

RURAL LAND USE IN NW JUTLAND

VIGGO HANSEN

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The paper contributes to the open field/common field discussion in historical-geographical circles, in as much as it analyzes an infield/outfield system from the northwestern part of Jutland, Denmark. The 1688 field book for the village of Tødsø on the island of Mors testifies the use of a strip-cultivated but non-compulsory land-use in the infield. At the same time most of the outfield was composed of turf-walled crofts, grazed and occasionally cropped in severalty by the 15 full farmers, and this was non-assessed land.

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The study of pre-enclosure field systems in Denmark has recently been taken up again in connection with a renewed interest in the historical past, and several research papers have seen light making it possible to produce a generalized picture of the spatial distribution of field systems as appeared in the 1688 land registre. But it must also be stressed that the final account is still waiting. (fig. 1).

The $\frac{2}{3}$ field system predominated on the Danish main islands (\div Bornholm) and in an eastern rim of Jutland, but only as far inland as about 30 kilometres from Limfjorden to S. of Kolding. A loamy soil of great fertility and a well balanced hydrology is common to this area. New research, still in an initial stage, seems to indicate the introduction in the area of an open field system at the end of the Viking period, round 1000 A.D., and contemporary with the political unification of the Danish kingdom. Unfortunately few records are available until the beginning of the 13th century, when Medieval laws appear from different regions of the country. Poul Meyer (1949) who studied the management of village communities in the light of these concluded that 1) there was no compulsory farming in the Middle ages, but that 2) it was also justified to see evidences of a development from a free admission to enclose land in the field to a more and more restricted and conditional assent to make such enclosures. According to Meyer a common field system only reached maturity in the 17th century. He may be right in the sense that field regulations are known to have taken place as late as that, but the common field system no doubt existed long before that and must have spread in the time following the Late Medieval desertion period. Frits Hastrup may be true when he postulated a regulation of the $\frac{2}{3}$ field system some time in the Middle Ages, contemporary with regulations comprising also the village settlement. Widding (1949)

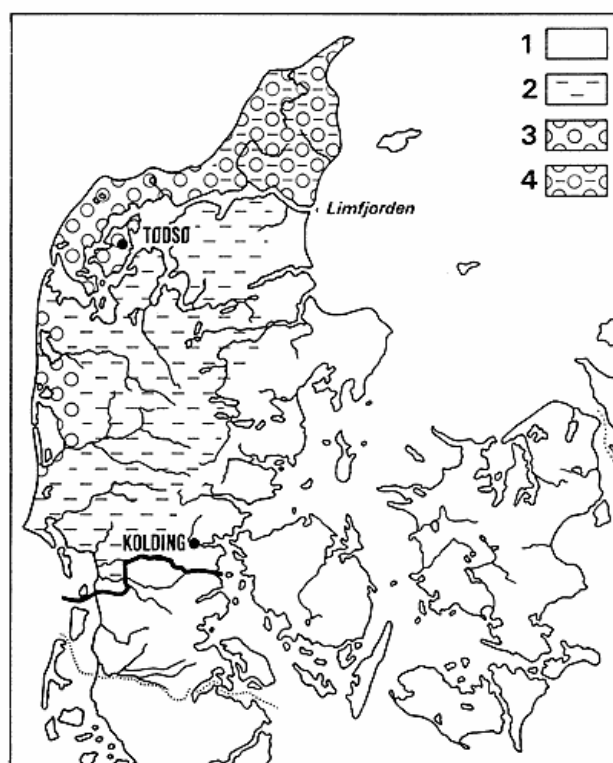


Fig. 1. The spatial distribution of field systems according to the 1688 Land Registre. 1: $\frac{2}{3}$ field system, 2: ley-grass system, 3: infield/outfield system, 4: Continuous cropping/ley-grass system. (Provisional).

