



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

PROCEEDINGS  
OF THE  
THIRD INTERNATIONAL CONFERENCE  
OF  
AGRICULTURAL ECONOMISTS

HELD AT  
BAD EILSEN  
GERMANY  
26 AUGUST TO 2 SEPTEMBER 1934

LONDON  
OXFORD UNIVERSITY PRESS  
HUMPHREY MILFORD  
1935

3 cards  
 Farm Management. Cooperation  
 Germany. Cooperation

## AN EXPERIMENT IN CO-OPERATIVE MACHINERY- EMPLOYMENT BY PEASANT FARMERS

A. MÜNZINGER

*Agricultural Research Institute, Hohenheim*

THE peasant family who cultivate their farm themselves want nothing else than as high an income as possible from their work, an income which permits of a decent life, which keeps the farm in the family, and out of which savings may be effected for the education of the children leaving the farm. The smaller the farm and, at the same time, the more unfavourable the climate, soil, and economic location, the harder it is for the peasant family in general to achieve the above aims by means of their own labours. Thus, peasant farms under such conditions of production will be sufficient for the complete maintenance of the owning family only if they are comparatively large. With too small an area, and without extra earnings, even with the hardest work, the peasant family can do no more than eke out a meagre existence.

But not only soil, climate, and economic location determine the extent of surface which is sufficient for the upkeep of the peasant family and determines their standard of living. There are other obstacles which have to be considered, especially in districts of good economic location with favourable soil and good climatic conditions. These are generally the consequences of the peculiar hereditary division of the estate. We must note, therefore, at the beginning the senseless splitting up of land and the scattered position of the small allotments, which bring with them an enormous waste of work and minimize the success of that work, all the more so when the peasant family tries to fight these aggravations with the work of their own hands.

There is a district in Württemberg in which the average size of all allotments is only 9 ares (1,076 sq. yds.), and in several other districts they vary from 10 to 15 ares (1,196 to 1,794 sq. yds.). The many small allotments of a peasant farm are scattered about over very large areas, and for this reason the peasant loses 30 to 40 per cent. of his working time in going to and from the village and the separate allotments. It is necessary to get a clear idea in figures as to what the effects of such conditions are.

For this purpose I should like to take the example of a peasant .

farm which I examined myself and which, for Württemberg, has the fairly large size of 30.27 hectares (about 75 acres). The number of its plots is 162. The average size of a plot is 18.8 ares (2,248 sq. yds.). The size of the smallest is 0.73 ares (87 sq. yds.), the largest 124 ares (14,880 sq. yds.). The total distance of all the plots from the house amounts to 206 kilometres. If the peasant had the idea of going from his house to every plot and back, he would have to cover 412 kilometres. Of course, he does not want to do so, as he can reach one plot from another without having to go back to the farm. Yet these figures show what waste of time such splitting up of the peasant property accounts for and how considerably it must reduce the success of the work of the peasant family.

What minimizes the success of work is not this big loss of time alone. The marked splitting up is for other reasons as well the greatest obstacle to the progress of the peasant farms. The fight against weeds is greatly aggravated and the necessary standardization of agricultural products for the purpose of better marketing cannot be carried out at all. The progressive peasant is almost powerless against the damage done to the crops by weeds and obnoxious vermin which come to his plot from those of careless neighbours.

In the communally owned fields of the village, which are as much divided up, the difficulties put in the way of labour-saving, labour-cheapening machines are especially great. The small allotments either completely exclude the use of most machines, or, on account of the smallness of the farm, the machine is too little used to be economical, especially as the wear and tear caused by continually taking them from one allotment to another is unusually heavy.

Attempts have been made for nearly fifty years, through the reorganization and consolidation of holdings, to combat these difficulties of the peasant agrarian constitution, often in the teeth of powerful opposition in the districts most needing this concentration. The opposition has arisen out of a predilection for the inherited ancestral soil, and a dislike of paying the hitherto high costs of consolidation. Thus, the process has been extraordinarily dilatory in the states which need it most, and Mr. Henkelmann states that the necessary consolidation would take Bavaria 165 years, Württemberg 110 years, and Baden 160 years if it continued at the slow rate hitherto prevailing.

