

## Summary of presentation

### Preliminary results on breeding of some commercial citrus varieties by inducing mutation on budwoods

Trần Thị Oanh Yến, Nguyễn Ngọc Thi, Phạm Ngọc Liễu và Nguyễn Minh Châu

#### SUMMARY

Budwoods from free-disease trees of da xanh pummelo, duong la cam pummelo and king mandarin were treated by gamma irradiations at Dalat nuclear research institute in dosage levels as 0, 3, 5, 7, 9 krad. The irradiated buds were grafted on volkameriana rootstocks in green house. After 4-5 months of grafting, the grafted trees were transplanted to field until fruiting.  $Ld_{50}$  was near 5 krad for da xanh pummelo and king mandarin buds and 3 krad for duong la cam pummelo buds. However, no buds receiving more than 5 krad survived to growing field except only one bud of da xanh pummelo at 7 krad level. Number of seeds per fruit and fruit quality were observed. Commercial seedless clones were primarily selected for trials including 12 clones of da xanh pummelo, 3 clones of Duong la cam pummelo and 9 clones of king mandarin.

### Performance of clones of Duong la cam pomelo through budwood irradiation with gamma ray in the Southeastern region of Vietnam

Phạm Thị Mỹ, Nguyễn Văn Hùng, Trần Thị Oanh Yến,  
Mai Văn Tr và Bùi Xuân Khôi

#### SUMMARY

After pomelo budwood of cultivar Duong La Cam radiated with gamma ray 5Krad, they were grafted on rootstock Volkameriana and 17 clones were gathered. These clones were planted to evaluate their performance on the grey soil condition in the southeast region. Result showed that clones 242, 243, 244, 430, 437, 453, and 468 and untreated control were well growing; good fruit set clones were 244, 240, 245, 434, 436, and 437; clones of few seeds (5 - 10 seeds per fruit) were 434, 436, and 240.

### Reliable and easy screening technique for salt tolerance of commercial citrus rootstocks under in-vitro

Tô Việt Diễm Ca, Nguyễn Thanh Bình, Lê Thị Khoa và Võ Hữu Thọ

#### SUMMARY

Salt tolerant experiment using 11 citrus genotypes were carried out to find a reliable and easy screening technique for salt tolerance in breeding programs. The best germination percentage; size root of plantlets; size plantlets are cultured on a Murashige and Tucker (MT) medium with NaCl 1%.

The classifiable same citrus rootstocks into 4 groups: Excellent salt tolerant genotype was *Citrus nobilis* ( $S_{5.1}$ ); good salt tolerant genotypes were *Citrus reticulata* ( $QT_{3.2}$ ), *Citrus aurantifolia* ( $CT_{5.2}$ ), *Citrus sinensis* ( $CM_{6.1}$ ); medium salt tolerant genotypes were *Citrus maxima* ( $BLH_{2.1}$ ), *Citrus maxima* ( $BX_{2.0}$ ), *Citrus maxima* ( $BC_{2.4}$ ), *Citrus maxima* ( $BC_{3.1}$ ); salt sensitive genotypes were *Citrus maxima* ( $BC_{2.3}$ ), *Citrus maxima* ( $BC_1$ ), *Citrus maxima* ( $BTT_{7.0}$ )

## **Results of surveys, selections and records on citrus in saline soil and flooding area in Tien Giang and Ben Tre provinces**

*Lê Th Kh e và Võ H u Tho i*

### **SUMMARY**

*Result of the surveys on some citrus in the saline soil (Go Cong Dong District, Tien Giang province and Binh Dai district, Ben Tre province) and flooding area (Cai Be district, Tien Giang province) revealed that calamondin (*Citro microcarpa mitis*), sanh (wilt, hybrid citrus), pummelo (*Citrus maxima* (Burm.) Merr), orange (*Citrus sinensis* and *C. reticulata* x *C. sinensis*) and mandarin (*Citrus reticulata*) could be grown successfully in saline soil. In the field conditions (at commercial produced orchards), flooding had been  $41,82 \pm 9,36$  cm above soil level for  $15,43 \pm 9,59$  days, 30,06 % pummelo (out of citrus species) could survive, overcome and bear fruits in the following years. It also showed that the suitable cultivation practices such as pruning, watering, mulching, fertilizing, fungicide application... were obtained. Therefore, the prominent individuals regarded as tolerant to saline soil and flooding condition were selected for screening in the greenhouse and field (orchard) conditions.*