Fig. 1. Provisorisk kort over fordelingen af marksystemer på grundlag af 1688-matrilen. 1: To- eller trevangsbrug. 2: Græsmarksbrug. 3: Indmarksudmarksbrug. 4: Alsæde-græsmarksbrug.

and Hastrup (1964 and 1970) found the most perfect expression of the common field system in the inter-village cropping system, when several villages participated in the same 3 field rotation that might extend for many kilometres. The same system has been demonstrated by K. E. Frandsen from the island of Falster (1975) as well as by Dahl and others for the Swedish province of Skåne (1968).

The $\frac{2}{3}$ field cropping system was in Jutland as mentioned limited to a narrow zone along the east coast, while S. of Kolding in the eastern part of Sønderjylland (North Schleswig) it was replaced by a different field system. According to Troels Fink (1941) an enclosure movement had been at work since the early 17th century, maybe even before then,

on the initiative of the local farmers and often against the wills of the authorities. An important contemporary cartographic source is a collection of maps drawn by Johannes Mejer 1639-41 and reprinted by N. E. Nørlund (1942). The fine maps unveil an enclosed landscape with strip-cultivated furlongs near the habitations and enclosures worked in severalty in the more distant fields. It seems much similar to the bocage landscape in Bretagne. Unfortunately the maps do not disclose, if a compulsory cropping system of the small enclosed furlongs had taken place or not, but it may be stressed that the cropping system did not fulfil the demands of a common field system, according to Joan Thirsk (1964).

Inland in Jutland as well as N. of the latest glacially covered area Henrik Larsen (1932) has demonstrated how the $\frac{3}{4}$ field system here was replaced by other systems. Most widely spread on the sandy loam with its extended valley formations was a kind of ley-grass system, mostly with 7-8 or more fields (intakes) worked in a 7-8 years' rotation. Half of the intakes were cropped with the other half lying in fallow each year. From the surviving records it may be argued that the system, at least in the northeastern part, may well be seen as a relic of a 3 field system, which had been abandoned, because a one year's fallow in the course of a crop rotation had proved unable to maintain soil fertility. As a remedy a system with a longer fallow period had been chosen, while at the same time more stress on stock rearing meant more manure on the grazed fields. Another motive for leaving the 3 field system may have been a local lack of fencing material, as obvious from the early cadastral maps (Larsen, op. cit.). It is known that animals were tethered or herded. This ley-grass system was widely spread over Central Jutland, as shown by J. R. Rømer (1976), as well as northwards toward the Limfjorden. It is best demonstrated along the many periglacial river valleys running E.-W. across the mainland (V. Hansen, 1971).

In the westernmost part of Jutland the ley-grass system was replaced by an infield-outfield system, which spread northward from here to cover most of the country N. of Limfjorden in the landscapes of Thy, Hanherrederne and the island of Mors. The system has been demonstrated by Henrik Larsen (1927) for Thisted county and researched by Jens Mou Andersen (1975) for Hanherred. The present author has studied the system for Vendsyssel (1959 and 1964), where a combination of continuous cropping and ley-grass was used. A study of the land-use pattern in the island of Mors in the Limfjorden was presented at a rural conference in Ireland in 1971 (Belfast 1976). This survey made it clear that the cropping system included: fields in continuous cropping (Danish: *Alsæde*), fields in which cropping and fallow alternated in a 6-8 years' rotation (Danish: *Brødbland*), and outfields sown with oats for 2-4 years and left in fallow for a period of 12-20 years (Danish: *Havreland*). The same paper had the special purpose to study the distance decay in farm efficiency and gave no detailed account of the infield-outfield problem. This has been remedied through the pre-

sent research on the cropping pattern in a small neighbouring village of that same island (Mors) by the name of Tødsø.