The new Law on the Consolidation of Land Holdings of 1934 makes the process exceptionally easy, and strongly stresses the put-

ting together of small plots, whereas in the past, people were satisfied with the regulation of paths. Above all, it lowers the expenses of the process by the fact that the expenses of the surveyor and of the Agricultural Settlement Office (*Kulturamt*) are taken over by the State Exchequer, and the owner of the property has only to pay a small additional sum per hectare of the area thus dealt with. It is hoped that thereby the process of consolidation of holdings may proceed apace and that, above all, the peasant will gradually realize that the whole difference in the quality of the soil forming the plots of one of these split-up holdings cannot have as much influence on the results of his labour as the proper consolidation of the plots would inevitably have.

It has always seemed to me that further steps would have to be taken in order to give the peasant a fair return for his work. One of the most urgent measures would be to combat the over-burdening of the peasant woman, and to mitigate the hurry and haste which in many places constitute her working day. It is obvious that methods and arrangements must be found which are capable of making the work easier and speeding it up without causing unemployment, devices, for instance, which help to solve the problem of the peasant woman.

I see this problem of the peasant woman principally caused by her double round of duties, as mother and as co-worker, and the lack of proportion between these duties and her strength, which in a few years turns the radiant and vigorous peasant girl into an old woman. If the peasant is to be, and to remain, the transmitter of racial qualities and of healthy blood, and if it is demanded that the peasant woman shall bring many and healthy children into the world, then both must be relieved as far as possible from what frequently is one long daily hustle and haste, which limits their standard of life to a very great extent. It is this unhealthy situation which only too often induces the peasant woman to devote her time to the work on the farm, rather than to looking after her children. For she believes that this work is essential for the material maintenance of the family, and thus she neglects her maternal duties.

Furthermore, I think it necessary to provide the small farm with as many facilities in production as possible, to increase the farmer's chance of saving, and thus give him a broader and more secure basis, to-day particularly when so many relatives from all classes of society stream back to the peasant farm, and demand bread and work, a demand which can only be met by an increase in the net yield. Thus a reduction in the burden of work, so far as that is economically

possible, and an increase in the output, so far as that is technically possible, seem to me to be the most necessary improvements for many peasant farms.

It was in order to find such ways and means that I undertook an experiment lasting nearly four years in a village of Upper Swabia. This experiment has now been taken over as a rural co-operative society, and is voluntarily and independently managed by the peasants themselves. In this meeting, I need hardly stress the fact that this experiment has nothing to do with the Russian procedure and with the bolshevization of the peasants; furthermore, equally a matter of course, there was no underlying intention of using machines in order to put members of the peasant family out of work. Its purpose was the maintenance and improvement of the peasant property, and of a peasantry rooted in the soil.

Ultimately, the attempt was nothing other than the introduction of the co-operative idea into agricultural production, not merely into farm purchases and sales, and the extension of this idea to many sides of farming which hitherto had been wasting the strength and time of the peasant woman. This experiment may further be described as a way of influencing, permanently and without compulsion, the peasant's technique towards an increase of the net yield and the alleviation of work.

It was far from my intention to infringe in the slightest upon the peasant's idea of ownership, and I have protected his individuality as far as it was compatible with his interests. Of course, the introduction of the co-operative conception into the peasant's methods of production means that no one can any longer do entirely what he wants and as he wants.

But is this not true in every case where people desire to go ahead on the co-operative way?

First of all, it is clear that the co-operative supervision of peasant's work, especially as far as it is concerned with the cultivation of crops, must be adapted to the needs of the village community, and that it is necessary to provide certain preliminary conditions for the co-operative use of machinery. Where machinery is to be used co-operatively, the way for such use has, first of all, to be paved. The much split-up property, the smallness and the scattered position of allotments, do not make for the co-operative use of machinery. The first thing which may be reasonably asked for is that the machines finish work everywhere in good time. The shorter the time during which the work with the separate machines has to be done, and the fewer the number of machines of the kind in question owned by the

co-operative society, the more difficult it is to meet this demand. It must under all circumstances be avoided that a member of a co-operative society can say with justice that he could not finish his work in time because the machine arrived too late.

In this respect, the co-operative use of machinery is first and foremost a problem of leadership, and the leader must never be fighting a defensive battle against the difficulties in the use of machines, but he must always be on top of them. He has to make his plans in advance. The shorter the periods of time in which the different machines may be used, the more skilfully he must plan to divide up the different work, so that, by starting early and using the machine uninterruptedly, the work is finished in the proper time.

