

OIL AND AMMONIA CONTENT OF DIFFERENT VARIETIES OF COTTONSEED GROWN IN VARIOUS LOCALITIES

A Progress Report

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For the past three years the Bureau of Plant Industry has been engaged in a study of the relationship of varietal and cultural factors to the oil and ammonia content of cottonseed. This work constitutes one of the research problems proposed by the Basic Research Committee of the American Oil Chemists Society and the Interstate Cottonseed Crushers' Association. At the annual meeting of the former organization at New Orleans in 1924 the senior writer presented a summary of the results of the first year's work which indicated that some fundamental facts of interest to both growers and crushers of cottonseed might be established by this investigation. At the meeting of this Society last year a progress report was submitted stating that the second year's work appeared to substantiate largely the results obtained the first year, although the complete analytical data were not available at that time. Data on the oil content of the seed from a large number of varieties grown in a number of widely separated localities over a period of three years have now been obtained. These data cannot be readily presented in a paper without the use of extensive tabulations, but a brief summary may be given which will show the progress being made and which will give further indication of the trend of results which are being obtained.

Among a total of approximately thirty varieties of cotton there are three or four which have for three years consistently shown a higher oil content than the others and a similar number have with equal consistency shown an oil content noticeably below the average. Such a tendency on the part of both groups has manifested itself in the several localities in which the seed was grown. This points to the probability that certain inherent characteristics regarding oil content are sufficiently distinct in certain varieties under varying cultural conditions to warrant careful consideration by the grower in connection with the selection of suitable varieties for his particular locality.

The ammonia determinations have again been made by the Barrow-Agee Laboratories, but the necessary calculations for last year's samples have not yet been completed and therefore no comments can be made regarding the results for the entire three years. The ammonia figures covering the first two years do not point toward such a definite trend as is the case with the oil content. However, it seems likely that some interesting facts will be established from this phase of the work after it has been extended over a longer period.

During the coming season it is planned to secure seed of the several varieties from one or probably two additional regions, both in the southeastern area. In other respects the work will be continued along the same lines as heretofore.

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