THE INFIELD

In the case of Tødsø we are lucky to have a complete account of the actual land use for the year of 1683 in each strip. The land registre starts with a general outline of the cropping systems, according to which the cropland included three different kinds of infield: 1) toft-land that was cropped in severalty, 2) land in continuous cropping with intermixed strips, and 3) land in which cropping and fallow alternated. The three types are in the following called by their regional names: 1) Toft, 2) *Alsæde*, and 3) *Brødbjord*. In addition to the infield there were two kinds of outfields: *Havreland*, compulsory cropped for 2-4 successive years with oats, followed by long fallow (for further details see below), and *Havrelandstøfter*, also sown with 2-3 oatcrops and with long fallow, but worked in severalty. (see fig. 2).

18 named furlongs contained either *Alsæde* or *Brødbjord* alone or a mixture of both, all laying adjacent to the 31 farmsteads, that made up the open village. As an example of an *Alsæde* furlong is shown below *Korsagre* furlong with its 29 intermixed strips.

strip number	farm number	used for
1	28	hay
2	7	hay
3	28	hay
4	7	oats
5	28	hay
6	7	oats
7	9	barley
8-9	8	rye
10	1	rye
11	25	oats
12	9	oats
13	1	oats
14	15	tethering
15	27	oats
16-19	21	tethering
20	4	rye
21	1	oats
22-25	26	barley
26-29	5	oats

As seen above the *Korsagre* furlong had intermixed strips carrying barley, rye, and oats, beside strips with grass for hay and for tethering of animals, disclosing the absence of a normal triennial cropping system as found in a common field. It also discloses that ley-grass was equal to a grain crop in the *Alsæde*, and must not be mistaken for a fallow year.

A second furlong is *Quabager*, in the description said to be *Brødbjord* with a rotation of barley-rye-oats followed by 5 years' fallow. Nevertheless it was composed of *Alsæde* strips as well as *Brødbjord* strips in different rotation stages as seen below.

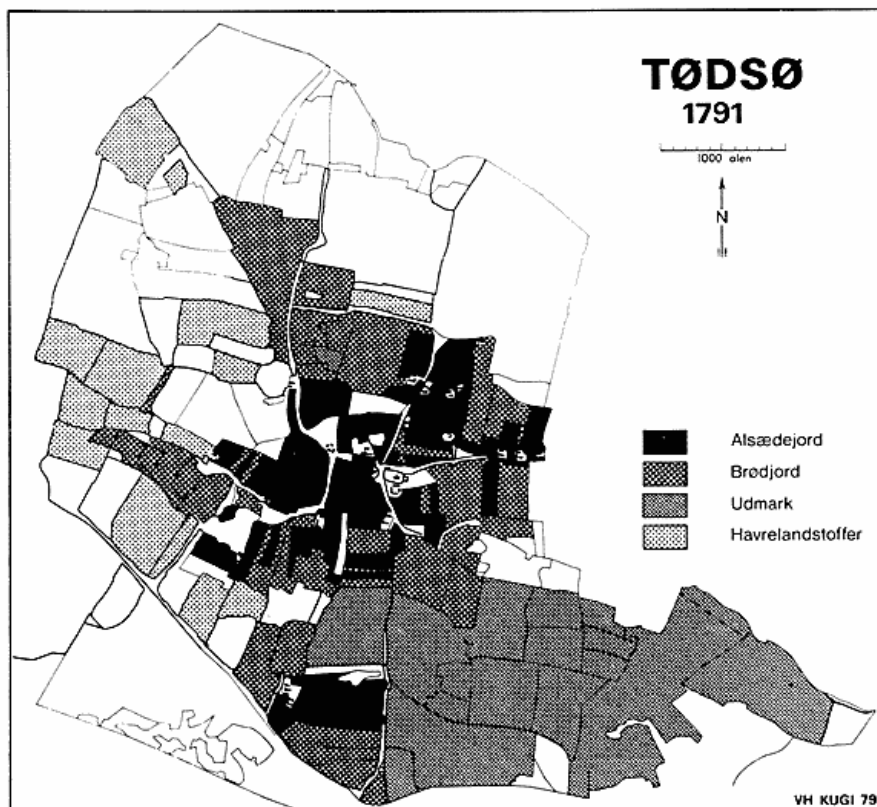


Fig. 2. The field systems in Tødsø village, as indicated on the cadastral map of 1791. *Alsæde*: continuously cropped land, *Brødjord*: cropping alternates with fallow, *Udmark*: strip-cultivated outfield, *Havrelanstoffer*: outfield worked in severalty.

