

January 19, 1969

Dr. William L. Brown  
Pioneer Hi-Bred Corn Company  
1206 Mulberry Street  
Des Moines, Iowa 50308

Dear Bill,

I am enclosing two letters recently received. The one from Painter is most important. The first paragraph of his letter gives measurements of DNA content in three strains of maize. The measurements were taken at the pachytene stage of meiosis. Monteiro's work indicated the manner in which knobs increased the DNA content. The amount of increase is astounding, though, as shown by Painter. Pavan is going to Austin, Texas, and he is taking some young students from Brazil with him. Blumenschein wrote me stating that Pavan had become very much interested in the knobs of maize and wanted suggestions of a problem for one of his students. I have suggested that the DNA content of the nuclei of different types of cells be measured cytophotometrically. It is obvious that the knobs are not acting in the same manner in different cells and I suspect this is related to differences in the DNA content of these cells.

The second letter is from Ellis Bolton. He was on vacation when your seed arrived here. Consequently, I held the seed until after I had returned from a week at Raleigh. The seed was mailed to Bolton the day after I returned here --January 10. I sure hope that the knobs will have a G-C content that will allow identification of their DNA. If so, we are on our way to an appreciation of what they may be accomplishing. Ever since I first saw a knob I have wanted to know this!

You will get a report by phone on my trip to Raleigh. The study of chromosome morphology and of knobs in *Tripsacum* is going to be as informative as the maize study. There will need to be some changes in mode of attack if progress is to be made. I have talked again to Roberts and he has talked to Wellhausen. More by phone, however.

Regards,

Barbara McClintock.

P.S. Marcus Rhoades had a heart attack at Christmas time. He is still in the hospital but was holding his own, the last time I heard.