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T02.001
The Relation between Flowering Habit and the Fruit Setting of the Kumquat

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Kumquat (*Fortunella crassifolia* Swingle) is originally from china and has cultivated for more than a 1,000 years. It is cultivated from 1826 in Japan and has become a popular fruit. The fruit is used for table use, Chinese medicine, processed food materials, and the tree itself can be used for ornamental display. Kumquat is a perpetual flowering and there are a few times full blooms during the summer in Japan. The harvest period is mainly from December to March. We've researched in details about the relationship of flowering habits and fruit settings. In addition, we revealed both the effects of flowering habits and fruit settings that result from the flower thinning. The flowering started at about 26 degrees Celsius. The flowering times were different for every individual Kumquat, and they varied from 3-5 times every 2 weeks between flowering periods. There were small flower buds on the peduncle during the first flowering, but the growth of these flower buds did not start soon, and later started after flowering or fruit abscission. Kumquat fruit that is derived from the first flowering period are usually larger than the later flowering periods. If the first flowers are removed, however, the number of flowering increases the second flowers and the third fruit becomes significantly larger as opposed to the non-thinning. The thinning that occurs in fruit growing is generally an effective method for quality control within the year it occurs, and especially for flower bud formation the following year. Similarly, the thinning of Kumquat control a number of flowers and fruit set within in a same year.

T02.002
Fruit Set in Orange (*Citrus xsinensis* (L) Osb.) with Phytohormones in Tamaulipas and Nuevo Leon Mexico

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The lacing the fruit needs the conjunction of two factors: an initial stimulus that causes the growth of the ovary and their ability to accumulate metabolites and adequate availability of these. This availability is critical during the abscission and determines final fruit set of fruit. It's set, or tie-flowering fruits and not the factor determining the crop in citrus (Guardiola, 2000). In the absence of research on the use of growth regulators in the North East of Mexico and the low rate observed in the orange tie, the present research work aimed to evaluate the effects of two complex natural hormone (auxins, gibberellins and cytokinins) and 2,4 - D (dichlorophenoxyacetic) in the tie, fruit yield and quality of two orange cultivars and to identify and quantify the gibberellic acid (GA3) to relate the endogenous content with the exogenous applications. Four experiments were conducted in a design in a randomized complete block with five treatments and four replications arranged in a split plot corresponded to the large plot and the plot cultivars girl found in the treatments. The fruit weight showed a significant difference between the proportions hormone, with an average weight of 325.78 g in 'Washington' and 330.67 g in 'Thomson', representing values greater than those reported (200-250 g) by Agusti (2003). Auxins (32.2 ppm), gibberellins (32.2 ppm) and cytokinins (83.2 ppm) in these proportions possible to increase the berthing of the fruit yield and quality under the conditions described. According to the results of this experiment in the Central zone of Tamaulipas Mexico the best date for the application of 2,4-D, orange varieties 'Washington navel' and 'Thomson' is in full bloom to favorably affect the performance.

T02.003
Heavy Pruning Effects on Flower Buds Formation of *Citrus microcarpa* Bunge and *Fortunella margarita* Swing

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In *Citrus*, like most subtropical fruit tree, low temperature often been considered as an inducement to release bud dormancy and enhance flower bud formation, while high temperature is reported to inhibit flower formation contrarily. However, kumquat (*Fortunella* spp.) and calamondin (*Citrus microcarpa* Bunge) are found in different situation. In Taiwan, blooming period of kumquat usually occurs in high temperature season, and shoots developing under low temperature condition will be vegetative, shows high temperature may improve flower bud formation process. A similar result is also shown in potted kumquat which held at 35/30 °C (day/night temperature) began to bloom after 2 weeks and had greater number of flower, while those in 25/20 °C and 20/15 °C failed to bloom in experimental period. Flower bud formation in calamondin is very fast. Calamondin with new flush grown under 25 °C might flower when reach three week old of age, no matter they were in high or low temperature thereafter, but higher temperature treatment induce greater number of flower. It shows temperature might not be an important factor to influence flower bud formation in calamondin. Since calamondin is an interspecific hybrid of kumquat and small fruit mandarin, its flowering behavior may be influenced by both of them.

T02.004
Integrating Cover Crops to Enhance Sustainability in Banana and Citrus Cropping Systems

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In Martinique (FWI), because of the susceptibility of insular environment, the demand from society and policy-maker is high in sustainable and environmentally friendly fruit production systems. In tropical wet areas, weed management is crucial, but it remains difficult without herbicides. Furthermore, herbicides become the most important pesticide in banana and fruit fields; thus developing herbicide free alternatives is a priority. Cover cropping systems constitute the most promising option. Beside weed control, their ability to reduce runoff and soil erosion, water and nutrient competition, to host pests and auxiliaries, to preserve biodiversity are key services that may be provided by cover crops. A multi step and multicriteria grid was built to select the ideal cover crop. We tested it on banana and citrus orchards. In the first step, cover crops are selected on the basis of their climate suitability, seed availability, technical suitability, non invasive status, and perennial under the main crop. In the second step, we assessed the agronomic performances of 24 cover crops species in field conditions. We measured their specific traits (establishment, covering rate, perenniality, biomass production, root depth, nutrient uptake or recycling, regrowth after mowing...). In the last step, we defined specific objectives to be reach in terms of ecological outputs for each cropping systems specifications. We designed cropping system prototypes with the most relevant cover crops. In citrus orchards, grasses, characterized by a high covering index associated with a low biomass production, were selected but auxiliaries hosting services were poor. In banana fields, grasses were intercropped and the nitrogen competition between cover crop and banana plants was assessed using the SIMBA simulation model. As a conclusion, we showed that the concept of 'ideal cover crop' is useful to select cover crop species and to design efficient cover cropping systems.