

# The Cane Grower

The Newsletter of the South African Cane Growers' Association  
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## Eldana: Something to Chew On

By G Ducasse – Area Manager: Umzimkulu

The Eldana borer is the caterpillar of an inconspicuous brown moth indigenous to Africa, *Eldana saccharina*. Outbreaks of the pest were first apparent in the late 1930s in the Umfolozi River flats, and was considered as a pest in the early 1940s. However, with the advent of hardier cane varieties, it largely disappeared until 1970 when a heavy infestation was recorded in NCo376 at Hluhluwe. Outbreaks then occurred progressively both north and south of Hluhluwe, including Mpumalanga, Pongola, Swaziland and low altitude areas of KZN. Indeed, Eldana is now recognised as the most serious insect pest in the South African sugar industry.

While cane variety susceptibility to Eldana varies, all of the current varieties can be affected. Studies have found that the boring damage impacts negatively on both quality and yield (in terms of stalk weight by the hollowing-out effect). However, since boring damage occurs in the lower half of stalks (where sugar storage occurs), Eldana damage has a greater impact on quality than on tonnage. Furthermore, secondary infestation of borings by the red rot fungus can further aggravate such losses. Under drought conditions Eldana damage may become increasingly severe, as stressed cane is particularly susceptible.

This has certainly proven to be the case in the Umzimkulu region following the severe drought of 2010 and the exceptionally dry February/March period of 2011 – the resultant stressed cane proved highly vulnerable to Eldana which rapidly infested fields in all growing areas of the region. This is illustrated in Figure 1 on page 2 which shows Eldana/100 statistics by ward area, comparing current season survey data with that of the previous two seasons. E/100 indicates the number of Eldana in 100 stalks, and is a measure of the Eldana population in a field at the time of the survey. The “skyscrapers” apparent in the 2011 data across all ward areas is clear evidence of the

magnitude of infestation experienced during the current season.

Although it's difficult to place an exact figure on the value of damage caused by Eldana, several studies, based largely on SASRI trials, have shown that there is an estimated 1 to 1.5% loss in RV for every 1% stalk length red (SLR). SLR refers to the measured length sampled that have borings that turn the cane stalks red in colour, expressed as a percentage of the total length of stalk – this measure is useful as it also tells us the length of stalk that has no sugar in it. For instance a 4% SRL indicates that 4% of the length of all the stalks in the survey area have no sugar. In an effort to apply the findings of these studies, Eldana survey data for the current season was analysed, focusing on the %SLR and the associated impact on RV% and thus gross cane returns. Making use of historical yield and quality data, the impact of current Eldana damage

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Picture • Courtesy SASRI 2010

(Continued from page 1)

levels on the various ward areas is shown in Table 1. On average, the loss in RV% due to eldana boring damage is equivalent to a R1 097 per ha loss in gross cane returns, with Murchison showing the largest impact equivalent to a R2 092 per ha loss.

The above exercise can be taken one step further by the inclusion of current cane production estimates by ward area (Table 2). Multiplying the RV% loss attributable to eldana by total expected tonnage per ward reveals the true extent of the loss in potential revenue. Alarmingly, the total loss for the Umzimkulu region is an estimated 4 147 RVtons, equivalent to roughly R12 Million in the current season. The above figure should possibly be viewed as a conservative estimate of the value of eldana damage, as it simply takes into account eldana's direct impact cane quality.

However, as previously mentioned, secondary infestation of borings by the red rot fungus can further aggravate such losses - this has not been accounted for. In addition, although to a lesser extent than quality, boring damage also impacts negatively on cane yield. This impact on tonnage can be estimated based on evidence from trial work which indicates that for every 1 eldana/100 stalks averaged throughout the season, 0.5 tons cane/ha is lost. Considering that the average E/100 for Umzimkulu as a whole (season to date) is 15.03, the loss in tonnage due to eldana alone is an estimated 7.5tons/ha. With 15 377ha due for harvest this season, this equates to a loss of 115 554 tons of cane.

