

Future of Food

Comparing countries

Adapted from: <http://asiasociety.org/education/how-much-there-eat>

Compare the country of India with the southern region of the United States. The region below the 37th parallel, from Arizona to North Carolina, plus Kansas and Missouri, is roughly equivalent to India in size.

Items to think about: food production, population/population density, weather/climate, available food proportionally to each individual, infrastructure, and topography.

Part A: Research and Discover the following items using <http://www.prb.org/wpds/2015/>

After you have found credible answers report them below.

Country/ State	Population (thousands)	Land Mass (acres)	Other information i.e. Density (pop/sq mile)
India			
Alabama			
Arizona			
New Mexico			
Texas			
Oklahoma			
Louisiana			
Arkansas			
Kansas			
Tennessee			
North Carolina			
Mississippi			
Missouri			
Georgia			
South Carolina			

Future of Food

Florida			
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Territory	Population Totals	Land Mass Total	Significant differences
India			
15 American States			

Use 24 rice cakes to represent the landmass of each of these two areas (India and Southern US). Put 24 rice cakes on a table labeled India, and another 24 on a table labeled Southern US.

Read the information below to compare the arable land of each.

Part B: The Significance of Topography and Food Production

Remove rice cakes to represent unusable land for each of the following topographic features (*the land forms or features (such as mountains, rivers, deserts, plateaus) in an area of land*).

India's Topography and significant weather

- ï The rugged, glaciated Himalayas make up 1/12 of India's landscape.
- ï The Thar desert (in Northwestern India) takes up another 1/12.
- ï The Southern Peninsula, approximately 1/3 of the land area, is plagued by monsoons, floods, droughts and tornadoes, and is an unpredictable producer of food.
- ï The remaining land is suitable for agriculture but also is home to the majority of the rapidly growing population.

How many rice cakes remain? _____

Topography of the 15 States

- ï The dry high plateau of Arizona and New Mexico rises into the southern end of the Rocky Mountains, which represents 1/6 of the total area.
- ï Dry grasslands in Texas and Oklahoma make up 1/4 of the area.
- ï Further east and south are forests and hills making up another 1/6.
- ï Low-lying wetlands comprise 1/12.

How many rice cakes remain? _____

Future of Food

Part C: Questions on results and comparisons

1. If the population of this portion of the United States is approximately _____ and one student in this class represents 60,000,000 people, estimate how many students will represent the population of the southern United States?
2. Using the same (one student represents 60,000,000), how many students would represent India's population of 1.3 Billion?
3. Therefore the United States have _____ rice cakes / _____ people = _____ rice cakes per person.
India has _____ rice cakes / _____ people = _____ rice cakes per person.

Part D: Conclusion

1. What problems may arise as India's population increases?
2. Use <http://www.prb.org/wpds/2015/> to write down what the projected population of India will be in 2050.
3. India currently exports food. How is this possible?
4. What could be done with the extra food in the United States?

For further consideration:

5. What are the attitudes of India's government and citizens toward GMOs? (provide links or articles)
6. What are the attitudes of the United States government and its citizens toward GMOs? (provide links or articles)