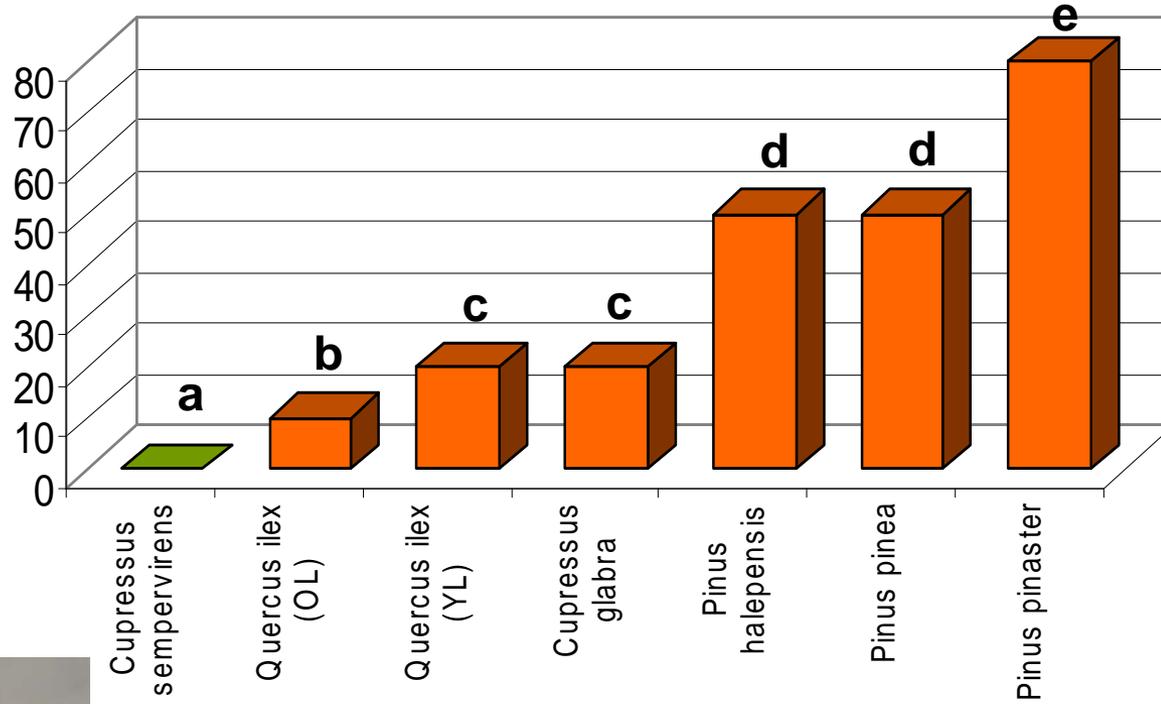


MAIN RESULTS

BIOMASS

Ignition frequency (%). Fresh material

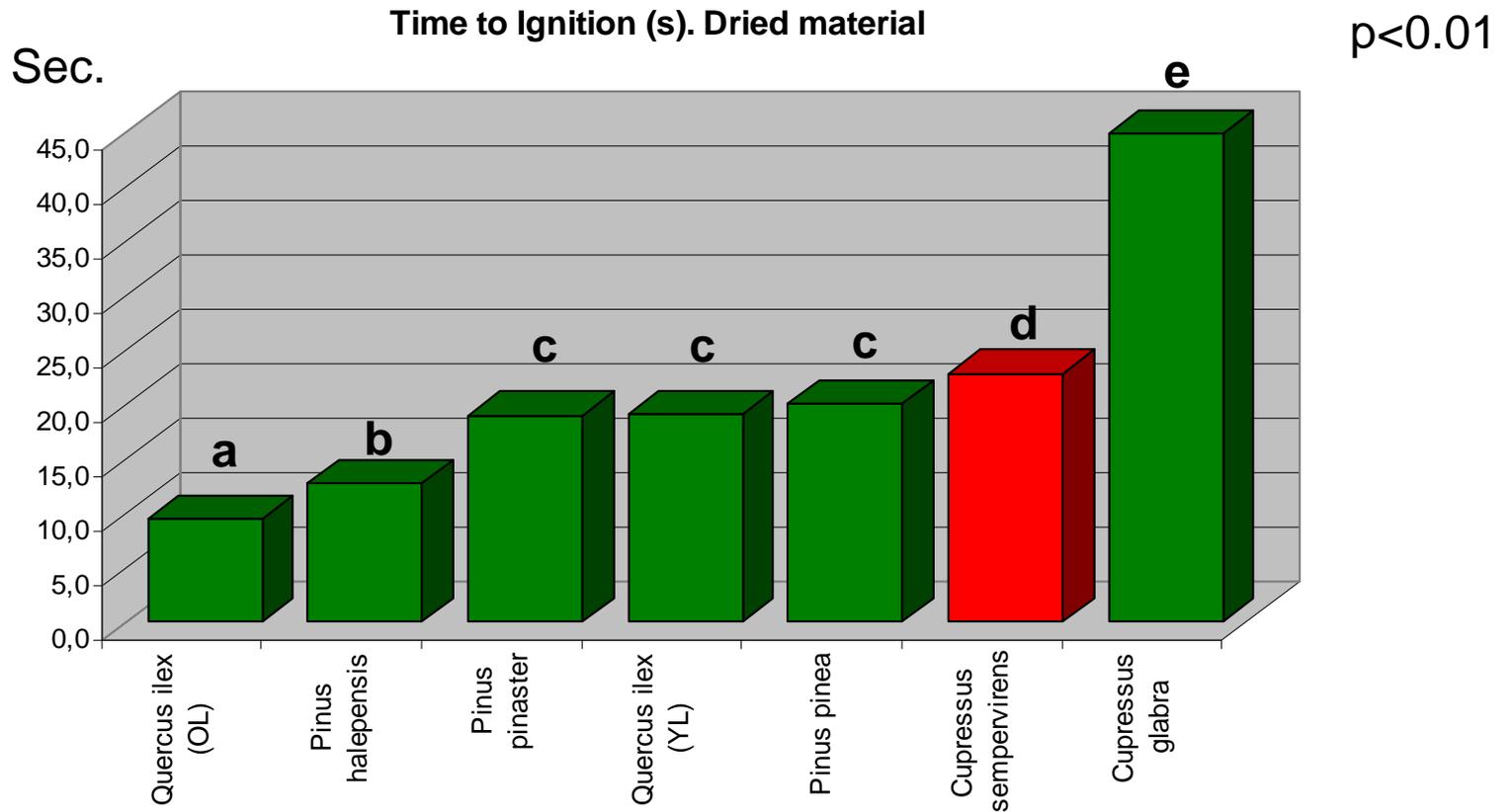
