## Jean Nolle, 1918-1993

Jean Nolle, the famous French agricultural engineer, died on 30 September 1993, one day before his 75th birthday.

He had been actively involved in the design of animal traction equipment since the 1950s, and developed an implement design philosophy based on simplicity, multipurpose uses and standardisation of components. He was a visionary and an influential advocate of animal traction technology, even in the 1950s and 1960s when it was often considered unfashionable. He stressed the needs of

Jean Nolle at the ATNESA workshop in Lusaka with the Kanol toolbar he brought and donated to the Zambian Animal Draft Power Research and Development Programme

smallholder farmers for well-designed and well-manufactured animal traction implements. Among his more famous implements have been the *Houe Sine* toolbar and the heavier *Ariana* multipurpose toolframe. He was the "father of the wheeled toolcarrier", inventing his first *Polyculteur* in 1955 and going on to develop the *Tropiculteur* and *Polynol*. With the assistance of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Nolle's *Tropiculteur* became the world market leader in wheeled toolcarriers, and it was bought by development projects in many countries. His *Kanol* long-beamed multipurpose toolbar is also innovative and has recently been tested in several countries.

Jean Nolle never became rich from his work in designing such implements. Only his *Houe Sine* was sold in large numbers (about half a million of these, and its derivatives, are now used in West Africa). This implement, and other Nolle designs, have often been copied without credit to the inventor. With the publication of his semi-autobiographical book *Machines modernes à traction animale*, many of his plans and ideas were given to the public domain. His animal-drawn wheeled toolcarriers did not receive the widespread adoption which he had expected. He joked that he accepted just half of the

book Perfected yet rejected about these implements, he agreed that his toolcarriers had indeed been perfected, but he could not accept that they had ever been rejected by farmers. He blamed their limited adoption on inadequate promotion by projects and he maintained a "conspiracy theory" suggesting that manufacturers and distributors refused to manufacture or promote his products lest the success of Nolle implements reduce their other markets.

In recent years, Jean Nolle acted as an international consultant

and helped small manufacturing workshops in many countries in Africa, Asia and Latin America to manufacture his implements. The patience and skill with which he imparted his expertise earned him devoted friends in many countries, although the frankness with which he put forward his ideas and criticisms seldom ingratiated him to formal development organisations. In later years, he became very concerned with the wider issues of ecological sustainability and human development, and his mission reports and publications (notably L'accident de civilisation) became increasingly philosophical. He became a valuable member of the African animal traction networks, attending meetings in several countries in Africa at considerable cost to himself, particularly when he carried and donated samples of his equipment. His films always proved popular at network meetings, as did his jibes at the lack of realism of certain research techniques.

With the death of Jean Nolle, animal traction has lost a good designer, a patient teacher and a colourful personality. Luckily many of his ideas and designs have already been passed on to the next generation, and they are presently benefiting the smallholder farmers for whom he worked. His achievements will influence us for many years to come.

Paul Starkey, Reading, 1993