Markov decision programming techniques applied to the animal replacement problem

Anvendelse af teknikker for Markov beslutnings-programmering
til løsning af udskiftningsproblemet vedrørende husdyr

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Preface

The research behind this thesis was carried out at the Royal Veterinary and Agricultural University partly while I was the holder of a senior research fellowship at the Department of Mathematics from 1985 to 1986 and partly during my employment at the Department of Animal Science and Animal Health, where I was assistant professor from 1986 to 1990 and now hold a position as associate professor. I am very grateful to the staff of both departments for excellent working conditions.

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As concerns the choice of subject of the thesis, I am indebted to Professor Harald B. Giaever, Agricultural University of Norway, who must suffer the indignity of being referred to as “Giaever” in this and other studies. His thesis on “Optimal dairy cow replacement policies” from Berkeley arouse my interest in the animal replacement problem already when I was a student. Even though the thesis was published already in 1966, it remains even today an important reference, and several more recent studies have not even reached its level.

The works of Dr. Yaron Ben-Ari from Israel have been the direct inspiration of one of the chapters of this thesis, and indirectly they have inspired several chapters. Also the numerous works of the Department of Farm Management, Wageningen Agricultural University, have been of great value to my research. In particular I am indebted to the works of Professor, dr. ir. Aalt A. Dijkstra and his staff.

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