

**Applicable subject number: 1- 1.1.** Assessment of the availability of resources, land use issues, recovery of feedstock, environmental impact of resource recovery

#### **RAPESEED, AS A POTENTIAL FEEDSTOCK FOR BIOBODIESEL IN GREECE.**

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#### **Purpose of the work**

The purpose of this work is to present the results obtained from a number of experiments (funded project by EU: FAIR CT96 1946: “**The outset of a new crop for biomass and industrial non-food oil**” in the Mediterranean regions) in Greece. Results refer to the field experiments conducted in central Greece during 1998 and 1999.

#### **Approach**

A common experimental layout was applied in both years: 2x3 factorial randomised complete block design in three blocks. Fifteen varieties were tested each year (eleven *B. carinata* and four *B. napus* varieties in the first year) and (thirteen *B. carinata* and two *B. napus* varieties in the second year). Row spacing was 30 cm and the seeding rate was 200 seeds/m<sup>2</sup> (8 kg/ha). A basal fertilisation with 30 kg N ha<sup>-1</sup>, 60 kg P ha<sup>-1</sup>, and 70 kg K ha<sup>-1</sup> was applied before sowing. The plantation was entirely rainfed.

A number of non-destructive measurements were carried out during the growing period, recording crop height, number of plants/m<sup>2</sup>, and number of pods/plant. At the end of the growing period a final harvest was made, and fresh biomass, dry matter and seed yields were measured. For the dry matter determination, samples were oven-dried at 75<sup>o</sup>C until constant weights.

#### **Scientific innovation and relevance**

Despite the fact that Greece has still no commercial experience in biofuel production interesting figures derive from research fields both for the adaptation and the yielding potential of rapeseed varieties.

#### **Results**

Results from experiments conducted by CRES and lasting four years (1997- 2000) under the programme of the European network (FAIR CT96 1946: “**The outset of a new crop for biomass and industrial non-food oil**” in the Mediterranean regions), were encouraging with average yields up to 17 tons dry biomass/ha and 0,7-3 tons seeds/ha, depending mainly up on the variety and prevailing soil/climate conditions.

#### **Conclusion**

Rapeseed as a rainfed crop (as a winter plantation) offers certain advantages for the agricultural systems of the Mediterranean region. We may say that from the experimental data obtained so far in central Greece, it is clear that some selected varieties are proved as high yielding potential and present good agronomic potential as an energy crop for biodiesel and biomass production.