The Influence of Supplemental Irrigation on Corn Yields in Indiana

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The average annual precipitation in central Indiana is approximately 39 inches; however, less than 35 inches are received in the northern counties, while up to 47 inches per year fall in southern Indiana. Total crop failures due to drought seldom occur in Indiana, but reduction of yields caused by inadequate moisture at certain periods in the growth of crops is frequently experienced. A study of the rainfall records for the past 20 years at West Lafayette shows that severe droughts occurred during the growing season in seven of these years. Water supply has become of increasing importance in crop production as higher yields are obtained through the use of improved varieties, cultural practices, and fertilization.

The soils of Indiana are saturated with moisture in spring; however, soil types vary widely in their power to retain both this water and the additional water supplied by rain during the growing season. Much of the state has an abundant ground water supply at fairly shallow depths. Many farmers have everflowing streams.