These data describe representative farms modeled using the Integrated Farm System Model to evaluate changes in the environmental impacts of U.S. dairy farms over a 50-year period. Twenty farms are described in each of 6 regions of the United States for the years of 1971 (Table S1) and 2020 (Table S2). Descriptive data and information for these farms include the farm location, number of cows and heifers maintained, milk produced, feeds and nutrient contents fed, crop areas, crop yields, fertilizer and lime application rates, irrigation water applied, milking and housing facilities, manure collection, storage and application methods, and soil characteristics. These data are published as supplementary information for the article “Fifty years of environmental progress for United States dairy farms” published in the Journal of Dairy Science [Rotz, C.A., D. Beegle, J. K. Bernard, A. Leytem, G. Feyereisen, R. Hagevoort, J. Harrison, G. Aksland, and G. Thoma. 2024. Fifty years of environmental progress for United States dairy farms. J. Dairy Sci. (in press)]