

EUREKA PROJECT E!2563 - EUROAGRI BLUE ROSE

1. General description

Project	E! 2563 - EUROAGRI BLUE ROSE	Status	Announced - 28-JUN-2001
Title	Production Of Mini-Rose Plants		
Class	Sub-Umbrella	Technological area	Medical and Biotechnology
Start date	25-MAI-2001	End date	25-MAI-2004
Duration	36 months	Total cost	0.72 Meuro
Partner sought	Yes		
Summary	Development Of A Novel System Of Continuous Production Through Stimulating The Rooting Of Mini-Rose Plants.		

Budget and duration

Phase	Budget(Meuro)	Duration (Months)
Definition phase	0.1	6
Implementation phase	0.62	30
Total	0.72	36

Member contribution

Member	Contribution	Position	Since
Spain	70.00%	Contact Member	27-FEV-2001
The Netherlands	30.00%	Participating Member	28-JUN-2001

Participants

Company	Country	Type	Role
PLANTAS CONTINENTAL S.A.	SPAIN	SME	Main
DE RUITER'S NEW ROSES INTERNATIONAL B.V.	THE NETHERLANDS	Large company	Partner

2. Project outline

Project description

With the implementation of the new hydroponic cultivation systems, the perfect plant will require different characteristics; principally a small size but similar quality. PLANTAS CONTINENTAL S.A. is studying this new growing demand.

This project aims to investigate and develop a new mini rose plant production system.

This new production system will complete and improve the current cultivation procedures so as to extend the plant's supply period, stimulate the plant's response to adverse conditions, mechanize and automate processes, reduce the environmental conditions and improve the workshop to go to an industrial outline.

We shall start from a basic field of vegetable material with different types of patterns, such as deciduous and evergreen patterns and we will carry out rusticity tests, earliness and rooting capacity.

From the patterns' field we will obtain a small pegs that, classified and disbudded, will be subjected to different treatments and means that will allow us stimulate the root system so that we obtain plants that present greater efficiency in the use of water and nutritious, better disposition in stress conditions, for example, in transplants, and resistance to plagues and diseases.

We shall then go on to the following step, plantation in inert substratum and grafting. The process from the preparation of pegs until its plantation will be carried out in PLANTAS CONTINENTAL's warehouse.

The grafted and planted peg will go to cultivation tables of the nursery for their rooting and grafting stick. Under controlled environmental conditions, we will accelerate the sprouting and the acclimatization for their later commercialization.

The mini rose plant obtained by PLANTAS CONTINENTAL S.A. will be subjected to vegetative and sanitary test under different conditions. These controls will be carried out by DE RUITER's NEW ROSES INTERNATIONAL B.V., in the installations that they have in HOLLAND, ECUADOR, COLUMBIA, KENYA, etc.

This new production system will make it possible to have plants all year around and shorten the supply period to the clients, just half that of the present day.

Keywords: rose micropropagation, mini-plant varieties, genetic engineering.

Technological development envisaged

The new production system for mini-rose plants will work simultaneously on several lines, with the aim of being able to develop the project in a single phase.

Previous to the manipulation of any vegetable material, it will proceed to the inspection 'of visu' and the realization of ELISA tests following the approaches marked by the INSTITUTE OF AGRARIAN INVESTIGATION in Valencia.

One of the mainstays of the new production system is to manage to get patterns with a strong radical system and

adapted to the controlled job conditions. Starting from a collection of deciduous and evergreen patterns, we will treat them under physical, chemical and environmental conditions in different substratum that will allow us to select those that are most appropriate.

The whole production outline, from the preparation of pegs up to plantation is the object of a development of mechanization processes and automation that will change the current job system: from hand tended outdoor growth, to industrial growth under cover.

Another of the parameters to consider is the compatibility to the grafting with different varieties, together with the resistance to pests and diseases.

No such machinery adapted to the chain production that we are going to instigate currently exists which is why we want to design a specific one for this purpose, keeping in mind so many different points of view such as versatility, security, quality construction (CE stamp), easy-to-manage and appropriate ergonomic conditions.

Both the production chain and the laboratory for sanitary controls will be in installations specifically designed for them and apart from the company's day-to-day activities.

The nursery will be completely automated and endowed with the latest refrigeration technologies, central heating, zenithal opening, shadow, humidification, etc. in a period of three months, the new product will be kept in conditions under which it is presented to the client.

This work schedule also involves new packaging, containers and labelling of those plants on which the tests are made.

Markets application and exploitation

Both the mini-rose plant production and the development of new varieties will allow to PLANTAS CONTINENTAL S.A. to improve its current position in the market and enlarge its catalogue of products.

The mini-rose plant represents an adaptation to customer demands, decreasing the period of readiness of the plant from 9 months (6 in the best of cases) to 3 months and adapting the mini-rose plant much better to the new cultivation systems (especially hydroponics).

The mini-rose plant production does not halt the current work outline but rather supplements it, because in three months the rose plant is ready to be planted out of doors and to produce a plant with the same characteristics as those the company currently offers.

The sanitary control of the plants is better in the nursery and with mini-rose plant than outdoors and with big plants.

The laboratory that will start in the new installations will allow a certification for lots, in the first place, and planting to be carried out in successive stages.

The commercialization of the mini-rose plant does not suppose an additional effort in a first phase because the potential market is the same, with the advantage that PLANTAS CONTINENTAL S.A. has the commercial channels permanently open. In a later phase and having achieved the threshold of profitability, they will carry out prospection in other markets which are potential consumers of mini-rose plant; mainly in the EUROPEAN UNION and later on DE RUITER's NEW ROSES INTERNATIONAL B.V. will instigate openings in new markets.

Project codes

BSI

NACE

3. Main participant

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Organisation type SME
Participant role Main

Contribution to project

Will contribute with their experience and 'Know How' acquired in the development of their own activity and in the tests to be carried out to set the plants out on time.

Expertise

4. Partner

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Organisation type Large company

Participant rolePartner

Contribution to project

Will contribute its experience in mini-rose plant cultivation nurseries, to provide guidance on initial parameters that PLANTAS CONTINENTAL S.A. should keep in mind when designing the production process.

Expertise