

## **2016 AP® HUMAN GEOGRAPHY FREE-RESPONSE QUESTIONS**



Photo Y



Photo Z

Photo Y, © Richard van Kesteren / age fotostock; Photo Z, © Sisse Brimberg / Cotton Coulson / Keenpress / Exactostock

3. The pictures show two types of agriculture in the world.
- Identify the grain crop shown in each photo.
  - Discuss TWO economic differences between subsistence agriculture and commercial agriculture.
  - Identify ONE environmental impact resulting from the type of agriculture shown in photo Y.
  - Identify ONE environmental impact resulting from the type of agriculture shown in photo Z.

**STOP**

**END OF EXAM**

# AP® HUMAN GEOGRAPHY 2016 SCORING GUIDELINES

## Question 3

**A. Identify the grain crop shown in each photo: (1 point total)**

(1 point for identification of both)

Photo Y

Rice (wet or paddy rice is OK)

Photo Z

Wheat, oats, barley, rye, flax, millet, triticale, canola, rice (only upland or dry)

**B. Discuss TWO economic differences between subsistence agriculture and commercial agriculture. (4 points total)**

4 points (2 points for a difference and a corresponding comparison) + (2 points for a difference and a corresponding comparison)

	<b>Subsistence</b>	<b>Commercial</b>
<b>Labor/mechanization/technology</b>	High inputs of human labor or intensive Hand tools/limited mechanization Low technology	Low inputs of human labor or extensive Machinery/mechanization High technology
<b>Economic purpose</b>	Family or communal For households With surplus to local markets	Profit drive/agribusiness For trade Large scale markets (reg./nat./global)
<b>Size or scale of farm</b>	Small plots	Large farms
<b>Level of Economic development</b>	Predominant in LDCs/less developed	Common (but not limited to) MDCs/developed
<b>Financial investment</b>	Low levels of financial/capital investment	High levels financial/capital investment, loans
<b>Inputs</b>	Lower use of chemical fertilizers and pesticides	Higher levels of chemical fertilizers and pesticides
<b>Percent labor in agriculture</b>	Countries have higher percent of labor force in agriculture	Countries have lower percent of labor force in agriculture
<b>Gender</b>	Large percent of farm workers are female	Small percent of farm workers are female

**C. Identify ONE environmental impact resulting from the type of agriculture shown in Y. (1 point total)**

1. **Habitat loss:** Destruction of natural wetlands, lakes, streams, forested regions; loss of species (aquatic/terrestrial plants and animals)
2. **Water quality:** Pesticides and fertilizers used in paddy farming or to control mosquitoes can affect bird reproduction and downstream aquatic ecology
3. **Increased wetlands:** Increased water surface areas for migratory birds, reptiles, sedentary fish, or other water-dependent species.

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### Question 3 (continued)

4. **Changes to natural systems by landscape modification:** Specific to rice farming: terracing, diversion of streams, rivers, deforestation, increase in arable land and wetlands; and increased CH<sub>4</sub> emissions from organic decomposition in rice paddies adds to the greenhouse effect.
5. **Disease:** Increases water borne disease, mosquitoes, malaria, and other diseases.
6. **Soil quality:** Improvement from burning rice straw, deposition/sedimentation.
7. **Air quality:** Smoke from burning rice paddies/straw; CH<sub>4</sub> (methane) from organic decomposition.

**D. Identify ONE environmental impact resulting from the type of agriculture shown in Z. (1 point total)**

1. **Air quality:** Degradation from spraying agricultural chemicals (herbicides, pesticides, fertilizers), vehicle exhaust, and dust.
2. **Water quality:** Downstream effects of water diversion, increased sedimentation, and chemical pollution; dead-zones in lakes and oceans at or near the mouths of rivers.
3. **Soil quality:** Erosion, nutrient loss, moisture capacity loss, salinization, land exhaustion, accumulation of agricultural chemical (herbicides, pesticides, fertilizers)
4. **Modified biodiversity:** Destruction of natural grasslands, wetlands, plains' fauna and flora; super pests; decreased crop variety from monoculture Airborne or other mechanized pesticide spraying damages natural insect ecology and harms animals that prey upon insects; agricultural chemicals and vehicle exhaust contribute to greenhouse effect.
5. **Water availability:** Depletion of streams, groundwater, and aquifers from irrigation in dry regions or during dry climate cycles.