INJURIES AND OCCUPATIONAL DISEASES IN AGRICULTURE IN FINLAND; COST, LENGTH OF DISABILITY, AND PREVENTIVE EFFECT OF A NO-CLAIMS BONUS

by

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An Abstract

Of a thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Occupational and Environmental Health in the Graduate College of The University of Iowa

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Thesis supervisor: Professor Craig Zwerling

ABSTRACT

This study aimed to describe costs and lost time from injuries and occupational diseases, and to measure the effect of a no-claims bonus intervention using Finnish farmers' workers' compensation data.

During 1996, there were 10,092 injuries (7.37/100 workers) and 830 occupational diseases (0.61/100 workers) in a population of 137,002 persons in agriculture. The total insurance cost was €23.5 Million Euros, which was 0.7% of the national gross farm income, 2,2% of the net farm income, and 2.5% of the insured farm income. The costs consisted of medical (16%), lost-time per diem (37%), accident pension (23%), survivors' pension (3%), impairment allowance (7%), rehabilitation (6%) and other costs (9%). The mean cost of 1996 claims was €1340 for injuries, €6636 for occupational diseases, and €1743 for all claims.

The total compensated lost time from 1996 injuries and occupational diseases was 1431 person years, which is 1.04% of the person years in agriculture in 1996. Occupational diseases comprised 8% of the claims and 29% of the lost time. The mean lost time was longer for occupational diseases (185 days) compared to injuries (37 days) ($p<0.0001$), and longer for women (62 days) compared to men (42 days) ($p=0.001$).

Biological and organic dusts, saws, sawmills, wood splitters, wood chippers, slippery terrain, stairs, scaffoldings, ladders, power take-offs, roofs, large animals, and vehicles were among causes associated with high costs and long disabilities. Working with large animals, commuting, transporting, harvesting, grain handling, construction, and forest work were among tasks associated with high costs and long disabilities.

The preventive effect of a no-claims bonus was assessed using the interrupted time series analysis. Injury claims reduced about 10% after the intervention ($p<0.0001$). The reduction occurred in minor and moderately severe injuries. No shifting of claims to other insurances was found. Under-reporting of minor injuries appears to explain part of the reduction, but the reduction in moderately severe claims may be attributable to the preventive effect, assuming that the farmers know the true value of the bonus and seek compensation when it is financially feasible for them.

Abstract approved: Craig Zwerling, Head

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CERTIFICATE OF APPROVAL

PH.D. THESIS

This is to certify that the Ph.D. thesis of

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has been approved by the Examining Committee for the thesis requirement for the Doctor of Philosophy degree in Occupational and Environmental Health at the May 2002 graduation.

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