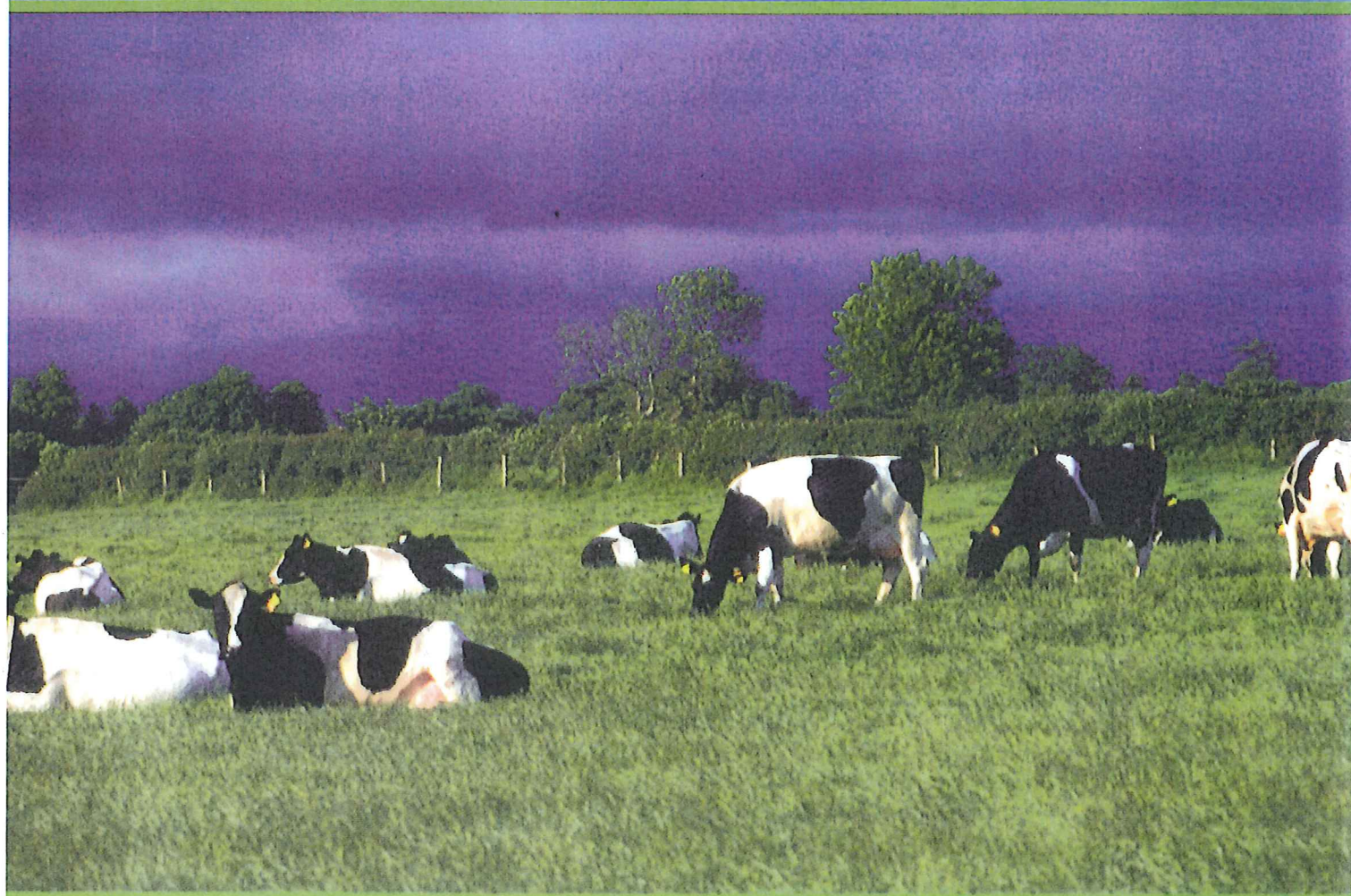


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# The contribution of participation to the grassland research of the Louis Bolk Institute

J. de Wit, T. Baars and N. van Eekeren

Louis Bolk Institute, Hoofdstraat 24, 3972 LA Driebergen, Netherlands, Email: [j.dewit@louisbolk.nl](mailto:j.dewit@louisbolk.nl)

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**Introduction** Participatory research methods are well described, but the contribution of participation to the R&D process often remains unreported. In this paper some benefits of participatory on-farm research (OFR) carried out by the Louis Bolk Institute (LBI) are highlighted.

**Methodology** Most research at the LBI on grass-clover management is executed together with organic farmers, mainly focussing on the introduction of clover, management options to affect the clover content of the sward and grass-clover production with limited manure application (de Wit *et al.*, 2004). The OFR is mutually planned and executed by farmers and scientists, focussing on the facilitation of mutual learning and integration of experiential and experimental knowledge (Baars *et al.*, 2004). Besides OFR, LBI is also involved in more traditional research, demonstration and extension activities.

**Results** On-farm research offers opportunities to include specific relevant agro-ecological conditions. Thus, it was possible for the LBI to assess the effect of P-fertilisation on organically managed grass-clover on soils with a very low P-status, conditions which are hard to find on a research station. More importantly, however, was the possibility of transforming rather general R&D topics (originating from discussions with organic farmers organisations, funding agencies, etc.) into specific conditions through the mutual planning of the OFR by the scientist and the farmer. In this example, it became clear that the farmer's objective was in optimising feed production given the low P-status and pH of his soil, but also given the limited amount of organic manure available at the farm and the objective to avoid slurry application in spring on part of his land due to nature objectives (birds). Thus, the trial took note of these constraints. Later, during field visits it became clear that results of such a trial with a specific set of conditions and objectives are easier to communicate to other farmers than results from formal research. Group discussions revealed that this might be because the interpretation of the results is easier for farmers if all relevant conditions are transparent and because the set of conditions and objectives is a clearly recognisable idotype relevant for the development of Dutch organic agriculture.

Participatory OFR also offers opportunities to incorporate farmer's experiences into the formal scientific system. Due to continuous observations of phenomena under variable conditions (years, soils, management, etc.) farmers may be better capable to include relevant conditions in their experience than can be expected of formal research in a relatively new research area. Experience of the LBI, however, shows that this requires regular contact between scientists and farmers, and observational qualities of the farmer related to the particular subject (a pioneer farmer in grassland management is often not a pioneer in cattle breeding). For example, grassland scientists of the LBI are often contacted by farmers and extension workers to advise on problems with (too high or low) clover content of their grassland. However, it is impossible to review all known relevant (management and agro-ecological) conditions in hindsight, and, thus, truly adequate advice or specific hypotheses to understand the events are hardly ever formulated as a result of these irregular contacts. During a regular contact the influence of these known factors can be filtered. For example, a distinct negative effect of hybrid ryegrass on clover content was established in OFR with a farmer interested in clover-rich, short-term leys, sown in autumn. Clear understanding of the relevant context proved essential some years later, when too high clover contents in leys became a common problem for organic farms with favourable soil conditions using modern, highly competitive, clover varieties in leys used mainly for cutting. It was possible to use the very competitive hybrid ryegrass to control clover content below 50-60% under these conditions.

**Conclusions** Research and development programmes can benefit from participatory OFR through the transformation of general into specific problems during the mutual planning by scientists and farmers of OFR, and through the incorporation of farmer's experiences into the formal scientific system. Thereby, OFR will speed up the search for and dissemination of adequate innovations. Major prerequisites for successful participatory OFR are direct and regular contact between scientist and farmer, keen interest of the farmer in the specific problem and of the scientist in farmer's conditions and objectives.

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