

## ***Interactive comment on “Content analysis for Agricultural Records of the United Kingdom, AD 200 to 1977: a study of frequency in human records concerning climate phenomenon” by D. H. Holt***

**Anonymous Referee #2**

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The paper attempts to establish the types of meteorological events recorded across the British Isles between AD 200 [sic, data used start in 220] and 1977 and assesses if the choice of events was consistent over time. This is in itself a worthwhile and valuable subject. However, the study is based not on original documentary sources recording the weather events, but on a compilation regarding harvest success and weather events, the so called ‘Agricultural Records A.D. 220-1977’. The first edition of the ‘Agricultural Records’ was compiled by the farmer Thomas H. Baker in 1883 (published under the title ‘Records of the seasons, prices of agricultural produce, and

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phenomena observed in the British Isles’), the work was updated him and other non-historians in 1912, 1968 and 1977.

Due to the points listed below I cannot recommend the paper for publication in ‘Climates of the Past’. In brief, the author ignores basic scientific principles of historical climatology established since 40 years regarding the unchecked use of compilations and also shows a general lack of knowledge of historical methodology. Based on a flawed compilation of weather events the results of the content analysis are irrelevant.

### Major points

Compilations of weather events were common throughout central and western Europe starting in the mid-eighteenth century and became more frequent after c. 1850; over the last decades the tradition has been revived. Unfortunately compilations before the latter part of the twentieth century are often flawed by the indiscriminate collecting of weather references from a variety of documentary sources, without subjecting them to the standard historical methodology for assessing the quality of a record: the source criticism. Therefore such compilations also contain data that would be judged by the historian at best as ‘unreliable’ and at worst as ‘imaginary’. Misdatings, errors in copying, doublings and omissions of weather events are also common in old compilations. Therefore as Bell and Ogilvie have stated in 1978, compilations themselves cannot serve as a basis for historical climatology. The ‘Agricultural Records A.D. 220-1977’, although being revised as late as 1977, are an especially bad example of such compilations, as they do not even reference the sources used, either together with the actual weather information or in a bibliography. This renders the validation of the sources and weather references impossible, but this has also at no point been attempted by D. H. Holt. It cannot even be excluded that the ‘Agricultural Records A.D. 220-1977’ are themselves at least partly (and definitely to a large extent until c. 1600) based on older compilations.

Consequently in respect to the ‘Agricultural Records A.D. 220-1977’ several questions

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have to be raised. Amongst them are: Is the quality of the information compiled consistent over time? What are the documentary sources used? Are the used sources representative for the wider pool of documentary records containing weather information? What percentage of sources available for a given period has been included in the compilation? How does the nature of compiled sources change over time, because change it certainly must? What is the geographical coverage of the compilation? (Whereas for more recent centuries a more national outlook on the United Kingdom appears to have been attempted, medieval chronicles mainly concentrate on the southern and eastern parts of England.) Is the concept of seasonality the same in medieval England as in the nineteenth century? None of these questions are answered in the compilation itself, nor in the paper presented.

#### Additional points

The author frequently refers to 'climate' data being contained in documentary sources. This is the wrong wording: contained are actually weather references, either in the form of direct weather references or proxy data. This information can be used to study climate and also long term climate change. However, this is not the angle of the documentary sources and an angle generally never taken before the eighteenth century.

Basing the content analysis on a compilation about whose background, sources and context is little known, also creates problems for the content analysis itself. Since the compilation is entitled 'Agricultural Records' and the focus of the compilers was the impact of weather on the agricultural and pastoral production, it is hardly surprising that references to harvests figure prominently in the text, especially in the period of the Little Ice Age which embraces the time roughly post 1700 when 'agricultural records' in the form of estate papers, farming diaries or agricultural magazines became increasingly common and were – considering the title of the compilation – probably included in it. Therefore the choice of sources in the compilation explains its focus on harvest success. Most likely these agricultural records are not representative of the array of documents recording weather information available for England during the Little Ice

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Age (weather diaries, personal diaries, newspaper and magazine articles, instrumental observations etc.). The analysis therefore tells us more about the motivation of the compiler than the focus of the majority of written records containing information on weather.

The contextual analysis is also not based on copies of original weather references, but on summaries, which raises the source of error. Additionally 'English' documentary sources before the end of the Middle Ages were rarely written in English, but mostly in medieval Latin and partly in medieval French. Medieval English also needs to be translated into modern English, consequently all c. pre-1500 information is based on translations whose quality cannot be evaluated. Connotations of words can change over time and certainly over more than one and half millennia.

The author states finally that 'If we can understand what humans record when documenting the climate, we can better understand the documents.' Clearly the problem is approached from the wrong side. It is by a critical analysis of the sources, i. e. the original sources, that the potential and the limitations of a text can be understood. The different strengths and weaknesses of various source types are long known to the historical climatologist.

It can be concluded that the author has not, as necessary for a content analysis, 'reviewed a representative percentage of all literature'. This would involve the consultation and critical evaluation of a significant percentage of the original texts containing weather references for England between 220 and 1977. This is not impossible, but merely very time-intensive and laborious.

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