

Gurteen Agricultural College – AA011

Unit 8.1 - 8.5 Revision Worksheet

Sustainable Energy and Resources on Farms

Work in pairs, complete the questions on the Units completed to date below using the internet, your own farm experience and class notes.

1. What is the main type of energy used on a farm?

Name one other:

2. Name 3 delivered/useful energy forms on a typical farm:

1.

2.

3.

3. Why is electricity such a useful power source?

4. Why does 1 kWh of heat produced from electricity have a higher carbon emission rate than 1 kWh derived from kerosene?

5. What is the:

A. Unit of power

B. Unit of power consumption/usage

6. What is the unit of efficiency of a tractor?

7. Give the web address of an energy provider comparison site:

8. A survey of dairy farms in Ireland showed an average of 6kwh/ week/ per cow in a standard milking parlour

Using the results of your internet search, complete the cost comparison for a 100 herd farm:

Total weekly power consumption	Annual Power consumption	Name of cheapest supplier		Name of most expensive	
		Day rate	Night rate	Day rate	Night Rate
Cost comparison					

9. Find an electricity consumption calculator and use to complete typical power ratings for an

A. Electric kettle:

B. Pump:

C. Washing machine:

10. Which costs more to run - 10 bulbs (each bulb being a 40-watt fluorescent bulb) which run for 10 hours a night or 1 water heater (3 kW) which runs once per day for 30 minutes? Give the reason for your choice:

11. Rank from largest to smallest the typical running cost items for a 2 year old tractor purchased with bank finance:

12. What has the biggest impact on tractor and farm vehicle fuel consumption?

Why?

13. Access the results from the farmer led research project Efficient 20 - "Putting your tractor on a diet":

<http://efficient20.eu/2013/04/11/put-your-tractors-on-a-diet/>

List 5 specific measures that would reduce fuel consumption:

1.

2.

3.

4.

5.