$p < 0.01$



NECROMASS - Litter

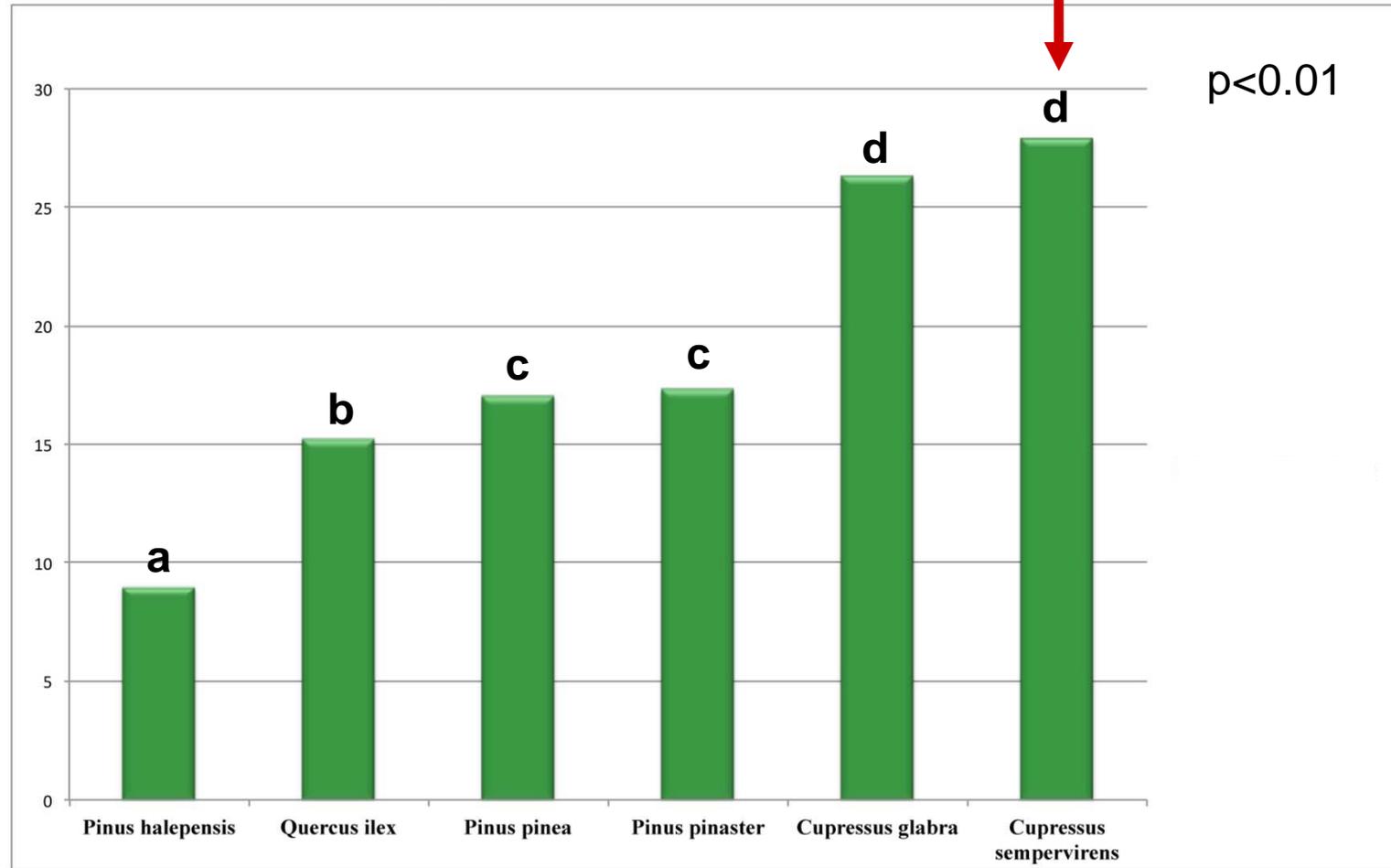
Species	Ignition frequency (%)
Pinus halepensis	100%
Pinus pinea	100%
Pinus pinaster	100%
Cupressus glabra	99%
Quercus ilex	97,3%
Cupressus sempervirens	90,3% 

