

CURRENT SITUATION REGARDING THE BORER *ELDANA SACCHARINA* WALKER (LEPIDOPTERA: PYRALIDIDAE)

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Abstract

From figures provided by millyard and field surveys of the borer *Eldana saccharina* Walker, a comparison is made between the current situation and that of a year ago. Apart from some local spread in infestation, especially in the eastern Transvaal and Nyalazi areas, there has been little change during the last year. Although various indigenous host plants throughout cane growing areas support the borer, it has not been recorded in cane from just south of the Tugela river southwards, nor is it found in the higher altitude areas in any host plants. It is suggested that the naturally controlling factors in operation may be aided by meticulous field hygiene and the restricting of standover cane.

Introduction

The history of *Eldana saccharina* Walker and various aspects of its bionomics have been discussed at earlier congresses^{1, 2, 3}. The purpose of this paper is to outline its distribution and pest status during the last year, and to compare the present situation with that of a year ago.

Distribution

In broad terms, the distribution of this pest within the cane growing areas of S. Africa and Swaziland has changed little during the last 12 months (Fig. 1). Except for two isolated cases near the Tugela river, the borer has not been recorded from cane anywhere south of it. It has been locally plentiful in coastal areas from the Tugela northwards as far as Nyalazi, with an indication that the most heavily infested area has moved southwards from Mtunzini to Amatikulu. The very heavy infestations at Hluhluwe have waned considerably, but it is still present there. It has remained locally abundant at Pongola especially in old cane. Although persistent at Nsoko in Swaziland it remains unrecorded at Big Bend. In northern Swaziland its numbers remain much the same. In the Malelane area, however, there were very severe outbreaks in the earlier part of the season, and, while in previous years only one farm had been affected, during 1976 *Eldana* was found to have become widespread in the areas supplying Malelane mill.

In wild hosts, particularly in certain riverine sedges, *Eldana* is widespread throughout the cane growing areas of S. Africa and Swaziland, even in certain coastal areas remote from the nearest cane, for example Makatini flats and Ndumu Game Reserve. However, in Natal at any rate, its range does not extend far inland, and towards Margate its distribution in wild hosts is restricted to a very narrow coastal strip. Details of its distribution and the controlling factors are the subject of a current investigatory project, from which it seems that the presence of favoured host plants is determined by temperature and rainfall.

Millyard Surveys

Since August 1975, resident inspection teams have operated at mills which are supplied from *Eldana*-infested areas *viz.*, Darnall, Amatikulu, Empangeni, Felixton, Umfolozi and Pongola. Following heavy infestations in the eastern Transvaal early last season (June 1976) an inspection team was established at Malelane as well. So far, the Darnall resident team

has not recorded *Eldana* from cane grown south of the Tugela river although, in November 1976, a visiting Experiment Station team picked up a suspect larva which turned out to be *Eldana*. Subsequent inspection of the field concerned showed a very low infestation.

