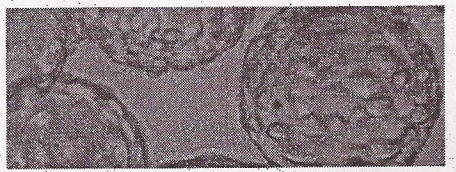
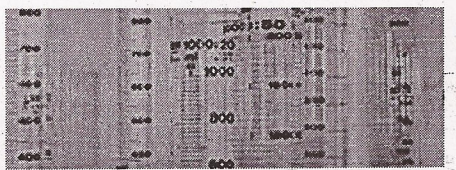
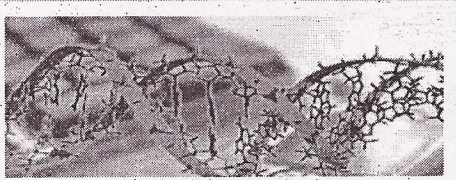


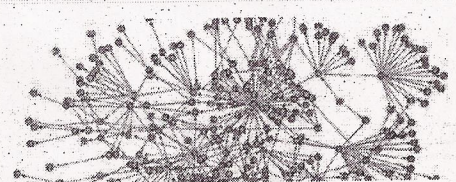
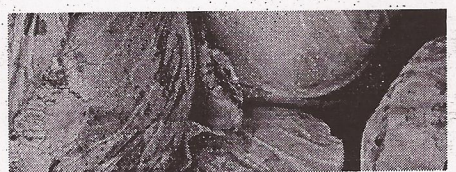
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with regards to detection of genetic variability between species in Orchidaceae family.

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Molecular marker assisted selection for resistance to tomato spotted wilt virus (TSWV) in pepper breeding



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Pepper (*Capsicum annuum* L.) is one of the most important vegetable crops grown in the world and Turkey. Tomato spotted wilt virus (TSWV) is one of the most common virus diseases that causes loss of productivity in pepper cultivation. The most important method in the fight against viral disease is using resistant varieties. In pepper, a major gene, Tsw, identified in different accessions of *Capsicum chinense* Jacq., can control systemic spread of the virus by a hypersensitive response. Resistance gene is determined by a single dominant gene. In order to facilitate the selection for TSWV resistance were used CAPS marker that is helpful for marker-assisted selection in a wide range of genetic intercrosses in breeding program. In breeding study, six resistant lines and five susceptible line as parents are used to the development resistant cultivars in long, bell, capia and charleston-type pepper. A total of 420 plants were tested by using CAPS-SCAC568 primer. A codominant polymorphism was revealed after restriction of the 568 bp fragment with XbaI and TaqI between resistant genotypes and the other lines. One hundred twelve plants were identified as resistant.

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An improved wheat microspore culture technique for the production of doubled haploid plants



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Al-Farabi Kazakh National University, Kazakhstan

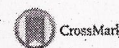
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Innovative microspore culture is used to produce completely homozygous plants in a single generation. Many factors influence the plant recovery including composition of regeneration media, donor plant genotype, microspore developmental stage, and pretreatment conditions. The objectives of study: (i) develop an improved regeneration medium for wheat microspore culture and (ii) determine the optimal pretreatment conditions and regeneration media combination increasing recovery rates. Fourteen varieties and hybrids of Kazakhstani soft wheat were used in the experiments. Spikes were kept at 4, 6, 8 °C for 4–6–8–14 days. Anthers were isolated and cultivated on various media (i.e. N6, modified MS). 28–30 days after the incubation, embryoides were transferred to the 2% sucrose containing regeneration media and cultivated under 25 °C on the light with the 16h daylight and 3000 lux intensity. As a result, new genotypes of Kazakhstanskaiya 4 and Karagandinskaiya 70 varieties with high production of embryoides and plant regeneration are obtained. Maximal effect is obtained for Kazakhstanskaiya 4 variety under spikes incubation at 4 °C for 7 days. On the modified N6 media percentage of

embryogenesis reaches up to 120% (the number of embryoides at 100 anthers). The optimal cultivation temperature is –26 to 28 °C. Forty-six green regenerate-plants have been obtained.

<http://dx.doi.org/10.1016/j.jbiotec.2014.07.388>

Research on the behavior of variety of Roses hybrid Polyantha on propagation by cuttings under a modern greenhouses



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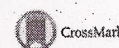
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The species Rosa is estimated that it appeared on Earth about 35 million years ago. Rose has come then how long a journey on so glorious, conquering huge worldwide through a diversity of shapes, colors, scents and uses in special ways (Maria Cantor, 2008). Due to its spread at first only in the northern hemisphere and then in the south, rose the daily lives of people accompanied by its use for outdoor decor, room by his presence in the most solemn occasions in human life to nutrition in medicine natural, literature, art of architecture and more (Florin Toma, 2009). Besides ornamental value rose has medicinal value, its rosehips having a high content of vitamin C is also used in cosmetics and perfumery industry, but also to the food. Given the decorative qualities of this plant and manufacturers worldwide interest for this plant, the problems addressed in this paper suggest further research to establish the influence of different types of cuttings on growth and flowering of species and varieties of roses Thea group in terms of Timisoara climate and the possibility of their propagation by cuttings cultured on different substrates.

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Studies regarding on the combination ability for the number of siliquas at some varieties and hybrids of *Sinapis alba*



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The great importance of mustard is explained in that the mustard oil is a premium quality food as some countries considered as superior to sunflower. The main objective of our research was to study the genetic variability and heredity main character of production in this species, namely: establishing general and specific combinative capacity for choosing the best genetical prognostication most valuable hybrid combinations based on the analysis of the first generation. Experienced biological material was represented by a collection made up of nine varieties of mustard with different genetic origin which were added 72 hybrid direct and reciprocal (F1 and F2) resulting from interbreeding. For the quantitative character studied were significant differences between direct and reciprocal hybrids due to dominance. It was also observed that parental forms had a considerable influence on hybrids, depending on their position in the hybridization. Differences between reciprocal hybrids not only due to maternal effects but also other causes, such as the influence of environmental significance of differences between repetitions. Based on observed effects specific combination ability that