BIOMASS

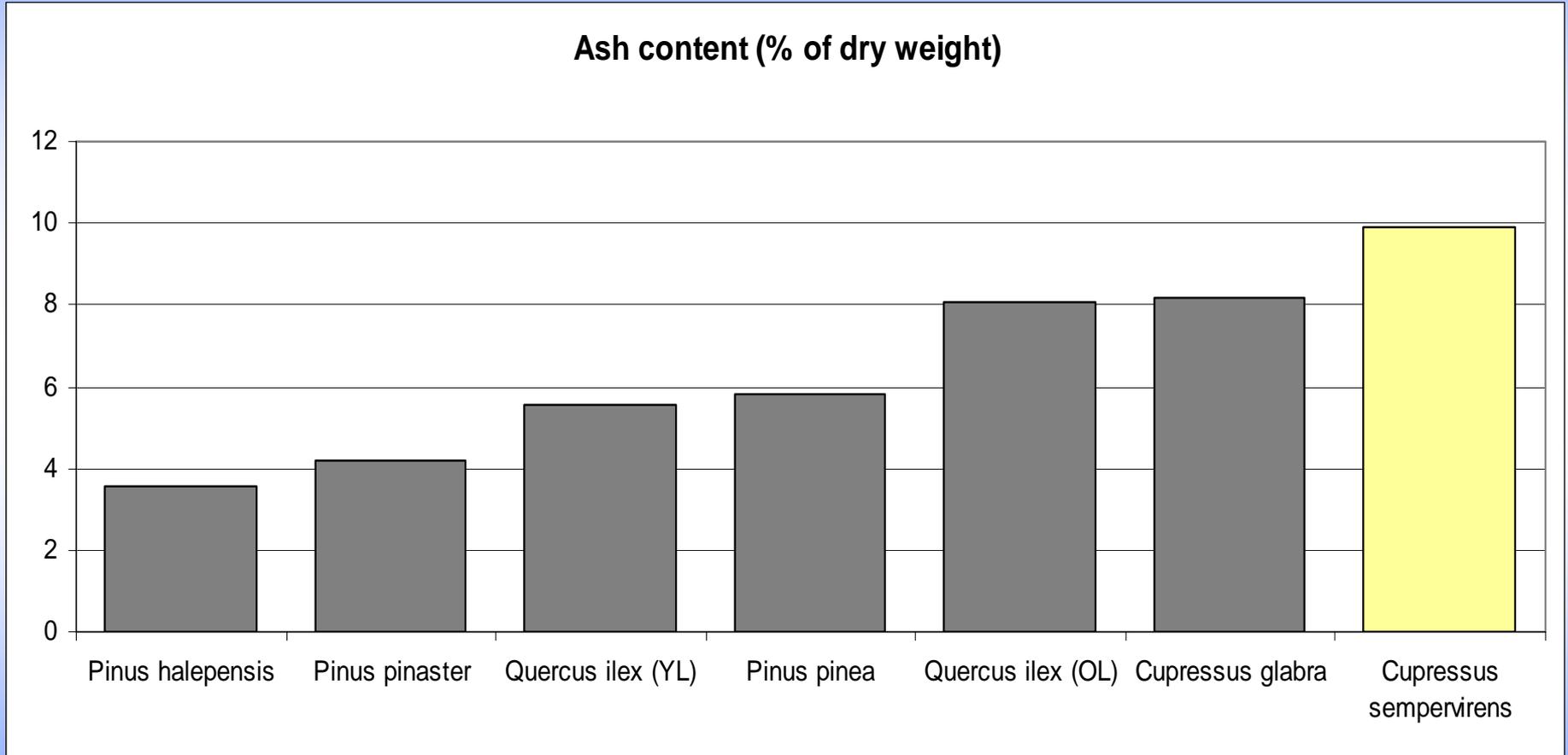


NECROMASS - Litter

Time to Ignition (sec). Dried material

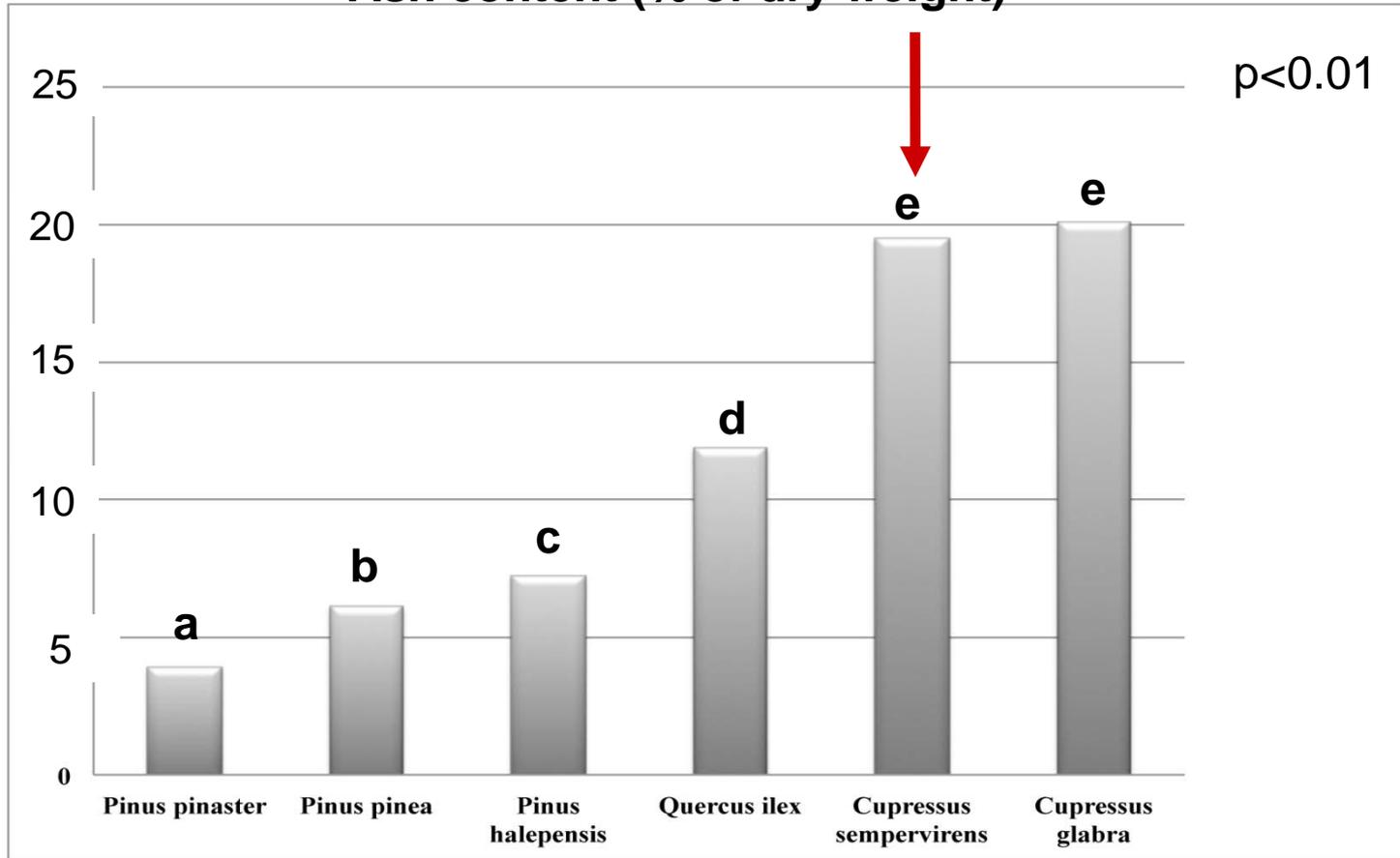


BIOMASS



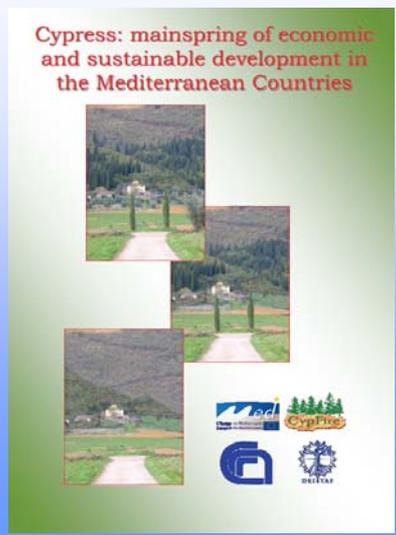
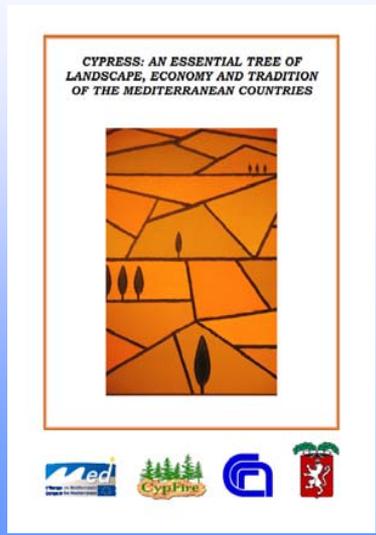
NECROMASS - Litter

Ash content (% of dry weight)

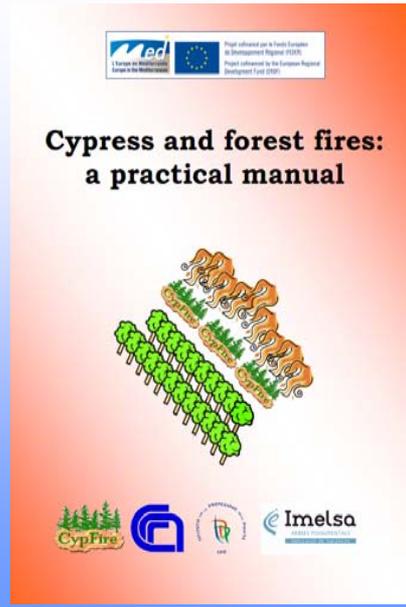


Publication of 2 brochures to demonstrate that the cypress is an irreplaceable tree in the Mediterranean countries:

- Cypress: an essential tree of landscape, economy and tradition of the Mediterranean countries. ISBN 978-88-88228-21-1, 2011,84 pp.
- Cypress: mainspring of economic and sustainable development in the Mediterranean countries. ISBN 978-88-88228-22-8, 2011:50 pp.



- Two Training Schools for experts in the forest fire problems: May 2011 in Florence and May 2012 in Faro, Portugal