Fig. 2: Marksystemerne i Tødsø landsby iflg. udskiftningskortet fra 1791. Indmarksjorderne omfatter Alsædejord og Brødjord, hvoraf sidstnævnte indeholder en række år med brak. Udmark og Havrelanstoffer udgør tilsammen udmarken, der aldrig godes.

strip number	farm number	used for
1-6	21	barley, rye, oats
7-8	2	hay
9-10	22	Brødjord with barley and oats
11-12	21	hay
13	22	mixed grains
14	2	mixed grains
15-16	27	Brødjord
17-18	27	Alsæde
19	21	Brødjord
20	2	Alsæde
21-22	21	Brødjord with hay
23	15	Brødjord with hay
24	17	Brødjord with hay
etc.		

From this it is obvious that the text in the heading did not render the true land use, but was to be understood as an expression of the rent level of the said furlong, in other words a fair taxation level as examined by the surveyor.

From the two examples given above and an examination of the other 16 furlongs one may conclude that

1. No communally agreed rotation was practised in the infield.
2. Continuously cropped strips and strips with ley-grass were intermixed in the same furlong.

3. Strips in different rotation stage lay adjacent to each other in the furlong.
4. Pasture-leys were common in the arable.
5. There was not fixed system in the allocation of strips between participants.
6. Conclusively the basis of crop rotation was not the field, not even the furlong, but the single strip or a bundle of strips, as well as the decision making unit was the individual farming household.

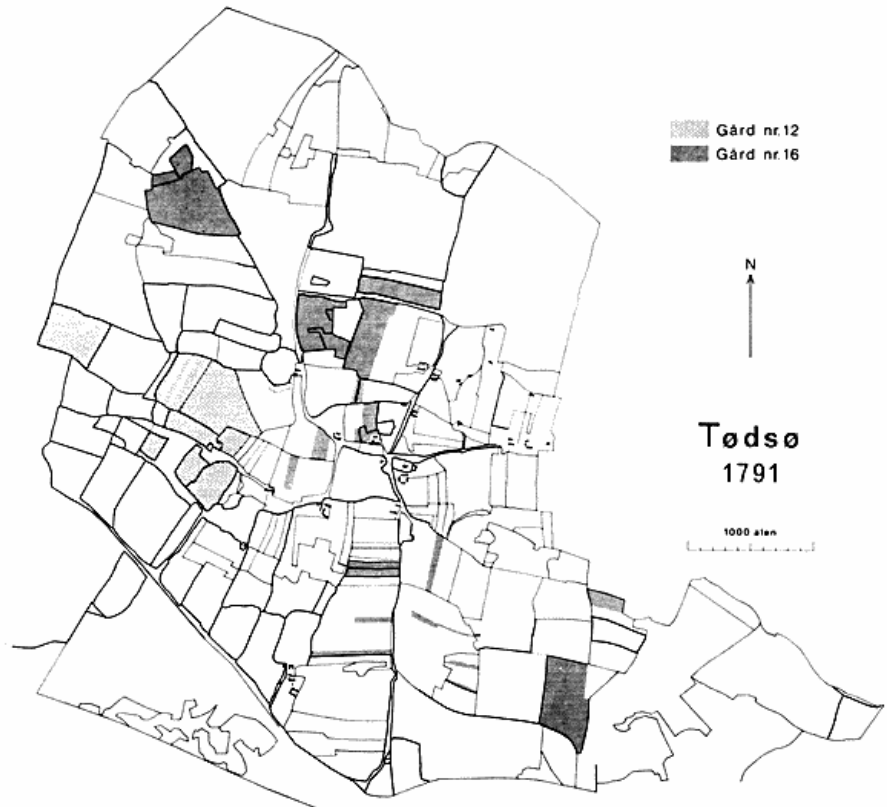
Normally the tenant held the furlongs or part of the furlongs adjacent to his farmstead, and in most cases he could work all his infield strips without passing over his neighbours' lands (fig. 3). Thus the frequent fencing of the infield furlongs shown on the cadastral map had no meaning except to prevent the intrusion of the herd or of stray animals, when passing along the many interjacent cattle paths on their way to and from the outfield or the waste. Inside the furlong cattle were kept tethered on the pasture-leys, and even here village bylaws stressed restrictions for letting cattle graze during a certain period after hay cutting.