From a management perspective, of biggest concern is that of carry-over field selection. While eldana will attack cane of all ages, the most serious damage typically occurs in carry-over cane of 15 months or more. In fact, studies have shown that damage in April can be between two and four times that of damaged assessed in the previous October in carry-over cane. That is, a field with 4% SLR in October (equivalent to a loss in RV of 0.4%) is expected to have a SLR of at least 8% by April the following season (equivalent to a loss in RV of 0.96%). While growers, even those on a 12 month cutting cycle, need some carry-over cane to start the season, careful carry-over field selection is vital. With current infection levels as high as they are, growers have been advised to cut as large a proportion of their cane as possible this season.

With regard to the choice of carry-over fields, growers have been advised to spend time with the P&D team, ensuring that they focus on carry-over cane. Furthermore, understanding P&D capacity constraints, growers should be conducting their own field surveys in an effort to get a grasp of the eldana levels in their proposed carry-over fields. While there are several variables at play, and in many cases constraints which prevent one from doing so, growers are encouraged not to carry-over cane with a SLR of 2.5% or greater.

A further management consideration of importance when carrying over cane is that of insecticide use. Fastac is registered for use against eldana and has been shown to suppress eldana levels in carry-over cane during the off-crop. It is important to note that Fastac *suppresses* and not *reduces* eldana population – therefore the economic decision of whether to spray Fastac is dependent on the correct selection of carry-over fields, i.e. selection of fields with minimal eldana damage in October (SLR < 2.5%). In this regard, basic costings have shown that the gain in RV% (or more strictly the prevention of RV loss) far exceeds the cost of the pesticide application (whether aerial or ground). ●

<sup>1</sup>Acknowledgement to J Bowley of SASRI for assistance on agronomic aspects and data provision.

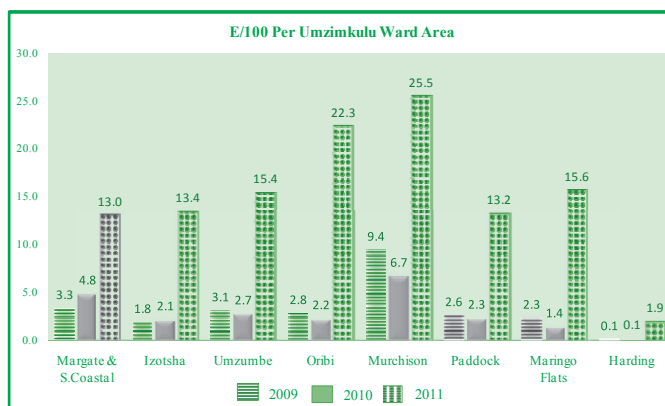


Figure 1: E/100 survey data by ward area over three seasons  
Source: Umzimkulu Pest & Disease eldana surveys (averaged data)

Table 1: Eldana boring damage and its impact on RV% and gross cane returns

WARD	%SLR	15 year avg RV%	15 year avg yield (tons/ha)	RV% Loss	Rand loss/ton	Rand loss/ha
Margate & South Coastal	3.62%	11.5%	67	0.42%	R 12.18	R 817.99
Izotsha	4.56%	11.3%	73	0.51%	R 15.05	R 1,094.93
Umzumbe	4.09%	11.4%	60	0.47%	R 13.67	R 819.64
Oribi	6.03%	12.1%	65	0.73%	R 21.34	R 1,396.59
Murchison	7.49%	11.7%	82	0.87%	R 25.59	R 2,092.12
Paddock	4.01%	12.7%	80	0.51%	R 14.89	R 1,195.79
Maringo Flats	3.88%	11.9%	69	0.46%	R 13.59	R 935.94
Harding	1.23%	13.2%	90	0.16%	R 4.74	R 426.74
<b>AVERAGE</b>	<b>4.36%</b>			<b>0.52%</b>	<b>R 15.13</b>	<b>R 1,097.47</b>

