



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

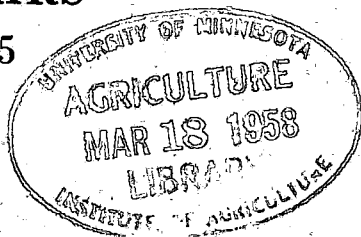
<http://ageconsearch.umn.edu>

aesearch@umn.edu

*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.*

**INTERNATIONAL
JOURNAL OF
AGRARIAN AFFAIRS**

Vol. II, No. 2, June 1955



**Agriculture
and Forestry:
Competition or
Coexistence?**

Price 5s. 0d. net

OXFORD UNIVERSITY PRESS

LONDON: GEOFFREY CUMBERLEGE

By C. VON DIETZE

Freiburg University

GERMANY

IN the 'Great Peasants' War', which broke out in 1525, one of the peasants' demands was free use of the commons, grassland and woodland. Max Weber, in his *Wirtschaftsgeschichte*, says that the consequence of such an exploitation of the forests by agriculturists would have been horrible devastation, since woodland had become too scarce for a return to the old customs advocated by the peasants on the ground of quotations from Holy Scripture.

As Germany's soils are overwhelmingly woodland by nature—plains with a rainfall insufficient for trees, or moorlands unsuitable for woods cover only a small proportion of the country—agricultural use of the land necessary for a denser population was generally to be won only by clearing forests. By the middle of the nineteenth century they had been driven back almost entirely to soils of low fertility, to 'absolute woodland'. On the other hand, the demand for timber had become so great that on the remaining area good forestry was indispensable. Thus, use of the forests for pasture or for other agricultural purposes was, in most cases, to be regarded as a sheer waste. Since agriculture as well as forestry have become the object of independent enterprises, we will trace on the following pages how far these enterprises are co-existent, competitive or complementary.

During the nineteenth century, considerable changes between agricultural land and woodland took place, and in both directions. In Bavaria and Prussia the sovereigns, being disciples of the prophets of economic liberalism, gave away parts of the state forests which, to a large extent, came under the plough. Generally, wet woodlands, mostly occupied by poor alder trees, were turned into meadows for hay-making. On the other hand, large tracts of land used for rough grazing on sandy moorland were afforested, as well as hillsides which up to then, by paring and burning, had offered numerous examples of periodical change between agriculture and forestry. Such a system of land utilization is still to be found, e.g. in parts of the Black Forest, but it has diminished a great deal.

Woodland in the Reich amounted to roughly 14 million ha.¹ in 1913.

¹ 1 ha. = 2.47 acres.

Owing to territorial changes, it went down to 12.7 million ha. in the twenties. For the *Bundesrepublik* (1949) the figure is 6.9 million ha. The share of woodland in the total area was a little more than one-fourth at each date. Reliable statistics go back to 1883. They show that, on the whole, woodland slightly increased during the period from 1883 to 1937, viz. by less than 4 per cent. The increase was strongest during the prosperous years from 1900 to 1913. During the whole period, losses in leaf-wood were overcompensated by gains in coniferous trees. At the same time, the productivity of the forests steadily increased; the output of timber per ha. rose from 2.7 solid cubic metres¹ in 1900 to 4.3 in 1937. It was highest in the state forests and lowest in unentailed private forests.

The following figures may be quoted:²

Solid cubic metres of timber per ha.

	1900	1913	1927	1937
State forests	3.4	4.6	4.5	6.0
Communal forests	2.4	3.3	3.5	4.9
Entailed private forests	3.0	3.9	4.0	4.8
Unentailed private forests	1.9	2.0	2.0	2.8
Total	2.7	3.4	3.3	4.3

Germany, with other countries of continental Europe, was famous for its well-managed forestry, which refrained from reckless and wasteful exploitation. This fact should be seen in connexion with the distribution of forest property. According to Max Sering,³ the ownership of woodland in 1925 was

	<i>per cent.</i>
States	31.9
Communes	16.1
Entails	11.0
Co-operatives and foundations	3.5
Free private owners	37.5
	<u>100.0</u>

The state forests originated from the woodlands controlled by the kings and through other lords becoming reigning sovereigns. Many of these forests had belonged to *mark* communities in medieval or earlier times. Communal forests were most frequent in south-western Germany where agriculture is characterized by a large number of

¹ 1 solid cubic metre = 35.31 cu. ft.

² V. Dieterich, *Forstwirtschaftspolitik*, Berlin and Hamburg, 1953, p. 327.

³ *Die Deutsche Landwirtschaft*, Berlin, 1932, p. 62.

very small holdings, while in north-western Germany the owners of the prevailing medium-sized farms had succeeded in dividing the former mark land amongst themselves. In eastern Germany entailed or unentailed larger landowners had got hold of a considerable share of the woodland.