### **Micropropagation technique on commercial pummelo (*Citrus maxima*) rootstocks by applications of biotechnological methods**

*Tô Vi t Di m Ca, Nguy n Thanh Bình và Tô Th H ng Y n*

### **SUMMARY**

*Preliminary result of micropropagation technique on 4 commercial pummelo (*Citrus maxima*) rootstocks genotypes. Experiments have been used small segments of stem from in-vitro growing plants of theirs. The best multiplication rate of adventitious buds, reacting explants rate, number regenerated shoots adventitious buds have been cultured on a Murashige and Tucker (MT) medium plus BA ( $1-2\text{mg.l}^{-1}$ ) and adenin ( $20\text{mg.l}^{-1}$ ).*

*The classifiable 4 commercial grapefruit rootstocks genotypes into 3 groups: Excellent developmental shoots are long co co pummelo which can be used the initial material rootstocks in breeding programs; good developmental shoots are Nam roi pummelo and Duong la cam pummelo; poor developmental shoots are Da xanh pummelo which can be used the initial material scion in breeding programs.*

### **Observation on the compatibility between Volkamer rootstock and some commercial scion varieties**

*Nguy n Thanh Bình, Bùi Th M Bình, Tô Th H ng Y n, Ph m V n Vui,  
Gi n c Ch a, Lê Th Thu H ng và Nguy n Minh Châu*

### **SUMMARY**

*To determine whether an early diagnosis of incompatibility in citrus is possible by examining union structure. The method of grafting used in the study involved interchanging a complete ring of bark between seedling os rootstock and scion cultivars. Ring grafting is a simple and effective means of producing reciprocal graft combinations for examination. The experiment results showed that the*

rootstocks of Troyer citrange, Citrange C35, Carrizo citrange and Goutou S. orange were unable in compatibility with King mandarin and Tieu (Hong) mandarin scions. The Volkameriana and Cleopatre mandarin were the suitable rootstocks for King mandarin and Tieu (Hong) mandarin scions by using interchanging ring grafting method.

## **Results on survey and identification of the causal agent of root rot and results of using biological substance and rootstocks to control root rot on citrus**

Nguyễn Ngọc Anh Thảo và Nguyễn Văn Hòa

### **SUMMARY**

Root rot is a serious disease on citrus trees, especially on citrus in the Mekong Delta. Results from investigation showed that all orchards were infected both Greening and root rot disease. At orchard having there, Citrus trees were infected both Greening and root rot diseases were higher than that of trees orchards were infected in with single disease of Greening or root rot.

Isolation of soil and root samples from disease citrus tree revealed the present of *Fusarium* sp, *Trichoderma* sp, *Pythium* sp, *Aspergillus* sp ...and *Paratylenchus* and *Tylenchulus* nematode. Of them, *Fusarium* sp is the highest percentage and 100% orchards were infected nematode.

Result of using cock's postulat shown that all trees got infected after 30 days of inoculation. In conditions of root's injury and high humidity.

Result using biological substances showed that all biological substances and chemical were good in both the nursery and the field condition..

Result of rootstock study in the petri and the small plastic glasses showed that there are 2 domestic varieties: Do pummelo and Tau lemon which were able to tolerant to *Fusarium solani* and *Phytophthora nicotianae* and also there are 2 introduced varieties: Citrumelo and Carry Citrange which were able to tolerant to *Fusarium solani*.

## **Preliminary results in determination unsafety microbacteriums on King mandarin in Tien Giang Province**

Phạm Hoàng Hiệp và Nguyễn Văn Hòa

### **SUMMARY**

This study is aimed to determine unsafety microbacteriums on King mandarin in Cai Be, Cai Lay, Chau Thanh of Tien Giang province. Results were obtained as follow: *Salmonella*, *Clostridium perfringens*, *Staphylococcus aureus*, *Escherichia.coli*, *Coliforms* which appeared on King mandarin with huge quantities. They will influence consumer's health under suitable conditions when they consumpt these fruits which is not suitable for EUREPGAP market..