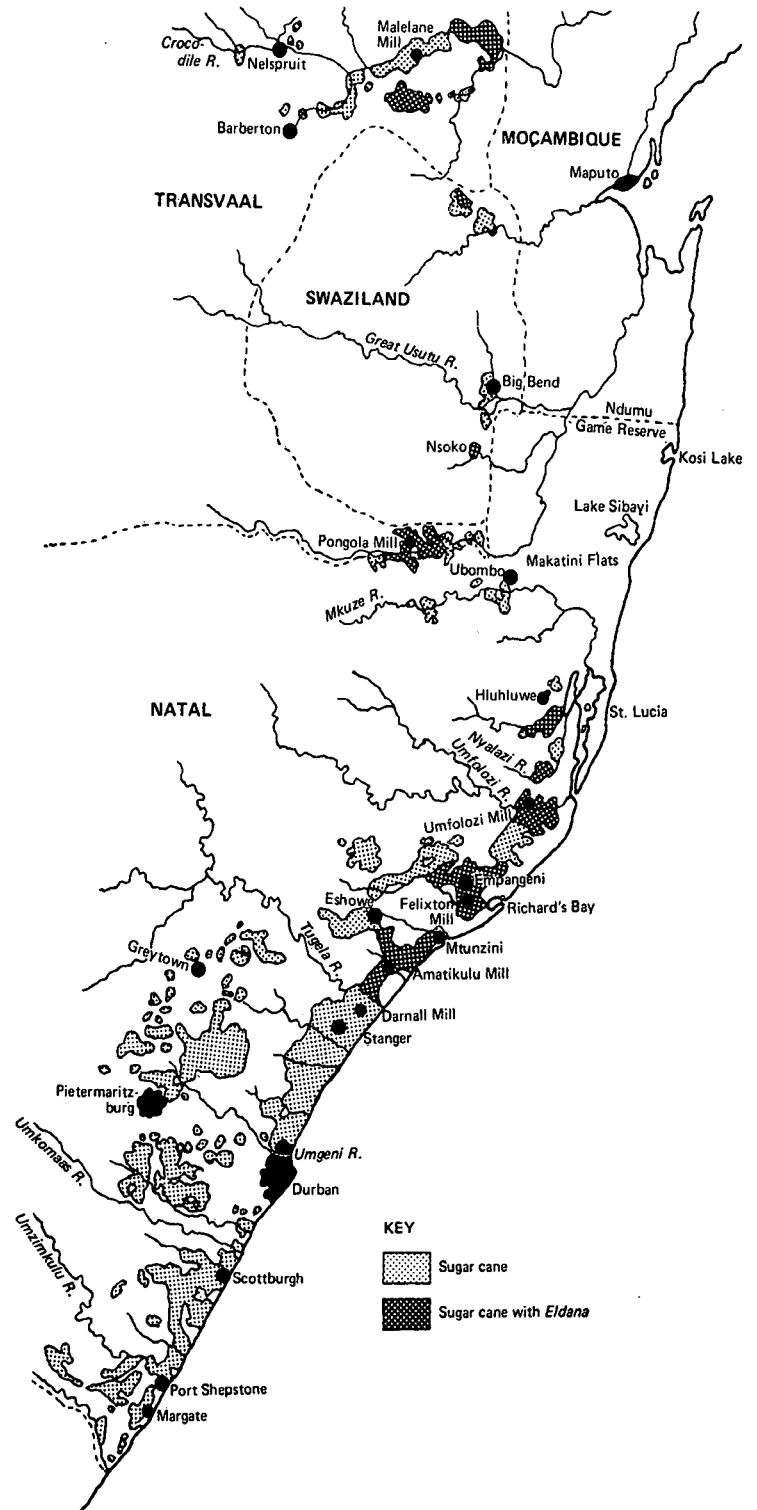


FIGURE 1 Present distribution of the borer *Eldana saccharina* in cane.