In 1925 about 50 per cent. of the total woodland was operated in less than 3,000 holdings each of more than 1,000 ha., 25 per cent. in 24,000 holdings of 100–1,000 ha., 15 per cent. in 200,000 holdings of 20–100 ha., and less than 10 per cent. in 600,000 holdings of under 20 ha. In the state forests, units of 2,000–5,000 ha. predominated; more than half of the communal forests and of the entailed forests were found in the group 100–1,000 ha. Amongst the unentailed private forests, units of 5–100 ha. occupied more than 40 per cent. of the woodland.

In the *Bundesrepublik* (1949) the distribution of property was (in rounded figures):

	<i>million ha.</i>	<i>per cent.</i>
State forests	2.1	30
Forests owned by communes, foundations and co-operatives	2.1	30
Forests of private owners	<u>2.7</u>	<u>40</u>
Total	6.9	100

In all groups, operating ownership is the rule. The figures show no essential difference from those given above for the Reich in 1925. The only change is that the legal form of entail has disappeared. But large private forest owners are still of importance. Out of the 2.7 million ha. of woodland held by private owners, 0.7 are in units of over 200 ha., 0.2 in units of from 100 to 200 ha., and 1.4 in units of from 20 to 100 ha.

Apparently the large forests are segregated from agricultural holdings. Between them and agriculture cases of competition have not died out completely, but they are of minor importance. As mentioned above, forests in Germany generally occupy 'absolute woodland' unfit for agricultural purposes. However, shifts from forestry to agriculture and vice versa are not altogether obsolete. During the food shortage of the first post-war years, there was a strong demand for turning suitable tracts of land under wood into arable, particularly for establishing new agricultural holdings. Now, the current goes rather in the opposite direction.

In some regions remnants of the old antagonism between foresters

and agriculturists are still to be felt, even in connexion with game laws and poaching. More frequently, farmers suffering under a shortage of grass land are feeling exploited by the high rents they have to pay for cutting hay on the meadows belonging to neighbouring forests.

Where such forms of competition are out of the question, the relations between agriculture and forestry are mainly characterized by coexistence in the sense of mutual independence. However, a close connexion between agriculture and forestry is also widespread, chiefly on the medium and smaller units. Here, many farmers operate agricultural land as well as woodland. As a rule, the agricultural enterprise predominates, but it is interwoven with the utilization of a smaller or larger forest area. Perhaps we may speak of co-management and interdependence.

According to Koestler,¹ in 1933 woodland occupied the following percentages of the total within the various size groups:

ha.	Niederbayern per cent.	Württemberg per cent.
5-20	22	7
20-100	17	18
100-500	61	85
500-1,000	100	100
Over 1,000	100	100

For the *Bundesrepublik* (1949) we have the following figures:

Woodland operated in units of ha.	Number ('000)	Area (million ha.)
under 20	674.0	1.5
20-50	14.0	0.4
50-100	4.9	0.3
100-500	6.0	1.3
500-1,000	0.8	0.6
1,000 and more	1.1	2.7
Total	700.8	6.8

Many of the large units have no arable land at all. Where they have, it is of subordinate importance. An interdependence of forestry and agriculture, with agriculture predominating, is typical for units below 100 ha., and even more so below 50 ha.

In some hilly regions, where medium-sized agricultural holdings prevail, the latter cannot yield a sufficient living without the complement of adequate woodland. The *Bauernwald*² has given rise to increasing interest among agricultural as well as forest economists.

¹ *Wirtschaftslehre des Forstwesens*, Berlin, 1943, p. 46.

² Peasant woodlot.

Instead of somewhat haughty reproaches as to the inferiority of forestry as practised by small farmers, better ways of advising them are worked out. For that purpose, investigations are being made into the special importance of woodland to the farmer and his family. For the Black Forest, such research work goes on in the respective departments of Freiburg University, where some of the interesting facts found in recent years are:

In the villages of the Black Forest, about 800-1,000 metres¹ above sea-level, 50 per cent. and more of the land in farms is under trees. Farms of from 10 to 75 ha. occupy roughly three-quarters of the land. A farm of 50 ha. run by a farmer and his family with, perhaps, one or two hired hands will have, for instance: 5 ha. under grain, potatoes and fodder crops, 20 ha. of grassland, and 25 ha. of woodland. The woodland has to serve the whole enterprise. Consequently, it cannot be considered only from the forestry aspect.

