Sustainable Practices

Nathan Curtis

1. Will and Hildegarde both had plots in the raised beds, but they did not have adjacent plots. Since Hildegarde had plot 6 (the NE plot in the raised beds), Will must have plot 5.
2. Since everyone but Mary had a plot in the raised beds, Kara and Esther must have plots 4 and 7, in some order.
3. Since Hildegarde had plots adjacent to everyone but Will, her second plot, in plot 8 (the NE corner of the garden), must be adjacent to Mary in plot 9.
4. Esther has plots adjacent to all 4 other gardeners, so both of her plots must be adjacent to 2 other plots. One of these is 4 or 7, and the only remaining plot adjacent to 2 other plots is plot 2, which must belong to Esther.
5. Mary's cauliflower plot was directly to the north of Esther's garlic plot. Since Mary did not have a plot in the raised beds, Mary's cauliflower plot must be plot 1, and Esther's garlic plot must be plot 2.
6. So far, Esther has plots adjacent to Mary, Hildegarde, and Will. Since she has plots adjacent to all 4 other gardeners, Kara must be her remaining neighbor in plot 3.
7. Kara has plot 3 and plot 4 or 7. Since her spinach plot is directly north of Will's garlic plot, her spinach plot cannot be 3 or 7, so she must grow spinach in plot 4, and Will grows garlic in plot 5. Also, Esther must grow tomatoes in plot 7.
8. The only remaining plot is plot 10, which must belong to Will.
9. Since Mary grew cauliflower in plot 1, her tomato plot must be plot 9.
10. The two radish plots were at opposite corners of the garden. Since plot 1 has cauliflower, the radish plots must be 3 (Kara) and 8 (Hildegarde)
11. The remaining crops are spinach and cauliflower. Since no two adjacent plots grew the same crop, Hildegarde must grow cauliflower in plot 6, and Will must grow spinach in plot 10.
12. Since Esther grew a total of 8 kilograms of produce, her yields must have been 5 and 3 kilograms
13. Since Kara grew a total of 4 kilograms of produce, her yields must have been 1 and 3 kilograms.
14. Since the two garlic plots yielded a total of 4 kilograms, their individual yields must have been 1 and 3 kilograms. Therefore, Esther's garlic plot (plot 2) yielded 3 kilograms, and Will's garlic plot (plot 5) yielded 1 kilogram.
15. Therefore, Esther's tomato plot (plot 7) yielded 5 kilograms.
16. Since no two adjacent plots yielded the same amount of produce, Kara's spinach plot (plot 4) must have yielded 3 kilograms, and her radish plot (plot 3) must have yielded 1 kilogram.
17. Hildegarde's raised plot grew exactly half as much as her other plot. Since she could not have a 1-kilogram yield from either plot, her raised plot (cauliflower in 6) must have yielded 2 kilograms, and her other plot (radish in 8) must have yielded 4 kilograms.
18. The remaining crop yields are 2, 4, and 5 kilograms. Since Esther's tomato plot had a greater yield (5 kg) than Mary's tomato plot, Mary's tomato plot must have yielded 2 or 4 kg. But no 2 adjacent plots had the same yield, so Mary's tomato plot (plot 8) can't have been 4 kg (Hildegarde's radishes in plot 7). So Mary grew 2 kg of tomatoes.
19. Hildegarde grew a total of 6 kg of produce. Since no two people had the same total yield, Mary's cauliflower plot must have yielded 5 kg, and Will's spinach plot must have yielded 4 kg.
20. Use the amount of produce grown to index into the type of produce in each plot. Reading the letters in plot order spells the answer, **IRRIGATION**

BAPHL

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1 Mary Cauliflower 5 kg		N ⇑		8 Hildegarde Radish 4 kg
2 Esther Garlic 3 kg	4 Kara Spinach 3 kg		6 Hildegarde Cauliflower 2 kg	9 Mary Tomato 2 kg
3 Kara Radish 1 kg	5 Will Garlic 1 kg		7 Esther Tomato 5 kg	10 Will Spinach 4 kg