## **Study for technology of minimal processing product of Nam roi pummelo**

*Ph m Hoàng Lâm, Nguy n Thanh Tùng, V n n và Minh Hi n*

### **SUMMARY**

*Minimally processed Nam roi pummelo products were prepared and handled to maintain their fresh nature for providing convenience to the users. Fresh Nam roi pummelo after prepared segments, and dipping in acid ascorbic 1.5% and the addition of antimicrobials with Natri metasiphite 0.06% or Potassium sorbate 2%, they were packed in polystyrene trays covered with PVC film. These packages were stored at 10-12<sup>0</sup>C, the products remained good qualities in 20-25 days.*

## **Selection of Queen promising clones in production farms**

*Nguy n Th Ng c Di m và Ph m Ng c Li u*

### **SUMMARY**

*Yield trial comparision of 23 “Queen” clones selected from Tien Giang and Long An was conducted from February, 2005 to December, 2006. The priliminary result showed 4 potential “Queen” clones i.e., VII/27, IV/11, VII/33, VII/12 were selected. They had high yield 57,2-58,5 ton/ha, fruit with rather big size (weight: 1077,3-1112,2g), cylindricl shape, and no slips. Their flesh is yellow with hight bri and vitamin C content >15% in bix and 17,2-24,4 mg/100ml in vitamin C.*

## **GAP aspects of present status on Queen pineapple and its demonstration**

*Nguy n Ph ng Thúy, Nguy n Tr nh Nh t H ng và Nguy n Minh Châu*

### **SUMMARY**

*Investigation on the current “Queen” pineapple practices and initial demonstration pilot of Queen pineapple safe production in Tan Phuoc, Tien Giang province showed some advantages for GAP such as: big and intensive production areas, pineapple plantation nearby the processing factory... However, many constrains of GAP challenge were identified such as nitrate residue in fruits due to unbalance of fertilization, wrong harvesting and post-harvest technology research should be done to resolve the problems for further GAP application.*

## **Preliminary result on nitrate residue of Queen pineapple**

*Nguy n Tr nh Nh t H ng, Nguy n Ph ng Thúy và Nguy n Minh Châu*

### **SUMMARY**

*Pineapple (Ananas comosus L.) is one of the important fruit crops in the world after citrus and banana. The South of Vietnam introduced the pineapple crops (Queen varieties) from the 16<sup>th</sup> century. In Tien Giang province the highest planting area is distinguished as Tan Phuoc district with estimated of 10.000 ha in the year 2005. The survey was recorded that application of chemical fertilizer and foliar spray fertilizer at the stage of harvesting to increase fruit weight and yield due to nitrate content in fruit over limiting standard. The present study on pineapple aim to reduce the nitrate content in fruit has been*

carried out. The results indicated that types of fertilizer applied and stages of applied were influenced on the content of nitrate in pineapple fruit. There were significant differences in nitrate content among pineapple varieties, clones which were selected and planted for the first yield.

## **Comparison on yield, quality and adaptability in soil conditions of smooth Cayenne varieties in the South of Vietnam**

*Nguyễn Thị Ngọc Diễm, Bùi Thùy Trang, Lê Thị Chung,  
Nguyễn Văn Hùng, Đào Thị Bé Bý và Phạm Ngọc Liên*

### **SUMMARY**

*Nine introduced Cayenne varieties from France (7 varieties), Thailand (1 variety), China (1 variety), and one local variety (Lamdong Cayenne) have been grown for yield trial in Tiengiang and Baria-Vungtau provinces from April, 2004 to February, 2006. Result indicated that GF449 (France) gave produced high yield (79 tons ha<sup>-1</sup>), cylindrical fruit-shape and high fruit weight (1622gr), yellow flesh, high T.S.S. (brix = 17,4%) and medium vitamin C content about 8.3mg/100ml. Thus, it could be a potential variety and proposed for trial on a large scale at pineapple planting areas of the South of Vietnam.*

## **Present status of Mealy bug wilt disease at Tan Phuoc-Tien Giang the effects of controlling Mealy bug on wilt disease**