THE OUTFIELD

As previously pointed the Tødsø village had two kinds of outfields. In the southeastern corner of the township there were 10 coherent furlongs sown with 2-4 oat-crops followed by long fallow, *Havrelandet*. Only one of these, Church

Fig. 3. Land belonging to farm number 12 resp. number 16 in 1791.

Fig. 3. Jord tilhørende gård nummer 12 henh. nr. 16 (1791)



field, was fenced. The rest seems to have been worked communally, even if the field book is not strict on this point. Specially noteworthy is the fact that all the full farms participated in these outfield furlongs, and what more a sun-division was performed except in one single case. The fact that the incomplete farms did not have their share in the outfield, might lead to the assumption that the land had been taken in from the waste a long time ago, before these came to; but on the other hand the distinct sun-division suggests a recent distribution or a reallocation of the strips between the participants. No doubt these outfield furlongs were communally cropped, and communally grazed on the stubble and in the fallow season.

The second outfield type *Havrelandstoffer*, lies in the western part of the township area, spatially removed from the first type. The cropping system was similar to that one: 2-4 oatcrops followed by a fallow period of 10-20 years, and as such indicative of a soil that received no kind of manure except the dung from the grazing herd. But there was an essential distinction between the two types. While Havelandet was stripcultivated and furlong divided, this one was composed of turf-walled crofts, cropped and grazed in severalty, each croft by a single tenant, or occasionally by a couple of tenants jointly. Totally there were 15 participating farms that held some 25 fenced crofts, differing in size from a few up to a dozen hectares. The field book does not disclose

further details about the land use, presumably because it was non-assessed land, maybe except for the value of grazing.

The field name endings are particular by the invariable use of the term *-toft*, for instance *Nytoft*, *Stormtoft*, *Ploktøft*, *Klemmetøft*, while others were called by the name of the occupying farm, like *Lynggårdstøft*, *Fangetgårdstøft*, *Ballegårdstøft*, or the name of the then tenant as *Niels Andersens toft*. The extensive use of the term *-toft* is peculiar, because it was normally applied only to closes next to the farmsteads. There were, however, exceptions to this rule. Most of them were to be found in the bocage landscape in southern Jutland, where *-toft* besides being the plot on which the farm stood, was a synonymous term to Danish *Løkke*, *Hauge*, *Have* etc., all meaning a forest clearing, an assart, a close held in severalty, and originally meant for summer grazing of cows, horses, and swines.

There is no possible way to date this enclosure process, but none of the field names are indicative of a previous state of tree growth, the natural vegetational cover of the area, so the closes must have been taken in from a common pasture, in which a secondary growth of ling and weeds predominated. It would only be a guess, when a previous common pasture was turned into privately held closes. But if one interpretes this land use change as an intensification process, in which more importance was attached to cattle rearing, it might

well have occurred in the early 16th century or even before, when cattle export from Denmark began to flourish. If this assumption is true then one might also imagine that the loss of common grazing rights previously attached to the Havre-landstofter was compensated by a general subdivision between tenants of the rest of the waste in the southeastern corner of the township area (Havrelandet), where now 24 full farms got their share in the sun-divided outfield furlongs.