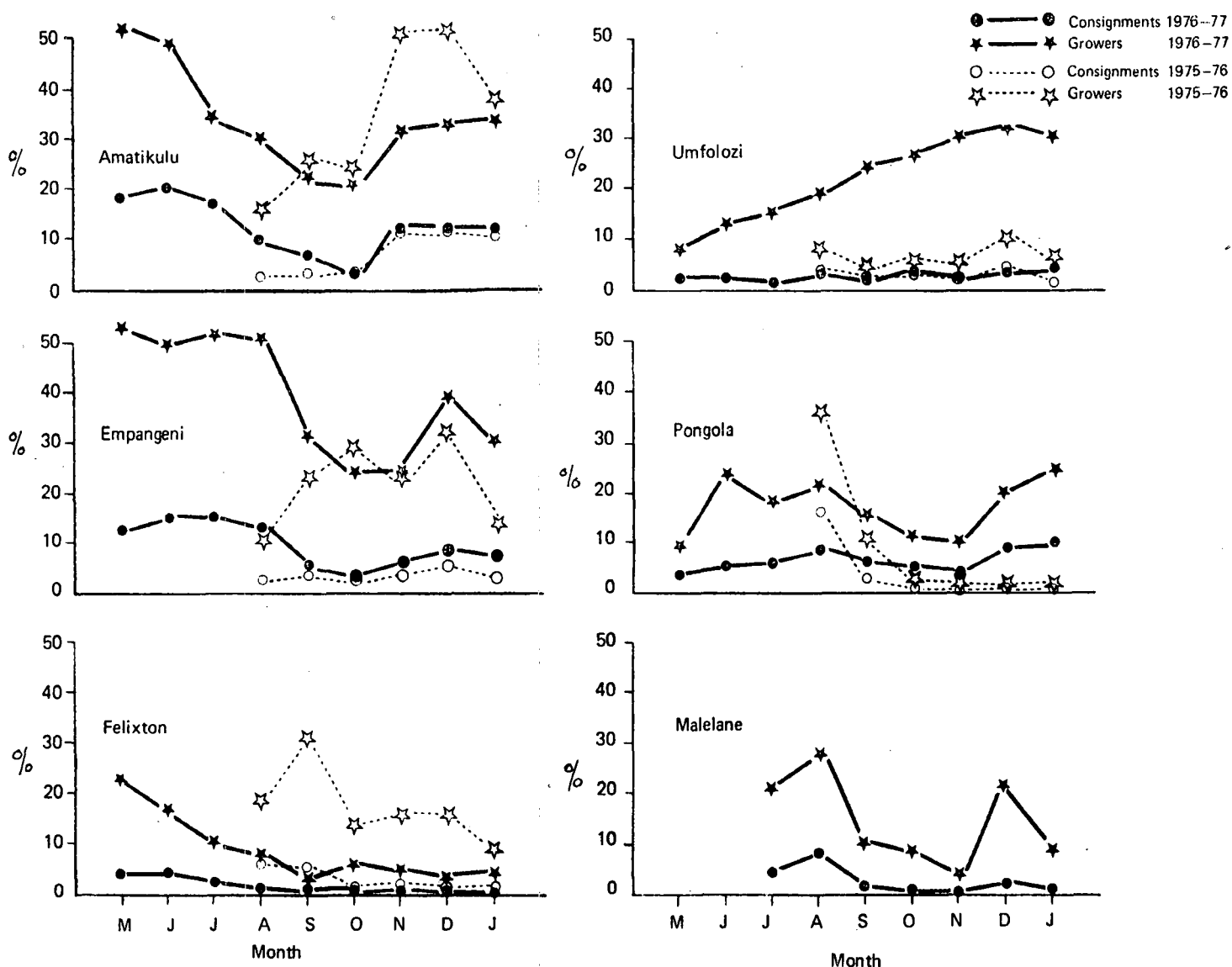


FIGURE 2 Percentages of consignments infested and growers affected by the borer *Eldana saccharina* at six mills.

Summarised findings from other resident mill teams are shown in Figure 2, which includes (when available) figures for both seasons, and for both consignments and growers affected.

Amatikulu

On both percentage consignments infested and percentage growers affected, figures were relatively high at the beginning of this season and dropped towards October, after which they again rose slightly. The pattern for the two seasons was similar, but consignments infested were slightly higher this season and percent growers affected rather lower.

Empangeni

The pattern was similar to that at Amatikulu but, at the beginning of the season, a high percentage of growers were affected. Percentage consignments infested and percentage growers affected were generally rather higher than for the previous season.

Felixton

A rather different pattern was recorded here. For growers the pattern was similar to that of the mills already mentioned, but the level was far lower, especially for the more recent season. The level of consignments infested was generally very low, and even lower this season than last season.

Umfolozi

Here again the pattern was different. The numbers of consignments infested remained at a low level during both seasons, but this season the percent growers affected rose progressively.

Pongola

The pattern for consignments was similar for both seasons, showing an increase in infestation towards the end of this season. A similar increase in growers affected was also apparent.

Malelane

Initially an increase in both consignments infested and growers affected was recorded. This was followed by a drop, and then by a further increase towards the end of the season.

Discussion

Probably the most important conclusion from all the evidence available is that the *Eldana* situation in January this year is little different from that of a year ago. It is apparent from Figure 2 that more growers are now affected (Felixton mill being the only exception) than was the case a year ago; but the percentage of consignments infested remains very much the same, suggesting there has been some spread within a mill area but not necessarily an overall increase in population. For

example, clear evidence of spread is apparent from Umfolozi mill figures, and this is borne out by circumstantial evidence on the farms concerned, but there is probably little difference in the numbers of infested sticks entering the mill. Similarly, to the industry as a whole there is probably little difference in crop loss.

The heavy infestations at Malelane were encouraged by the large amounts of standover cane which resulted from milling delays. Initially only the Komatipoort area was affected, but subsequently *Eldana* was recorded in many parts of the area supplying that mill.

At Amatikulu, Empangeni and, to some extent Felixton, there was a tendency for higher infestations to be recorded early and late in the season, and for mid-season figures to be lower. This could be explained by the presence of older and therefore more heavily infested cane earlier in the season, and by an accelerated rate of *Eldana* development in late spring and summer.

Conclusion

While the general situation has not improved in the last 12 months, it has worsened very little, and it may be concluded

that naturally controlling factors — ecological, biological and climatic — are having their influence. At this stage insecticide use is not recommended for, although it might provide some temporary improvement, it could well tip the scales in the wrong direction.

There is clear evidence that, where current recommendations are meticulously followed, an improvement has resulted. These consist essentially of avoiding having standover cane, cutting at or below ground level and leaving in the field no plant residues from which borers may infest the following ratoon or neighbouring fields.

REFERENCES

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