*Nguyễn Huy Cường và Nguyễn Văn*

### **SUMMARY**

*Result from the investigation shown that about 87,5% interviewed farmers could recognize mealy bug and 72,5% farmers known that wilt disease is associated with mealy bug. Only 25% interviewed farmers used chemical to control mealy bug, they used some very toxic chemical such as Nokap, Bam, Basudin which lead to pesticide residue on fruit at harvesting stage. The incidence of wilt disease and mealy bug were different from different village of Tan Phuoc district.*

*Results from the experiment shown that when we controlled well mealy bug, we could also control mealy bug wilt disease on the field. The petroleum oil could be used for control of mealy bug as a safety product.*

## **Effect of plant growth regulators on fruit drop of “Xuong com vang” longan**

*Bùi Thị Minh Hằng, Nguyễn Minh Châu và Bùi Trang Việt\**

*\*Trưởng Bộ môn Khoa học T. nhiên Tp. HCM*

### **SUMMARY**

*A field experiment was carried out at Tien Giang province, from December, 2005 to August, 2006. 2,4-D at 1, 2.5 and 5 ppm; IBA at 1, 2.5 and 5 ppm; NAA at 1, 2.5, 5, 10 and 20 ppm; GA<sub>3</sub> at 1, 5 and 10 ppm and BA at 1, 5 and 10 ppm, were applied as foliar sprays at 2 weeks after fruit setting (fruit size averages 4-5mm in diameter) to 6-year-old longan trees. The results showed that 2,4-D 5 ppm, IBA 5 ppm, NAA 10 ppm and 20 ppm, BA 5 ppm and 10 ppm, gave significantly increased fruit retention, fruit yield, and significantly reduced the percentage fruit drop.*

## **Result of investigation on present longan practices in Tien Giang and result of identification of quick decline disease of longan and its control measure**

*Nguyễn Huy Cường và Nguyễn Văn Hòa*

### **SUMMARY**

*Results from the investigation showed that in Tien Giang longan was grown mostly based on the farmer's knowledge and due to low price, they did not taken care well there orchards. Even though the pests and disease were less, they used chemical for control and did not care about chemical waste, which may cause pollution to the water and environment. The investigation showed also that quick decline present with high percentage at both Cai Lay, Chau Thanh and Cai Be districts. The results from Cock's postulate showed that the causal agent of quick decline is Phoma sp. The results from the chemical test shown that Phoma sp. Susceptible to Topsin M, Forthane, and Zineb and tolerant to Kasuran under Lab test.*

## **Preliminary results in determination unsafety microbacteriums on King mandarin in Tien Giang Province**

*Phạm Hoàng Hiệp và Nguyễn Văn Hòa*

### **SUMMARY**

*This study is aimed to determine unsafety microbacteriums on Tieu Da Bo longan in Cai Be, Cai Lay, Chau Thanh of Tien Giang Province. Results were obtained as follow: Salmonella, Clostridium perfringens, Staphylococcus aureus, Escherichia.coli, Coliforms which appeared on Tieu Da Bo longan with huge quantities. They will influence consumer's health under suitable conditions when they consumpt these fruits which is not suitable for EUREPGAP Market..*

## **Preliminary result on study on causal organison of witches broom on Tieu da bo longan**

*Nguyễn Huy Cường và Nguyễn Văn Hòa*

### **SUMMARY**

*Results investigation in Tien Giang shown that witches broom has appeared on longan but with the low incidence. The disease appear with the high incidence in the low temperature of the month October to December and less incidence in the hot season in the month of May to August. In this study we carried out experiments to test the causal organison of witches broom, the result shown that isolated fungi from infect leaves and mite such as Colletotrichum, Pestalotiopsis and 5 unidentified fungi were not the causal organison of witches broom on longan. The application of Tetracylin by infection ontrunk and spraying on the canopy can not prevent the appearance of witches broom, so the phytoplasma may not be the causal agent of witches broom disease on longan. Another study of transmisson by grafting shown that the symptom only appeared on shoot of the bud stick and not on the rootstock when the bud stick treated with miticide Ortus. So the mite Eriophyes litchii may not be the causal agent of witches' broom.*



## **Results of the investigation on transmission study on witches broom disease on longan and biological characteristics of *Eriophyes litchi***

