

Normal production costs for farm buildings

Their necessity and importance

The valuation of farm buildings is of great importance with regard to purchase, sale, testament negotiations and in connection with tax aspects when giving up the farm. Available for valuation of built-on sites are: earning valuation, asset valuation and comparative valuation methods. The choice of method is up to the experience of the valuator and must be explained in every individual case. In the asset valuation method the building production value is calculated from normal production costs. In the following report the recently revised tables available from January 2002 are presented.

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Keywords

Asset valuation, building value, asset value method

The Asset Valuation Ordinance (WertV) and the Asset Valuation Directive (WertR) are important legal and orientation bases. Application values are defined in § 194, Building Statute Book.

Normal production costs 2000 (NHK 2000)

With asset valuation methods the opening value is assessed from valuations of site, building substance and other facilities. For production valuation of the building facilities one needs the expenditures for building, outer facilities and any special related equipment. All valuations are made separately initially and only finally compiled.

The determination of building value takes place in stages. Firstly the normal production value is calculated. Here, as a rule, date-related normal production costs are established. The building normal production valuation is then reduced in value according to age. From the reduced figure further deductions for building faults and damage are made. This gives the building asset valuation. Exceptionally, this figure can still be further reduced or increased. In the first line this is through consideration of any other valuation influencing conditions (over-aged for management purposes, above-average running costs, inefficient plan elevation and building design for management purposes, too high building) and through adjustments for the state of the market and regional and local special influences.

Up until 1995 normal production costs were determined based only on the price basis of 1991/3/14. With the aid of the building price index the value is then subsequently reached (in part an increase of 20 times). Because this pricing basis has been clung to for so long in the past the asset valuation method became untrustworthy and slid into a serious crisis. In order to cut-off this old system once and for all, the Federal Ministry of Planning, Building and Urban Construction took the normal production costs based on the 1.1.1995 figures and channelled them into a comprehensive collection for integration into the Asset valuation Directive [1].

The tables covered 95 building type leaflets, differentiated according to building type, age group and method and modern normal production costs mainly with detached and semi-detached houses. For normal production costs (NPK) there is a federal average value according to the 1995 price level including purchase tax.

With introduction of the Euro as new currency January 1, 2002 recalculation of all table values was required. The new reference year is 2000 while the official building cost index of the Federal Statistical Authority is set at 100 every five years (1995 then 2000).

With regard to normal production costs for farm buildings there have been repeated criticisms from valuers in the past because of differentiations, e.g. insulated brick built buildings and non-insulated lightly-built buildings which meant that the table valuations could only rarely be applied.

Following actualisation of NHK'95 there was then, therefore, the wish to revise the farm buildings sector. The Federal Ministry for Traffic, Building and Domestic Housing (BMVBW) recognised the revision as necessary and supported the project.

Data basis

Basis for the new database consists of the building cost data of the Institute for Farm Technology and Building Research (IBB) at the Federal Research Institute for Agriculture (FAL) [2]. These are key cost figures taken from built and calculated structures. The FAL databank contains cost data from over 100 different livestock building models.

Key costing figures are published in supplements of the State Building Research Völknerode, in the KTBL pocket book and in the guideline prices of ALB, Hessen. With the specialist support of the KTBL working group „Building Investment Requirements in Farm Building Enterprises“ a databank was created in the previous year which allowed cost questions and cost comparisons for livestock buildings via Internet (www.ktbl.de.stallbaukosten).

Because of the consequent application of the cost classifications according to DIN 276 the FAL data could be processed to normal production costs in the sense of the Asset Valuation Ordinance. The normal production costs represent only the building costs, i.e. the cost groups 300, building and building construction and 400, building technical facilities according to DIN 276. Building auxiliary costs represent cost groups 700 and are not contained in the tables but are, however, given in the respective building type leaflets and, where required, can be introduced to the calculation.

Also costs for outer facilities, cost group 500 are not contained in the building site prices and therefore have to be determined separately. For the most important containers and equipment belonging to a livestock housing system orientation data is given in the building type leaflets.

