software packages. The option "Plot Total Heat" produces a plot of total heat production versus time. The computer must have CGA or better graphics capability for the graph to be displayed.

The following is a step by step example of how to use this software to evaluate the heat balance in swine housing. First, a file containing environmental data in column format must be prepared with each column separated by at least one space. Record the name of this file for later use. The values used in this example will be environmental data for May 1 to May 3, 1988 for Gainesville, Florida. Environmental data can be stored under any legal DOS filename. Values are entered in the order: month, day, number of pigs, outside temperature, (°C), inside temperature, (°C), wind velocity, (m/s) and total radiation, ($W/m^2$). The values shown in Table 1. are stored in file "Data.pig". The structure used in this example will be a metal roofed swine finishing building as shown in Figure 2. The building characteristics are as shown in Table 2. Building geometry is determined by measuring the quantities shown in Figure 1 from the building to be evaluated. The thermal characteristics for many common building materials are contained in PIGS. Thermal characteristics for materials not listed in PIGS can be determined by referring to handbooks such as the ASHRAE Handbook of Fundamentals (ASHRAE, 1985) or can be determined experimentally. Environmental data should be collected at the location of the structure. This can be done by manually reading sensing devices or by using automatic data acquisition equipment. Temperatures are obtained from sensing devices such as thermometers, thermocouples or thermistors. Temperature sensors located outside should be shielded from direct solar radiation. Temperature sensors located inside the structure must be kept out of the reach of swine. The radiation level is mea-