*Nguyễn Thị Kim Thoa, Lê Quốc Thịnh và Nguyễn Văn Hòa*

### **SUMMARY**

*Witches broom is a serious disease in longan at the Southeast of Vietnam. At present, the disease become start to more popular in the South west. The causal agent of this disease is still unknown. In this investigation, we carried out experiments, one for transmission using *Tessarotoma papillosa*, *Conopomorpha litchiella* and *Eriophyes litchii*. The results shown that only trees transmitted by *Eriophyes litchii* expressed symptoms of Witches broom starting from 20 days after inoculation. It means that mite *Eriophyes litchii* may be causal agent or a vector, that transmits the disease. Also under this investigation, at TienGiang, the *Eriophyes litchii* presented on many healthy longan trees without any symptoms, it means that the *Eriophyes litchii* may only be a vector of the disease. The life cycle of *Eriophyes litchii* is of 8-10 days. Within a year, they can complete 13-15 generations. They attacked the trees when the young flushes just emerged and they can move to other places when their body change to yellow color.*

## **Effect of spraying some pesticides to control witch's broom on longan in the Southeastern region of Vietnam**

*Võ Minh Hà và Mai Văn Trâm*

### **SUMMARY**

*Witch's broom is an important pest on longan cultivated in the Southeastern region of Vietnam. In this experiment, canopy of infected trees were heavily pruned and a spray program of pesticides with an interval of 7 days was carried out on young shoots after pruning. Results showed that spraying pesticides significantly reduced severity of witch's broom as compared with control. Spraying Cypermethrin + petroleum spray oil and Diafenthiuron + petroleum spray oil were highest effective in experimental condition.*

## **Investigating of fresh tieu da bo longan supply chain on exportation to China**

*Đàn Hữu Thịnh, Huỳnh Văn Việt và Trần Minh Tuấn*

### **SUMMARY**

*The result of study showed that Mekong Delta is the largest area of longan production in Vietnam. 48.1% of fresh tieu da bo longan product in Mekong Delta about 151,000 tons per year exported to China. Farmers who grow longan was getting the highest profit per kilogram of longan in stage of longan supply chain but farmer had lowest income with small longan area. 65.7% of longan product from farmers was bought by collector agents. 50% of profit in supply chain of fresh longan export to China belong to trader.*

## **Result on evaluation and selection of yellow gold mango variety**

à Th Bé B y và Ph m Ng c Li u

### **SUMMARY**

*Yellow Gold is evaluated in two conditions, trial and commercial conditions. In the first condition, it was compared to seven varieties viz., Langra, Amparali, Mallika, Dashehari, Chausa, Cat Hoa Loc and Cat Chu which are ripe fruit eating ones, Yellow Gold indicated high vigor ability, similar flowering and harvesting duration to cat Hoa Loc, Cat Chu and its fruit tastiness is equivalent to Cat Chu but less than Cat Hoa Loc. In the second condition where Y.G was compared to Khieu sa voi, an unripe fruit eating one, both showed similar to most of characters but Y.D born more fruits with two seasons per year and had softer flesh texture than Khieu sa voi. In addition to, Y.G. also depicted that it has largest fruit-weight, thick flesh, and highest flesh ratio, highest yield than others, easily flowering and fruit-setting and less infection by Anthracnose disease, Fruit worm and Wood worm in both conditions.*

## **Results from the observation on current cultivation of Cat Hoa Loc mango at Song Hau farm in comparison with EUREPGAP standards**

Nguy n V n Hòa, Nguy n Ng c Anh Th ,  
Tr n Nguy n Liên Minh và Minh Hi n

### **SUMMARY**

*At present, the cultivation of Cat Hoa Loc mango in the Mekong Delta is facing problem of heavy using of toxic chemical which lead to unsafe to consumers, growers and environmental condition. In this investigation, we carried out the survey on present practices of mango at Song Hau farm and made the comparison with that at Cam Son- Cai Lay and Hoa Hung- Cai Be- Tien Giang. The result showed that at Song Hau farm, they have 7,000 ha of Cat Hoa Loc mango with 150,000 trees of 3 to 10 years old. From that they built the mango cultivated club follow the cultivated protocol from the Farm leader, they used chemical for controlling of pests and diseases at early stay of the fruit, they bdg the fruit with paper dt 40 days after fruit setting, so the fruit become safe for the customer. All the club's member have flush nhà v sinh and the farm have ability to help farmers built the flush nhà v sinh when they participate to the GAP producing member. In comparison with the current cultivation at Cam Son and Hoa Hung – Tien Giang, the result shown that Song Hau Farm have more advantages for the model of cat Hoa Loc mango EUREPGAP pilot.*