Gross site area as reference unit

Instead of the normal usage unit used in farming – e.g. animal place – the area unit gross building site area (BGF) as used by all other types of building in the NHK was chosen. The normal production costs are given as area prices in €/m² in the BGF. Determination of the gross site area is according to DIN 277, areas and interior volumes, in the 1987 edition. The BGF is the sum of the building site areas in all plan elevations of a building. Applied for this calculation are the outer measurements of the building parts at floor level.

Table „NHK 2000“ for farm buildings

In the total Building Ministry (BMVBW) tables which are supplemental to the Asset Valuation Directive (WerR), all building types investigated by FAL could not be represented, and certainly not all being built in Germany currently. Because of the previously given number of building type leaflets, entries had to be limited to the most important farm building types. These now follow:

- 32 Riding facilities and stables
- 32.1 Riding halls
- 32.2 Stables
- 33 Farm buildings
- 33.1 Cattle housing
- 33.1.1 Calf housing
- 33.1.2 Cattle buildings (housing for young cattle, feeding bulls and milking cows without parlour)
- 33.1.3 Dairy cattle housing with parlour and bulk tank
- 33.1.4 Parlour with bulk tank and neighbouring rooms as single building
- 33.2 Pig housing
- 33.1.1 Piglet rearing housing

- 33.1.2 Feeding pig housing
- 33.1.3 Breeding pig housing (serving, pregnancy -checking and farrowing compartments)
- 33.1.4 Farrowing house as single building
- 33.3 Poultry housing
- 33.1.1. Broilers, floor system
- 33.1.2 Laying hens, floor system
- 33.1.1 Laying hens, aviary system
- 33.1.2 Layers, battery system ¹⁾
- 33.2 Multipurpose farm buildings and barns
- 33.2.1 Multipurpose farm buildings
- 33.2.2 Barns without livestock housing compartment

¹⁾ No longer applicable for permission in Germany

Equipment characteristics

Described for every type of building are three different standards of equipment: simple, medium, superior.

These differences refer to the building constructions as well as the technical equipment. The descriptions for the medium standard are to a large extent taken over from the FAL description and listed in shortened form. The characteristics for simple and superior equipment system from a large number of building projects looked after within the framework of the BML model project, or which could be evaluated through BML federal competitions.

The summary of the equipment characteristics is planned in table form with separation for every type of production. Every individual page also contains information over the building auxiliary costs and the total time of utilisation. Correction factors accounting for cost digressions in relationship to building sizes, and for the determination of extra costs for below-floor livestock building constructions (e.g. slurry channels), were brought by the institute into the total work.

Tables

A total 16 building types out of the agricultural sector were included in the „NHK 2000“. Included in the classification are equestrian facilities and stables of building type 32 and farm buildings from building type 33.

Preparing the data

The total tables as well as the texts on equipment standards were divulged beforehand to a large number of specialists for checking [3]. Following the replies and the integration of desired corrections, the data is now being published in different forms.

In the BMVBW Internet site, all the „NHK 2000“ tables are accessible. They are also published in book form in the supplement to the Asset Valuation Directive (WertR).

Working group

The preparation work of the Institute for Farm Technology and Building Research (IBB) at FAL was assisted by a working group: comprising the experts Dr. K. Gütter, Dr. H. Müller, K.-U. Scholz, H. Wiederhold and U. Bertz and W. Kleiber from BMVBW.

Summary

Following the revision of the 1995 Normal Production Costs (NHK 95) by the Federal Ministry for Traffic, Building and Domestic Housing (BVBW) on the testing point 2000 (NHK 2000), the farm buildings sector was able to be updated and extended through agreement with the Ministry for Consumer Protection, Nutrition and Agriculture (BMVEL). Many normal production costs are now available for cattle pig and poultry housing, for riding halls and stables as well as barns and multi-purpose halls. The basic source for the tables was the FAL building cost databank, which was determined within the framework of KTBL work project „Calculation documents“.

Literature

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