figs (Ficus), grapevines (Vitis), olives (Olea), cornels (Cornus),rowanberries (Sorbus), chestnuts (Castanea), walnuts (Juglans),hazelnuts (Corylus),pistachio (Pistacia), hackberry (Celtis), bearberry (Arctostaphylos), blackberries,raspberries (Rubus),strawberries (Fragaria) and vacciniums.The estimation of the share of taxa found in Albania with those at EU + Mediterraneanlevel show a relatively high share, where almost all genera are found. Beside for mapping purposes, the expeditions carried outserved also to assess the level of threatening of certain taxa due to small number of individuals, pest and disease pressure as
well as anthropogenic factors.

P EGI 12
Study on population fluctuations of sugarcane mite, *Oligonychus sacchari* Mc Gregor (Acari; Tetranychidae) and its effect ongrowth of sugarcane in south of Khuzestan province/Iran

A. Askarianzadeh, M. Minaeimoghadam
Shahed University, Plant Protection, Tehran, Islamic Republic of Iran
askarianzadeh@shahed.ac.ir

Sugarcane mite, *Oligonychus sacchari* Mc Gregor is an important pest of sugarcane in Khuzestan province. The pest is capable to dry sugarcane leaves in a short period. Study of outbreak time and population fluctuations and damage of the sugarcane mite is important for integrated pest management programme. Sampling was done weekly from June and continued till August. The fifth and sixth leaves were selected as sample unit and the numbers of mites per leaf were counted. To evaluate the damage, experiment was conducted on six fields (each field 25 ha) of CP57-614 cultivar in Amirkabir agro-industerial Co. With starting of mite activity in the sugarcane field in the middle of July, three experimental fields were sprayed with Hexythiazox (Nissorun®) acaricide. Number of infested leaves before spraying operation and number of dried leaves in the late of July were sampled in experimental fields. Also weekly growth of cane was measured in North and South of the fields from the late of June until mid October. The results indicated that mite activity in South of Khuzestan initiate from early June and their peaks occurs in June and gradually reduce in the mid July. In experiment of damage, there was not any dried leaves in treatment but 81% leaves were dried in control and also data analysis showed that aggregative growth of cane between treatment and control had significant different ($P<0.05$) and it was reduced about 12.37% in control in compare with treatment. Also activity of mite in North and South of the field had significantly different and damage of mite in South was more than North of the field.

P EGI 13
Genome diversity of *Tobacco rattle virus* (TRV) - basic knowledge for virus resistance evaluation

K. Lindner, R. Koenig
Julius Kühn-Institut, Braunschweig, Germany
kerstin.lindner@jki.bund.de

Tobacco rattle virus is the type species of the genus *tobravirus*. It is transmitted by trichodorid nematodes. In potato tubers, arcs of corky tissue form at some distance around the initial infection sites. These spraing or corky ringspot symptoms disfigure the tubers and can greatly reduce their quality. The most effective measure to keep the damage caused by this virus low is the use of disease resistance of potato cultivars in potato production strategies. The aim of research co-operations between potato breeders, plant protection services and nematologists/virologists is to develop methods for the evaluation of resistance of potato cultivars against TRV. Prerequisite for that is to know the TRV genome in its diversity. Tobraviral genomes consist of two RNA species. RNA1 encodes two replication-associated proteins, a movement protein and a silencing suppressor. RNA2s consist of a 5' RNA2-specific and a 3' RNA1-related part. The RNA2-specific part contains the coat protein gene and often two (*2b and 2c*) or more additional genes. The *2b* gene is required for nematode transmission. TRV isolates from various parts of Germany were found to contain various combinations of different RNA1 and RNA2 species. Two isolates were obtained from roots of *Nicotiana benthamiana* plants, which had been grown for ca. eight weeks in soil from a corky ringspot-affected potato field, and from roots of field-grown potato plants in a neighbouring field, respectively. The coat protein genes of these isolates were almost identical to those of some previously described Dutch and Polish isolates which had been propagated in tobacco leaves. However, whereas the RNA2s of the previously described isolates consist of only c. 2000 nucleotides (nts), the ones of our isolates contained c. 4000 nts. This difference in size is due to the fact that the RNA2s of our isolates contain two additional genes (*2b and 2c*). After mechanical transmission of one of our isolates to tobacco leaves most of the genome area containing these additional genes was lost. In addition, the original RNA1-related 3' end of its RNA2 which had resembled that of the RNA1 of a spinach isolate was replaced by that of the clearly distinct one of the supporting RNA1 in our isolates. Deletions and recombinations obviously govern the adaptation of tobraviruses to various hosts and growing conditions.