## **Studies on selection and evaluation of elite clones of star apple in Tien Giang province**

Nguy n Thành Hi u, tr n Th M H nh, Gi n c Ch a and Ph m Ng c Li u

### **SUMMARY**

*Star apple is a special tropical fruit of Mekong Delta of Vietnam, commercially grown in the river silt soils of Tien Giang, Can Tho and Ben Tre provinces. Fruits of this special crop are very much demanded by both domestic and exotic markets due to its superior quality. A survey had been carried out in the year 2000-2005 in star apple cultivated area of Chau Thanh district, Tien*



*Giang province with objective to identify superior clones of well-known variety “Lo Ren” for production. Four individuals of star apple namely as VSLR01, VSLR03, VSLR04, VSLR07 had been selected in respects of high yield (more than 650 kg/year), fruit weight (> 285g), fruit edible portion (>47,6%), good flavor and sweetness (>14,0% Brix). Data obtained from regional trials of these selected clones are also hereafter presented.*

## **Initial result of investigation, evaluation and selection of jackfruit clones on the southeastern region of Vietnam**

*Phan Văn Dũng, Nguyễn Văn Hùng, Châu Văn Toàn  
Mai Văn Trí và Bùi Xuân Khôi*

### **SUMMARY**

*During 7 years (from 2000 to 2006) of survey and evaluation of 7 selected individuals in the Southeastern region of Vietnam, two jackfruit individuals named MDN06H and MBRVT32H were excellent with good productivity and high quality.*

*After 3 years of experiment, clones of MDN06 and MBRVT32H were excellent clones among 7 clones compared in a 3- year field experiment on the grey soil in the region. In production condition, two clones of MDN06 and MBRVT32H are very promising.*

## **Status investigation of jackfruit cultivation in the Southern region of Vietnam**

*Nguyễn An ... , Mai Văn Trí và Bùi Xuân Khôi*

### **SUMMARY**

*Jackfruit is a promising fruit crop cultivated widely in the Southern region of Vietnam. In the year 2006 an investigation was carried out to have further understandings on their cultivation status in the region. Information of orchard scale, cultivar populations, productivity, cultural practices, plant protection, irrigation, harvesting etc. were presented in this paper.*

## **Effect of doses and application times of some plant regulators on yield and quality of dragon fruit**

*Nguyễn Hữu Hoàng*

### **SUMMARY**

*Dragon fruit is one of promising fruits of Vietnam in term of increasing production area and of export volume. The use of plant regulators such as Thien Nong ( $GA_3$ ; - NAA; - NAA: 0,1: 2: 0,5%) and Progibb (10% - 80%) to improve fruit quality in dragon fruit was found widely popular. The experiment was carried out to find out the effect of these chemicals at different doses and combinations (6 doses) and the best time of application (4 times) as well. The trial results revealed that the application of NAA +  $GA_3$  (20ppm + 50ppm) at time T-I (10days after flower bud initiation) + Bloom + 5days after bloom + 10days after bloom + 15days after bloom + 20days after bloom + 25days after bloom) gave the highest number of fruits and yield. The spray of plant regulators at different doses and times did not give any of good effects on fruit TSS content, but the fruit acidity was lower than the control. The other parameters such as total sugars, reducing sugars and Vit.C were positive correlated with the spray of chemicals.*

