HORTGRO
Growing Fruit IQ

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HORTGRO reaction to drought disaster declaration in the Western Cape

The current drought as well as the predicted long-term drying trends in the Western Cape has serious implications for the farming of deciduous fruit crops, HORTGRO – the deciduous fruit industry body said in a statement today.

According to Anton Rabe, HORTGRO's Executive Director, the current problem cannot only be solved by cuts on agricultural water quotas.

"The whole community will have to re-think their water usage and alternative water resources must be unlocked, and recycling of water should be phased in. Water policies will have to change and dams must be enlarged to save more winter rainfall. Water storage should be adapted so that water is stored for longer periods than just one season - given that there will be longer droughts in future, possibly followed by floods."

Rabe further said that "we cannot afford flood water to disappear – it must be stored and made available in the next drought period". He estimated that short-term crops will become very expensive, especially in the Western Cape. "Water for agricultural use will be prioritised for long-term crops, but short-term crops like vegetables can be imported from other parts of the country."

Prof Wiehann Steyn, HORTGRO's Crop Production Manager, explained the production implications of the drought: "Biomass production (both growth and fruit yield) of fruit trees relates directly to the availability of water during the growing season since trees cannot photosynthesize and produce carbohydrates in the absence of water.

"At moderate water stress, as experienced during the previous two seasons when water availability in some regions came under pressure, young trees grow less and mature trees carry fewer and smaller fruit. Fruit quality is also reduced under moderate water stress due to increased levels of sunburn and internal defects that result in fruit being unsuitable for fresh consumption and long-term storage.

"Severe water stress may be experienced during the 2017/18 season if insufficient winter rainfall does not allow fruit growers to replenish their water storage or if heavy restrictions are imposed on agricultural irrigation water use in water schemes that competes with the water needs of the City of Cape Town. When irrigation water is restricted below 50% of the needs of the trees, profitable fruit farming becomes impossible due to the progressive impacts on the trees. If irrigation water becomes very limited, growers may need to remove all fruit from the trees, rip out less

productive orchards to save water for remaining orchards or even remove the aboveground parts of trees to try to keep at least the root system alive.

“Evidently, considering the above and because deciduous fruit trees are perennial crops, severe drought stress does not only affect the season during which it occurs, but will have a knock-on effect in subsequent seasons. Considering that the annual production cost of a full bearing apple orchard runs close to R150, 000 per ha, growers may incur considerable debts in a severe drought year with diminished means to recuperate these debts in future seasons. Since deciduous fruit trees only attain full production 5 to 6 years after planting, it takes a long time to fully replace lost orchards while reduced growth of young orchards can have a significant impact on profitability, considering that establishment costs may exceed R350,000 per ha.

“Smaller commercial growers and new entrants to deciduous fruit farming are even more exposed to the negative effects of severe water limitations. Drought conditions also affect the 132 000 (Western Cape & Eastern Cape only = current affected areas) farm employees and their dependants as well as the rural communities dependent on the deciduous fruit industry.

“Irrigation research is a key focus area of HORTGRO and past projects, some in collaboration with the Water Research Commission (WRC), have led to the industry-wide implementation of new technologies to optimise the available water – making every drop count. A simple management practice like mulching is used to conserve water effectively. Irrigation is based on research that determines exactly how much water the trees need in order to maximise water use productivity, i.e., the value of production per unit of water used. New research is aimed at water savings achievable by installing fixed and draped nets over orchards and tree rows, respectively, and sophisticated water monitoring equipment.”

Steyn further said that future weather predictions (with a high degree of certainty) indicate 30% lower rainfall by 2050. “If we take averages into account one can expect more dry years ahead like the one we are currently experiencing. Water sources are limited while the Western Cape keeps growing. We should therefore look at the Western Cape Department of Agriculture’s SmartAgri plan and optimise continuous participation. Deciduous fruit growers will need to irrigate more effectively and save water as far as possible.”

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