NZ Dairy farmers have been using Genetic Improvement as a management practice for decades. Genetically superior bulls have been used to Artificially inseminate cows.

Each cow’s milk quality and quantity is measured several times each season and low producers are culled from the herd. Dairy farmers are paid for the amount of milk solids (MS) that the cows produce in the milk.

The table below shows some production figures from the same farm over a 20-year period. The farm is still the same size and produces about the same amount of feed as it did 20 years ago. The herd is descended from the cows that were on it 20 years ago.

|  |  |
| --- | --- |
| Original production | Current production  (20 years after original) |
| 260 cows | 220 cows |
| 259kg MS per cow | 315kf MS per cow |

1. Which Herd has the better producing cows and why?
2. Which herd has the smaller number of cows and how could this help with management?
3. The feed and other environmental actors haven’t changed over the 20 years. Explain the steps the farmer has taken to improve the production on this farm.