# **Results of benchmarking survey for GAP standard in dragon fruit production area of Tien Giang province**

*Nguyễn Hữu Hoàng*

## **SUMMARY**

*Dragon fruit is one of three largest export volume of fruits in Vietnam, but still not explored for the huge potential markets in Europe and other high value ones due to unable to overcome the barriers of techniques and phytosanitary requirements of imported countries. The implementations of GAP to gain certification like that of EUREPGAP is a must for dragon fruit industry, and this just happened years ago. The benchmarking survey on dragon fruit production area in Tien Giang province revealed that the strengths of this crop are of monoculture orchards, the production area is large enough for export, almost less threat of pests and insects as compared to other crops and the investigated growers are able to induce fruit year around. Besides, the results of survey also indicated that in the large production area of dragon fruit in Tien Giang, the land holder is typical small scale. Chemical companies or store owners play an important role in advices and in training sources for the growers. The water supplying sources almost come from nearby rivers so as its quality is unexpected. The common harvesting habitude of the farmer is to lay fruit on ground and this is quite far from strict requirements of GAP. There was no any dragon fruit cooperative or farmer group on the survey area. The farmers still need more infrastructures and advance loan from banks for up-grade their orchards and investments.*

## **Preliminary results of integrated pest management (IPM) study on dragon fruit**

*Huỳnh Thanh Lộc, Lê Quốc Thịnh, Trác Khương Lai và Nguyễn Văn Hòa*

## **SUMMARY**

*In this study, we investigated the species of pests and natural enemies of these pests on dragon fruit. The results showed that the important types of insect pests on dragon fruit were ants, termites, fruit flies, aphids, mealy bug, stinkbug, snail and thrips sp.. The parasites and predators on dragon fruit orchard were parasitic bees, predaceous spiders and ladybirds.*

*We also carried out the experiment on cutting of the tail of flower to reduce pests and diseases. The results revealed that cutting of the tail of flower which bloomed third night could prevent some potential pests.*

## **Effect of fertilizers combined with organic manures on yield and quality of “Com vang Sua Hat lep” variety of durian**

*Huỳnh Văn Tuấn và Nguyễn Minh Châu*

## **SUMMARY**

*A trial of different fertilizers combined with some commercially organic manures had been carried out in the year 2006 on well-known ‘Com vang sua hat lep’ variety of durian in 2 soil types- grey soil of Binh phước and river silt soil of Bến Tre province-with the objective to secure the suitable fertilizer*

formular for safe and good quality of fruit. The results showed that fertilizer of 750g N+ 930g P<sub>2</sub>O<sub>5</sub> + 630g K<sub>2</sub>O + 4kg Dynamic lifter+ 1 kg Guano (only 75% quantity NPK of the control) gave good effect on number of fruits/tree, yield, quality of flesh and good income point of view (1.11;1.03;1.27 and 1.06 time higher) as compared to that of the control. The results also indicated that organic manure could somewhat replace NPK fertilizer for safe and better quality of durian fruit. Data on other aspects are hereafter presented.

### **Study on control of wax plant hopper (*Allocaridara malayensis* Craw.) and fruit borer (*Conogethes punctiferalis* Guen.) of durian**

Hu nh Thanh L c, Lê Qu c i n, Hu nh V n T n và Nguy n V n Hòa

#### **SUMMARY**

*Clothianidin* at concentrations of 0,035g a.i/l and 0,070g a.i/l and *Thiomethoxam* at 0,031g a.i/l were highly effective to control *Allocaridara malayensis* of durian, whereas *Bacillus thuringiensis* war. *Kurstaki*, *Spinosad* and *Lambda-cyhalothrin* were very effective to control fruit borer *Conogethes punctiferalis* of durian.

*Bacillus thuringiensis* war. *Kurstaki* had been used successfully in controlling *Conogethes punctiferalis* of durian in large areas of Mekong Delta and in Southeast provinces. It could be considered as a desirable pesticide to satiate the safe fruit standar of durian.

### **Variety trail on okra**

Lê Th H ng Vân, Tr n Kim C ng, Hu nh V S n và Lê Tr ng Sinh

#### **SUMMARY**

Lines of okra given by AVRDC were evaluated at South of Vietnam. TOT5864 showed the most promises of high yield. TOT0581 had lower yield as compared to local cultivar in dry season, however in rainy season, yield was slight higher than the local cultivar and another commercial check named 'SG 9'. TOT1496 was evaluated in only dry season. It's yield was not significant different from checks. However number of pot per plant was lower than checks while plant was shorter with many nodes and second stems. All evaluated lines had pentagon pots.

