Any new or developing agricultural technology, despite design or marketing origin, will have many questions related to costs, benefits and differential impacts (Office of Technology Assessment, 1995). These questions, discussed below, attempt to assess the impact and appropriateness of a technology to farm communities, agribusiness, and the environment. Designing the necessary research methods and data collection protocols, analyzing data from multiple sources and working in multidisciplinary settings to answer these questions can be viewed as integral parts of a sociological inquiry into site-specific management (SSM); however, specifying both the questions and responses in this case are difficult because SSM or precision agriculture is not a single or uniform technology. The idea of SSM is only a conceptual nucleus around which a diverse bundle of partially-integrated hardware and software components are added in an attempt to achieve certain agronomic, environmental and economic functions. In general, diagnostic and analytical procedures are used in accord with agronomic decision rules to vary inputs and measure outputs within specific spatial and temporal settings in response to agroecological variation. In the SSM research literature (Robert et al., 1993, 1995) this is generally viewed as the use of some form of subfield diagnostic procedures (e.g., grid sampling for nutrient levels), variable rate applicators, positioning techniques that achieve accuracy within several meters and yield monitoring based on within-field spatial and temporal coordinates. This perspective of SSM, however, only occupies one end of a continuum that can be used to represent this bundle of techniques. The functions or objectives associated with this form of SSM also can be achieved using an array of different methods and techniques. As will be explained as part of this sociological analysis, these functions can be accomplished with a array of techniques and technologies where the specific mix has different implications relative to control and consequences.

The first set of questions asked in promoting any new agricultural technology concerns the requisite management skills and equipment, the availability of these skills and equipment within local private and public trade or jurisdictional areas, and whether this technology is targeted toward a specific type of farm. Answers to this set of questions are dependent on how one goes about attempting to achieve the functions of SSM. It is argued that the functions of SSM can be