CONCLUSION

In a generalized account of field systems the case here surveyed must be reckoned among the infield-outfield types, as these are found in Denmark N. of the Limfjorden as well as commonly along the Jutland west coast further south. Here the soils embrace such different types as blown sands, sandy and loamy tills, and raised marine beds of sand and silt, while the relief includes steep and high hills, gently rolling plains, and extensive flats lying few metres above sea level.

In this continuous area of more than 5000 square kilometres, of such differency in basic soil types and surface configurations, the one uniform physical trait is a *rainy climate with rather low summer temperatures*, in favour of grass growth as opposed to grain crops. This explains also why the same region since early times has been the most important cattle rearing area of Denmark, and an area from where cattle export since the early sixteenth century has been an important source of income to the peasants. This economic system must have been the governing element in the choice of field system and of cropping rotation, in the predominance of oatcrops, and of pasture leys in the arable, of cattle closes in the outfield, as well as of a 'common' outfield, the single compulsory cropped and grazed area of the community. The Tødsø township reveals at the same time elements of enclosed fields and open fields, of compulsory cropping, and of cropping in severalty.

RESUME

Studiet af de gamle, danske marksystemer har beskæftiget forskerne gennem mer end et århundrede, men interessen har især samlet sig omkring 3-vangsbruget, der var almindeligt udbredt på Øerne og i Østjylland, og det er fortrinsvis disse arbejder, der i videnskabelig form eller mere populær bearbejdelse er kommet til offentlighedens kendskab.

Det er fra disse, man i almindelighed har dannet sig et billede af driftsformerne før de store landbrugsreformer omkring 1800 og af det tvungne fællesskab, der var herskende her.

Forfatteren har tidligere beskæftiget sig med det græsmarksbrug, der var dominerende i Midtjylland, ligesom Vendsyssel har været behandlet som eksempel på alsædebruget. Begge disse systemer byggede ligeledes på fællesskabets regler så snart der var tale om landsbyer, mens de i andre henseender var forskellige fra det kendte 3-vangsbrug. Nærværende artikel har hentet sit eksempel fra Mors, hvor et indmarks/udmarksbrug var udbredt ligesom i Thy og Hanherrederne. Man skelnede her mellem en indmark, der gødedes og en udmark, der aldrig tilførtes gødning. Indmarken bestod dels af en

alsædejord, der gav afgrøde hvert år, og en brøjdjord, der hvilede 4-5 år efter 3-4 årsgrøder. Men driftsformen i indmarken var yderligere bemærkelsesværdig derved, at hver bonde frit kunne disponere over sine egne agre med hensyn til valg af afgrøde med sådant resultat som vist i tabelform i artiklen, hvor to skifter viser den store variation i afgrøde fra ager til ager. Der var således intet markfællesskab, ligesom de kendte regler om hegning og høstens begyndelse eller afslutning ikke praktiseredes.

Udmarken, her kaldet Havrelandet, kunne frembringe 2-4 havreafgrøder, hvorefter jorden måtte hvile i 10-20 år. En del af den var agerdelt efter solskifteprincippet og var muligvis underkastet fællesskabet, men større udbredelse havde Havrelandsstofterne, der var hegnede og på adskillige hektarer. Hver af byens 15 helgårde havde 1 eller 2 af disse indhegnede folde, som de kunne disponere over efter eget ønske. De har givet haft til formål at tjene til græsning for kreaturer ind mellem de 2-4 afgrøder af havre.

Dette indmarks/udmarksbrug har sine slægtninge i den atlantiske kystbræmme fra Pyrenæerhalvøen til Norge samt i Skotland og andre dele af de Britiske Øer, hvorfor man må formode, at det delvis er klimatisk begrundet.

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