Table 2: Loss caused by Eldana boring damage by ward area

WARD	%SLR	RV% Loss	2011 Estimate (Tons)	RV tons loss	Total Rand loss
Margate & South Coastal	3.62%	0.42%	63077	262.16	R 768,126.23
Izotsha	4.56%	0.51%	17369	89.20	R 261,355.87
Umzumbe	4.09%	0.47%	253346	1181.72	R 3,462,453.72
Oribi	6.03%	0.73%	73339	534.16	R 1,565,078.38
Murchison	7.49%	0.87%	76367	666.86	R 1,953,887.60
Paddock	4.01%	0.51%	178094	905.11	R 2,651,978.41
Maringo Flats	3.88%	0.46%	36223	168.06	R 492,421.70
Harding	1.23%	0.16%	209760	339.30	R 994,158.00
<b>Total loss for Umzimkulu region</b>				<b>4147</b>	<b>R 12,149,460</b>

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# Recapitalization the land reform sector

By Lucky Mthembu: Regional Economic Advisor – South Coast

**G**overnment, through the Department of Rural Development and Land Reform (DRDLR), has shown a strong commitment to the sustainability of farms transferred to land reform beneficiaries since 1994 with the introduction of the Recapitalisation and Development Program (RECAP). This program is aimed at revitalising these farms and taking them back to their optimum production. The lack of working capital, capital equipment, management skills and support amongst other factors has led to a significant decline in yields post transfer. The land reform sector includes farms that have been proactively acquired by the state (redistribution), restitution (land claims) and LRAD (grants). Farms deemed to be in need of revitalisation were identified and their requirements and associated costs were outlined in business plans which were submitted to government for approval.

Government consulted the various agricultural industries for assistance, inputs and skills especially with regard to the business plan compilation process. Milling companies in the various regions typically entered into strategic partnership agreements with the DRDLR to become implementation agents once the funds were approved. Since the inception of the land reform programme, DRDLR has changed its policies a couple of times. The LRAD program was abolished and has been replaced by the Proactive Land Acquisition Strategy (PLAS). The funding contribution specified in RECAP program has been amended recently from 25% of purchase price to financing farm needs over a period of time on staggered phases - 100% in year 1, 80% in year 2, and 60% in year 3 of costs as reflected in the business plan. The outstanding contributions in years 2 and 3 are expected to be obtained from the farming operation through a retention savings fund.

Business plans were requested from the strategic partners. These were compiled by CANEGROWERS with contributions by all other industry players. The business plans showed the true picture in as far as the condition of most farms and the amount of capital required to bring them back to optimum production. The amount of capital required bears testimony to the sharp yield decline over the years. The cane roots are generally old and massive replanting is required across the regions which will cost tens of millions.

Business plans were presented to DRDLR, who, using the 25% RECAP policy, paid out the first tranche of funds to the implementing strategic partners as per approved business plans. Although the funds came in late in the 2010 financial year, the growers and the industry are

ready for planting this season. Some of the farms are in worse conditions than others, and had deteriorated to the point that funding to the value of 25% of purchase price is insufficient to meet the farm's requirements. These rare cases are expected to benefit from the new RECAP policy which proposes funding 100% of farm requirements as reflected in the business plan in year 1 and staggers funding over the three year implementation period. Some of the farms were bought without capital equipment or necessary working capital which made farming exceptionally challenging, a point this policy now seeks to address, making it easier for the growers to operate the farm effectively and sustainably from the outset.

## Lessons learnt:

The RECAP program is still in its infant stages and there is a long way to go and much to learn. Nevertheless, at this point the program has identified areas that need attention which, amongst others, include:

- Understanding the challenges that the growers face in this sector;
- Improving working relationships between the industry and Government;
- Importance of pre-assessment of PLAS farms before acquisition;
- Corrects election of farmers;
- Reinforcing and co-ordination of structures to ensure improved levels of delivery ;
- Grower development;
- Improved induction and assimilation into industry structures.

In conclusion, government intervention through RECAP is anticipated to have a positive impact on grower yields and turn the situation in the right direction in the short-term. However, sustaining these yields, grower returns, institutional arrangements, social challenges, farm business management and deeper understanding of the needs of these growers remains the biggest challenge and a serious threat to the sustainability of these farming operations. ●

## DISCLAIMER

The Cane Grower is the official newsletter of the South African Cane Growers Association [CANEGROWERS]. Articles included in the newsletter are published with the intention of generating interest and debate in the various issues and to provide information to our readership. Contributions are welcome, but the right to edit any contribution is reserved. The opinions expressed in any published article or insert do not necessarily reflect the opinion of CANEGROWERS.