### **Variety trial on hot pepper**

Lê Th H ng Vân, Tr n Kim C ng và Hu nh V S n

#### **SUMMARY**

Lines of hot pepper given by AVRDC were evaluated at South of Vietnam. 9950-5197 and 9955-15 lines gave positive traits in yield and virus resistance, especially yield of these lines were significant higher than checks and their fruit characteristics were fit for domestic market.

### **Effeciency of pesticides on fruit borer control on French bean**

Lê Th H ng Vân, Tr n Kim C ng, Lê Tr ng Sinh và Hu nh V S n

#### **SUMMARY**

Effect of different pesticides on fruit border control on French bean was observed in the present study. A trail was laid out with twelve treatments including two controls. One control was treated by

pesticides as field of farmer and another one was not sprayed any pesticide. The result showed that spraying bio-pesticide Success gave the lowest percentage of fruits infected fruit borer as compared to other treatments except Sieu nhan that was chemical.

## **Results of the collection, conservation and evaluation on some flower varieties in Tien Giang in 2006**

*Lê Nguyễn Lan Thanh, Nguyễn Thị Hằng Lan và Lâm Văn Thông*

### **SUMMARY**

*In three years from 2004 to 2006, 19 kinds and 171 varieties/clones of flowers were collected and grown in the nethouse of Southern Fruit Research Institute.*

*Of 27 chrysanthemum varieties showed good growth in the nethouse but only 16 gave good blooming flower. They were Tho do mini, Tho tim, Co51, Co52, Co53, Co54, Co55, Nut trang, Nut vang, Farm trang, Farm vang, Lys, Simla, Vang pha le, Bin bin vang, TNXD. Three gloxinia varieties, i.e., Chuong hong, Chuong do dun, Chuong do kep had pretty and abundant flowers confirmed their suitability for pot production. It was also record that one ginger flower species with pink color may give good promising products.*

## **Results of the investigation on some gerbera (*Gerbera* sp.) varieties in Tien Giang**

*Lê Nguyễn Lan Thanh, Nguyễn Thị Hằng Lan,  
Lê Thanh Toàn và Nguyễn Văn Sơn*

### **SUMMARY**

*Three gerbera varieties i.e., T01, T02 and T03 were investigated in 2005 and 2006. The results showed that these varieties had good growth, beautiful flowers, well-proportioned plant, flowering days, less infected insects and diseases. plants to produce for cut flower and pot production.*

## **Results of the investigation on some potential chrysanthemum (*Chrysanthemum* sp.) varieties in Tien Giang**

*Lê Nguyễn Lan Thanh, Lâm Văn Thông và Nguyễn Thị Hằng Lan*

### **SUMMARY**

*Eight chrysanthemum varieties in Tien Giang. Investigation on the performance of eight chrysanthemum Tho do, Tho vang, Sofia vang, DL1, DL2, Vang he, CN98 and Vang Dai Loan were suitable for pot production and cut-flower. Sofia, DL1 and DL2 have beautiful flowers, Vang he has many potential traits such as long vase life, specific yellow and structure flower.*

# **Improving the quality and the price of micropropagated plantlets on elongation and acclimatization stage of chrysanthemum**

*Lâm Văn Thông, Nguyễn Thị Hằng Lan và Lê Nguyễn Lan Thanh*

## **SUMMARY**

*The purpose of this study was to improve and lower the price of micropropagated plantlets by using the materials and natural conditions of a net house on rooting of 2 chrysanthemum varieties. Results showed that the rooting stage in micropropagation of 2 chrysanthemum varieties can easily be carried out under natural conditions (the temperature and light intensity average were 28-31°C and 8.000-10.000 lux). The growth of plantlets produced under natural environmental conditions were as well as when planted under field conditions and continued grew better in the net house. Net house plants were assessed to be about 15% cheaper to produce than growth chamber plants. The shoots were good growth on the MS medium supplemented with Atonik (0.25-0.5 ml/l). Using natural conditions for micropropagation is a promising way to reduce costs and opens possibilities for application as an efficient procedure plant tissue culture technique for the production of high quality in vitro transplants at reduced costs.*