

Short Report

The impact of dracunculiasis in a sugar-cane plantation

Jean-Philippe Chippaux* *Centre ORSTOM de Cotonou et Centre OCCGE de Cotonou, République du Bénin*

Dracunculiasis is one of the major causes of disability among people living in endemic areas. Work loss due to the disability it induces in farmers has been little documented, mainly due to the failure to measure properly economic activities in poor rural communities.

A survey of dracunculiasis in a large sugar-cane plantation in the Zou Province of Bénin was made in 1988. The company employed about 1450 people, most of them seasonal workers. The incidence of dracunculiasis had been recorded since 1986 and the duration of disability was known in every case. In the Zou Province, transmission of dracunculiasis occurs from October to April, with a peak of prevalence in November and December.

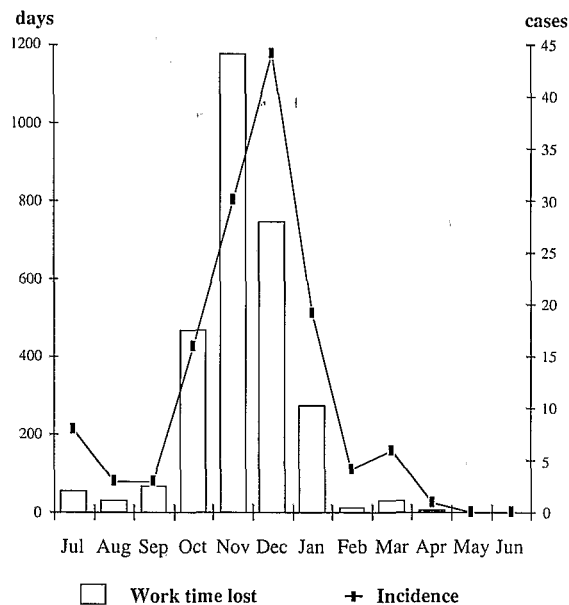


Figure. Monthly incidence and working days lost during the dracunculiasis season of 1986-1987

*Present address: Centre Pasteur du Cameroun, B.P. 1274, Yaoundé, Cameroun.

During the 1986-1987 transmission season, dracunculiasis was diagnosed in 134 people (9.3%). In July and August 1986, 9 patients were seasonal workers coming from north of Bénin where transmission occurs from June to September. 55% of cases occurred in November and December, corresponding with the beginning of the sugar-cane harvest. The work time lost in November and December amounted to 4% of cropping work time, and required the hiring of 37 workmen for 1650 working days. The average value of one day's agricultural work at that time was 300 FCFA (1.2 US\$). The cost of medical treatment, which must be added to the cost of substitute labour, is difficult to estimate accurately as all expenses were supported by the factory dispensary. However, 2370 daily treatments for dracunculiasis were notified in November-December 1986. In 1987-1988, only 15 people were infected. The work time lost was only 0.5% of cropping time in November-December 1987. Four workmen were recruited during these 2 months for 175 working days. During this period, less than 250 daily treatments for dracunculiasis were dispensed by the infirmary. The average duration of disability was 22 d. The seasonal distribution of disability agreed with the seasonal variation of incidence (Figure). The drastic reduction in the number of dracunculiasis cases in 1987-1988 was not explained. The decrease of incidence concerned permanent as well as seasonal workers coming from various parts of the country to ensure the harvest of sugar-cane. Paradoxically the reduction in days lost since December could have been due to the rise in demand for labour and men's exertion to keep their jobs.

This study must be considered as an attempt to evaluate economic loss induced by dracunculiasis. BRIEGER & GUYER (1990) emphasized the limits of such studies. In rural communities affected by dracunculiasis, various methods are used to cope with loss of productivity. Mutual assistance, alternative crops, flexible dates of sowing, varying degrees of disability and the hiring of substitute labour are not considered by most economic surveys. However, commercial plantations are increasing in developing countries and the traditional methods of coping could become inadequate to offset agricultural work lost and inapplicable to modern agricultural methods.

Acknowledgement

This work received financial support from the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (ID: 850350).

References

Brieger, W. R. & Guyer, J. (1990). Farmers' loss due to Guinea-worm disease: a pilot study. *Journal of Tropical Medicine and Hygiene*, 93, 106-111.

Received 15 April 1991; revised 18 September 1991; accepted for publication 19 September 1991

ORSTOM Fonds Documentaire

N° : 35.348 ex 1

05 MAI 1992

Cote : B

41 B3 II