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Letters to the Editor

FOOTWEAR FOR FARMERS AFFECTED BY LEPROSY

Editor,

We recently reported on a study of footwear carried out at ALERT which showed that commercially produced canvas shoes are a cost-effective method of achieving ulcer healing and/or preventing new ulcers in anaesthetic feet, and are readily accepted by leprosy patients.[1]

We have subsequently carried out a study to compare two commercially available types of footwear for use by farmers. One was the canvas shoe, made by the Ethiopian canvas shoe factory, used in the previous study. The second was a PVC boot, made by the Ethiopian Plastics Factory. This PVC boot is deep enough to accommodate an MCR insole (shore 15°, thickness 8 mm) without any modification, so can be bought 'off the shelf'. In appearance, it is a typical 'Wellington' boot or gumboot, and is used by many people in wet or muddy conditions. Both types of footwear now cost about US$ 6·2 per pair.

Methods

One hundred and ten male farmers working in various parts of central Ethiopia were randomly assigned to the canvas shoe group or the PVC boot group. The study commenced at the beginning of one rainy season (June 1996) and all clients were followed for 1 year. All were former leprosy patients who either had one or more plantar ulcer(s) at intake, or had the scar of a healed ulcer; all had loss of sensation (LOS) as tested by a 10 g monofilament. Many had clawed toes and bone loss.

At follow-up (at 3, 6 and 12 months) any ulcers were measured and the condition of the shoes or boots was noted. The acceptability of the footwear was also determined by a standard set of questions.

Results

Table 1 shows the sample characteristics and the outcomes after 1 year of follow-up.

Durability is mainly a problem of the 'uppers'; the soles and insoles generally remain in good condition. PVC boots were much more durable than the canvas shoes. Table 2 shows the number (percentage) of 'uppers' remaining in good condition after different periods.

At each follow-up visit, more than 80% of the farmers rated the PVC boots as 'excellent' for social acceptability and suitability for work. The canvas shoes were socially acceptable, but 85% of farmers rated them as 'good' for their work, rather than 'excellent' (8%) at the first follow-up, which occurred just at the end of the rainy season.

One adverse comment was that the PVC boots could become very hot in strong sunlight, with the possibility of burning the feet.

Conclusion

PVC boots are more suitable for the agricultural working environment in Ethiopia than canvas shoes.

Table 1. Sample characteristics and results at 1 year. Differences are not significant

	Canvas shoe group	PVC boot group
Total analysed	52	58
Average age	46 years	45 years
Age range	20–70 years	20–65 years
Number with complete LOS	34	39
Number with partial LOS	18	19
Number with ulcers at start	25	13
Of these, number with ulcers after 1 year	4	4
Number with healed ulcers	20	9
Lost to follow-up	1	0
Number with scars at start	27	45
Of these, number who developed new ulcers during the year	0	0

Table 2. Number (percentage) of 'uppers' remaining in good condition after different periods

	Start	3/12	6/12	12/12
PVC boots	58 (100)	58 (100)	58 (100)	25 (43)
Canvas shoes	52 (100)	24 (46)	21 (40)	17 (33)

They are also more durable and have as good a protective effect on insensitive feet as canvas shoes. They are well liked by farmers and are not stigmatizing.

People affected by leprosy in our programme now have the choice of receiving either two pairs of canvas shoes or one pair of canvas shoes and one pair of PVC boots per year at a subsidized price. They currently pay 25% of the cost of both types of footwear.

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