In order to do this, allotments under the same kind of cultivation must as far as possible be put together, and the same rotation of crops for the whole village land must be arranged, so that they keep together. Thus the long working run and the large surface can be created for the machine, giving its work speed and economy. These are generally lacking on the peasant farm. Too much time is lost, and damage is done to the machine by continually taking it from one little allotment to another.

In my 'experimental village', the putting together of the allotments under the same cultivation and with the same rotation of crops have made the co-operative use of machines possible. The same cultivation, the same crop, the same seed, have taken away from the village fields the appearance of a large patchwork quilt. A thorough tillage, done several times at the right time, cultivation and the right attention at the proper time, the freshening-up of seed, the careful manuring from newly constructed, economical manure pits, and the ruthless destruction of weeds have secured and considerably increased the yield and have given to the farmers greater possibilities and a higher income. Helping manual labour by machinery, wherever this was practical, has alleviated the burden of work of both peasant and peasant woman, and when I finished the experiment the peasants readily decided upon the founding of a village co-operative society and agreed to the independent continuation of the ideas incorporated in the experiment.

Not only field-cultivation and its possibilities were examined, but also housekeeping and the other duties of the peasant woman. I knew that particularly baking, washing, and milking took up much of the peasant woman's time and strength, and that consequently the dire necessity of these tasks was always regarded with a certain dislike. An attempt was therefore made to relieve and speed up the

work by the electric dough-kneader in the common bakery, the electric washing-machine, and the milking-machine. Dough-kneaders, the common bakery, and the common laundry have worked very satisfactorily, and the peasant woman would not like to do without them to-day. After a comparatively short time, however, they stopped using the milking-machines, which, in their opinion, saved no time and the daily cleaning of which demanded additional work. If this cleaning-work is neglected, milking by machines is no good.

The co-operative use of a machine for the canning of meat and vegetables, thus rendered always ready for use, has been especially popular. This machine enables the peasant woman to have fresh meat always in the house, and the salting and smoking, with its enormous waste and its unsuitability for summer food, becomes unnecessary. Also when animals have to be slaughtered to prevent diseases, the meat can be preserved immediately, and is, consequently, more economically utilized. Many parishes in the first experimental year brought their meat on wagons to have it canned in the experimental village—to-day ninety-two parishes in the district have bought machines. Practice has achieved much more than any number of lectures on the practical value of the machine.

If to-day, after finishing the experiment, I ask myself whether the new devices brought by the experiment were worth while for the village, I must say that they have done well in every way, and that they are capable of bringing about a progressive development of the peasant farms. All the peasants who formerly took part in the experiment and are now bound together in the co-operative society, are agreed on that. Even the one peasant of the village who did not take part in the experiment, and whose allotments often had a disturbing effect, has asked the leader of the co-operative society to be permitted to participate in the use of the machine, as he clearly saw that, in spite of all his efforts, his farm lagged more and more behind the others.

If everything has not been as perfect as I thought it would be, the reason is that the experiment had to be done in a village with an ancient agrarian constitution and whose peasants had rigid ideas about machinery and innovations.

It will not be easy to introduce all these co-operative measures and arrangements into the old villages, but one or other will be copied and has already been copied. The great interest and understanding which many peasant visitors to the village showed in the matter are, to my mind, a proof of it.

My opinion is that in new settlements the co-operative aids to manual labour, the increase of production, the raising of the yield,



ought not to be dispensed with, as the co-operative use of machinery is really possible and practical and the decisive factor in its use is the men rather than the machines. This question is entirely a question of leadership. The possibility or impossibility depends on the leader of the co-operative society and on nothing else.

Gentlemen, what one learnt and experienced in four experimental years in a village cannot be exhaustively treated in a speech of twenty minutes. I have therefore prepared the report on this experiment for the agrarian conference, and requested the board for the promotion of the use of machinery in agriculture to publish it.<sup>1</sup> You will find in it all the details of the experiment which I could not give you in the short time at my disposal.

<sup>1</sup> Bäuerliche Maschinen-Genossenschaft Häusern (The Association of the Peasants of Häusern for the Co-operative Use of Agricultural Machines). An attempt towards co-operative village economy. Volume 54 of the publications of the 'Reichskuratorium für Technik in der Landwirtschaft' Beuth, Verlag, Berlin S.W. 19.