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USING TERRESTRIAL RESEARCH TO ADVANCE DEVELOPMENT OF BIO-REGENERATIVE  
LIFE SUPPORT SYSTEMS

**Abstract**

Bio-regenerative life support systems are necessary for indefinite missions and planetary colonization. Scientist have studied the natural environment and forms of agriculture to understand how our planet supports our lives her on earth. Reviewing terrestrial based research from many different fields of earth science and agriculture provides a large base of information that can be utilized to further research on bio-regenerative life support systems. Terrestrial research includes a variety of relevant areas such as hydroponics and rate of oxygen recycling. While this an other research is extremely useful in the space industry the information is unorganized and largely inaccessible. This literature review investigates the major avenues of terrestrial research that are applicable to the space industry's future work, and proposes methodologies to utilize this valuable knowledge in support of developing full circle bio-regenerative life support systems.