- Publication of the “Cypress and forest fires: a practical manual”, ISBN 978.88.88228.23.5, April 2012: 240 pp.
- Sensitization of the population to the fire risks with lectures, seminars, and scientific publications and of the forest personnel with formation courses.



CONCLUSIONS

- The European Union financed numerous projects on forest fires, even if underrepresented in relation to those of other risks, as: Alp Fires, Forest management/Fire prevention, Grinfomed, OCR-Incendi, MedCypre, Princalb, Prompt, Proohf, Protect, Proterina, Pyrosudoe, CypFire.
- CypFire tries to identify some key explicative variables for the control of forest fires, based on lessons learnt from previous disaster and from the previous EU projects;
- CypFire considers useful to improve the traditional fire control approaches based on the coordination of alerting processes, the adaptation or creation of joint protocols, the development of common platform, but it is necessary to study and to define some new approaches, which must be more feasible, economic and ecological than the existing fire control methods

Finally, it would be essential for the success of the protection programme to “cluster” all the selected projects financed by Interreg and P.O.Med on forest fire risks and to capitalize their best results and solutions at the regional, national and international level.

THE MOTTO OF THE CYPFIRE IS “SEE TO BELIEVE”



Fire 2012, Jérica, Diputación de Valencia, Spain¹⁶

THE BEGINNING OF HISTORY



Turkey, peninsula of Gallipoli, fire 1994 ¹⁷

THE MOTTO OF THE CYPFIRE IS “SEE TO BELIEVE”



Fire 2012, Province of Sienne, Italy