



ANSI Committee on Education

Standardization Case Studies

ACCOMPANYING QUESTION AND ANSWER WORKSHEET

As appropriate, please suggest recommended study, test or quiz questions / answers to accompany the case study proposed above.

Proposed Question	What is the “Kyoto Protocol” and why are biofuel standards important to this agreement?
Proposed Answer	<p>The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing greenhouse gas (GHG) emissions. These amount to an average of five per cent against 1990 levels over the five-year period 2008-2012.</p> <p>Biofuels produce lower GHG emissions than traditional petroleum-based fuels and have the potential to significantly contribute to meeting Kyoto Protocol requirements. Standards such as ASTM D6751 ensure that a biofuel performs properly. Performance guarantees provide the confidence for industries to develop vehicles that use the biofuel and for consumers to purchase and use it. D6751 also assures the environmental community that the biofuel has reduced environmental impact.</p>

Proposed Question	ASTM D 6751 Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels is quoted in the case. What aspects of this standard make it important and able to be used by the Standards Association of Zimbabwe?
Proposed Answer	<p>ASTM D 6751 allows laboratories who extract biodiesel from Jatropha to characterize performance under prescribed conditions. D 6751 is a “performance” specification that prescribes minimum environmental and functional requirements without specifying in detail such things as composition, size, density, and other measurable basic parameters. Any formulation, then, that performs up to the demands of the standard will be deemed to qualify under the standard. Performance standards, like D 6751, thus provide the necessary assurance of predictable outcome without constraining imaginative problem-solvers in their efforts to achieve that outcome.</p> <p>ASTM International standards are copyrighted and, in most cases, to develop a derivative standard based on an ASTM standard is not permitted. However, through the Memorandum of Understanding program, ASTM’s agreement with the Standards Association of Zimbabwe (SAZ) allows and encourages SAZ to either adopt ASTM International standards or use them as the basis of their national standards.</p>

Please return completed Project Worksheet to training@ansi.org.

Questions can be directed to [Lisa Rajchel](mailto:Lisa.Rajchel@ansi.org) (212.642.4932)

Proposed Question	What makes Jatropha a particularly useful source for biofuel? How does choosing it influence rural poverty levels?
Proposed Answer	<p>Jatropha curcas is a locally grown, perennial plant that produces oilseeds appropriate for biofuel development. Zimbabwe can reasonably expect to produce enough Jatropha since the plant is drought-resistant and can tolerate the high-moisture stress conditions common throughout the country. It also grows well across a wide range of land types including marginal areas, wasteland, and land unsuitable for traditional agriculture. Jatropha produces seeds for up to 30 years, making it an ideal sustainable feedstock for producing biodiesel.</p> <p>To remedy serious rural poverty and unemployment, government and nongovernmental organizations are encouraging rural subsistence farmers to grow Jatropha plants as a business. Local communities have embraced the project, and such groups as World Vision have shown strong support. Planting Jatropha for biodiesel production has become a viable business in Zimbabwe.</p>

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