NEWSPLEAS: KEEP YOUR EYES PEELED!

Improve the global competitiveness of the South African citrus industry demonstrates the untapped genetic potential in citrus fruit.

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**HOU JOU OE OP IN DIE BOORDE!**
- Laat u boord personeel weet om uit te kyk vir takmutasies of afwykings.
- Neem deel in die sitrusbedryf se ontwikkeling van nuwe sitruskultivars en versterk die bedryf se globale kompetentie deur die ontwikkeling en kommersialisering van plaslik-aangepaste kultivars.

**INTRODUCTION**
As part of CRI's mission to maximise the long-term global competitiveness of the Southern African citrus producer, the Citrus Industry's Cultivar Development programme has various strategic objectives, among which is the timely sourcing of new citrus cultivars. New cultivars can be sourced from various avenues, including the Citrus Industry's own breeding programme, international breeding programmes or from naturally occurring bud sports or mutations which could occur in any citrus orchard in Southern Africa.

The purpose of this article is to highlight the possibility of discovering new cultivars from bud sports and to focus the attention of field personnel on the lookout for mutations. All commercial orange, Satsuma and Clementine mandarin cultivars, and nearly all grapefruit and lemon cultivars are derived from spontaneous mutations or so-called bud sports. Rare exceptions to this are Star Ruby grapefruit and Eureka Seedless lemon which were both derived from induced mutations. Mandarin hybrids fall into a separate category as these can be bred by conventional cross-pollination techniques.

Examples of citrus industries where mutations have been discovered and successfully commercialised include Satsumas from Japan, Clementines from Spain, early-maturing Navels from California, late-maturing Navels from Australia, and seedless Valencia from South Africa.

Locally selected cultivars are, generally, better adapted to local growing conditions and therefore quicker to evaluate and commercialise. In addition, many citrus producers have indicated their desire to be directly involved with introducing cultivars into the Industry's Cultivar Development programme and to improve the access of new cultivars to producers. Therefore, it is in your interest and that of your industry to identify possible mutations and bring them to the attention of the Citrus Industry's Cultivar Development programme.

**KEEP YOUR EYES PEELED**
In light of the above background, this "newflash" serves to bring to your attention the need to actively search out branches or trees with unusual fruit characteristics, for example, commercially important traits such as fruit size (generally larger fruit size), rind colour (earlier and brighter colour), relatively earlier or later maturing (usually difficult to find later maturity as fruit are harvested with the main crop!), improved flesh colour, higher sugar level or ratio (generally perceived as improved eating quality), seedless fruit in an orchard of a seeded cultivar, or elongated fruit shape in lemons.

Obviously fruit with some of these characteristics "disappear" before they get to the packhouse, or if they get to the packhouse, then it is difficult to trace the exact trees from where the fruit was harvested. Therefore, if this attempt at discovering new citrus cultivars is to work, producers need to motivate their orchard personnel to be on the lookout for branch mutations and to report them to the producer or production manager.

**WHAT TO DO IF YOU DISCOVER SOMETHING INTERESTING**
If you or your orchard personnel discover a branch or tree mutation, then contact Graham Barry (021-808 4105 or 082-900 0616), Thys du Toit (041-992 5366 or 082-889 2363) or Johan Joubert (013-759 8028 or 083-707 2812).

The process of introducing the selection into the Citrus Improvement Programme (CIP) then starts, which includes elimination of various pathogens and viruses, field and market evaluation, and budwood multiplication for larger-scale production. Through the introduction of numerous selections into the citrus development pipeline, the chances of commercially successful cultivars coming out of the pipeline are increased.

**KEEP YOUR EYES PEELED**
- Inform your orchard personnel to be on the lookout for branch mutations.
- Contact Graham Barry, Thys du Toit or Johan Joubert (contact details above).
- Be part of your industry's development of new cultivars and strengthen the South African Citrus Industry's global competitiveness through discovering and commercialising locally-adapted cultivars.