Under current economic conditions the woodland supplies the needs of the farm for fuel and timber and yields cash receipts for supplementing the agricultural income or for compensating losses arising in agriculture. Apart from that, the woodland makes the use of manpower, draught animals and tractors more regular, levelling out the seasonal demands. Moreover, the woodland provides the means for satisfying occasional wants, particularly for repairing, improving or expanding the farm buildings, or for capital needs. Such needs arise regularly when the farm is handed over to a successor, e.g. to a son who has to pay off his parents, brothers and sisters. For such purposes, as well as for unforeseen catastrophes, the forest serves as a savings bank which is considered particularly trustworthy in a country that has gone through two horrible inflations within thirty years.

The importance of the woodland when it comes to the handing over of the farm to a member of the younger generation goes very far in some cases. The forest may be operated and used in such a way that at the moment when a son takes over, the whole of the price he has to pay for it is covered by abundant timber sales which have been deliberately postponed. If this is done wisely, it need not diminish the annual natural increment. In other cases, the parents reserve a usufruct of parts of the woodland within the framework of a support contract. At an earlier date, timber crops are destined for the dowries of daughters or for paying for the professional training of sons. As,

¹ 1 metre = 3.28 ft.

in the farmers' families of the Black Forest, children are generally numerous, such a use of the woodland has beneficial social consequences. The individual advantages are taken into account in a way that alleviates the obligations of a brother taking over the farm.

For all these reasons, compromises between the demands of forestry and farming are to be found constantly, in order to reach optimal results for the whole enterprise. The situation of farmers in hilly regions, difficult as it is, would become almost intolerable without the support they have from their woodland. Here a segregation would not lead to coexistence, but agriculture would more or less disappear.

Of course, small farmers are sometimes inclined to neglect the rules of good forestry and to over-exploit the woodland. In consequence, government regulations as to the use of private forests have been enacted especially in states where many small owners are operating woodland, e.g. in Baden and Württemberg. Here laws, replacing the numerous earlier forest regulations ordained by the princes during the sixteenth, seventeenth and eighteenth centuries, were adopted as early as in the first half of the nineteenth century (1818, 1822 and 1836 in Württemberg, 1833 and 1854 in Baden). Felling, and particularly complete clearing, needed approval; some detrimental uses of forests were forbidden, e.g. carrying away leaves or needles for littering; the qualifications of foresters were to be examined; long-term plans for exploitation were to be laid before the administration; alienation and fragmentation of forests needed special consent. The extent and the stringency of such state controls have varied. They reached their peak under the Nazi régime with a law of 1934 (*Gesetz gegen Waldverwüstung*).

The Nazi legislation having been abolished, new and better ways have to be found to secure the interests of sound forestry, and to harmonize them with the well-founded interests of farmers who own woodland. Though legislation to this end has not yet been completed, the practice of administration is leading to a growing understanding and to a promising symbiosis of forestry and agriculture. As a rule, well-trained state foresters (*Forstmeister*) have to supervise the private forests. More and more they are becoming benevolent advisers whose knowledge and understanding are appreciated by the forest-owning farmers who come under administrative control. This desirable relation of forestry to agriculture is well under way and deserves to be fostered in the interest of both.

Within the European Confederation of Agriculture (C.E.A.), a

special committee is tackling the problems of private and communal forests. As the reports presented to the General Assemblies of the C.E.A. (1951-3) show, great attention is paid to the situation of medium-sized farms connected with woodland. Amongst the topics dealt with are the contribution of woodland towards safeguarding the existence of peasant farming in Europe, and the advising and training of woodland-owning peasants in good forestry and in the marketing of timber.

REFERENCES

Proceedings of the European Confederation of Agriculture,

Publications de la CEA, Fascicules 6, 7, 8. Brugg, Switzerland, 1952-4.

In Western Germany, the Universities of Freiburg, Göttingen and Munich have Departments of Forestry. The Schools of Forestry at Eberswalde and Tharand are situated in the Soviet zone of Germany.

In the periodicals *Forstwissenschaftliches Centralblatt* and *Allgemeine Forstzeit-schrift* articles dealing with problems of the *Bauernwald* are to be found, especially by Professor Abetz (Freiburg) and Professor Speer (München).

Figures given in this article are taken from the books:

MAX SERING, *Die Deutsche Landwirtschaft*, Berlin, 1932.

JOSEF KOESTLER, *Wirtschaftslehre des Forstwesens*, Berlin, 1943.

VIKTOR DIETERICH, *Forstwirtschaftspolitik*, Hamburg und Berlin 1953.

Statistisches Jahrbuch für die Bundesrepublik Deutschland, 1953 und 1954.

The article is also based on investigations of the *Forschungsstelle der Internationalen Konferenz für Agrarwissenschaft*, Freiburg.