# Farm Murders and Your Security

By Kathy Hurly—Director: Regional Services

This is a difficult subject to write about but one that is regularly discussed by all of us. It is also a regular agenda item at the Kwanalu Board of Governor's meeting, where Koos Marais provides an update from the Kwanalu Security Desk. Crime, whether it is serious crime like farm murders or petty crime like theft of cane, has a serious impact on rural communities, families, farm businesses and the rural economy. The cost of crime is ultimately paid for by the consumer and the economy.

On reflection of the past year's activities, the Security Desk reported that there were no farm murders in the first five months of 2011 compared to 2 for the same time period in 2010. Seventeen farm attacks were registered for 2011 in comparison to 2010. There were 10 murders and 39 farm attacks in 2010 in comparison to 6 murders and 36 attacks in 2009.

Farm attacks, particularly farm murders, receive a high status level at SAPS in Kwa-Zulu Natal, with the highest calibre detectives allocated to the task force used to investigate murders. For the 20 dockets that were opened for farm murders since 2003, 18 resulted in the criminals being caught and receiving sentences of between 18 years to life imprisonment. Two cases have been remanded to the High Court for sentencing in September and October of this year.

It is the advice received from the policeman who has spent the last ten years hunting down these murderers and thirty years in the SAPS that I want to share with you. He believes that through analysis of the motives of these criminals, effective preventative measures can be put in place to secure your safety on your farm.

The primary motive for murder is greed and the target is usually cash and fire arms. This is important for you to acknowledge and plan for if you sell animals, fruit and vegetables from the farm and have cash stored on the farm. His advice is stop selling. You are making yourself a target. Firearms are the next thing of value. Ensure that the whole neighbourhood is not aware of how many and where these weapons are locked away. Domestic workers are often targeted as a source of information in these instances.

Treating your staff with dignity and respect will also ensure your safety as 7% of the murders occurred because an employee had a grievance with the employer/farmer. In this instance, the payment of incorrect wages, unfair treatment, humiliation and sexual relationships have been mentioned. Respect is important in ensuring a good

## Price of Recoverable Value (RV) in Cane

SEPTEMBER 2011—RV PRICE FOR 2011/12 SEASON

The Sugar Association has declared the following INTERIM price for RV in cane delivered up to the end of August 2011:

<b>RV PRICE:</b>	<b>R 3 005.31 per ton of RV</b>
<b>"d" factor</b>	<b>0.380080</b>

The price is based on a crop of **17 134 312** tons of cane which converts to **1 896 775** tons of sugar at a cane to sugar ratio of **9.03**. The average RV content is **11.71%**.

### EXTENSION SERVICE LEVY

The average regional levy (excl. VAT) payable by participating growers for Extension Services for cane delivered up to the end of **August 2011** is:

**R0.7491 per ton of cane**

relationship. Practising this will also assist in improving the image by the public of farmers at large. Your biggest allies in the fight against crime are your own employees. Vigilance and information sharing is critical.

SAPS advice to all of you is to bring in an expert or alternatively a fresh pair of eyes to review your security measures. It is important to have as many layers of security as possible. This could mean dogs, alarm systems, panic buttons, beams, fences, gates and finally alert garden and domestic workers. Have a plan for an emergency situation and ensure you have an area where you can lock yourself in should the need arise.

The Local Grower Council or Farmers Association is encouraged to build a good relationship with the local SAPS to understand their constraints and intervene with the provincial office when a lack of resources is impeding their delivery.

If the worst happens and someone is murdered, the police have asked that you secure the scene of the crime as quickly as possible. Do not allow anybody to enter the scene of the crime other than the authorities. It was evidence gathered from the scene of the crime that was used to convict all 18 murderers.

I write this article and commend the excellent work that the Kwanalu Security Desk does to raise farm safety and security issues in the province. ●