

Selective breeding

Q1.(2018)

*(b) Figure 11 shows two varieties of potato plant.

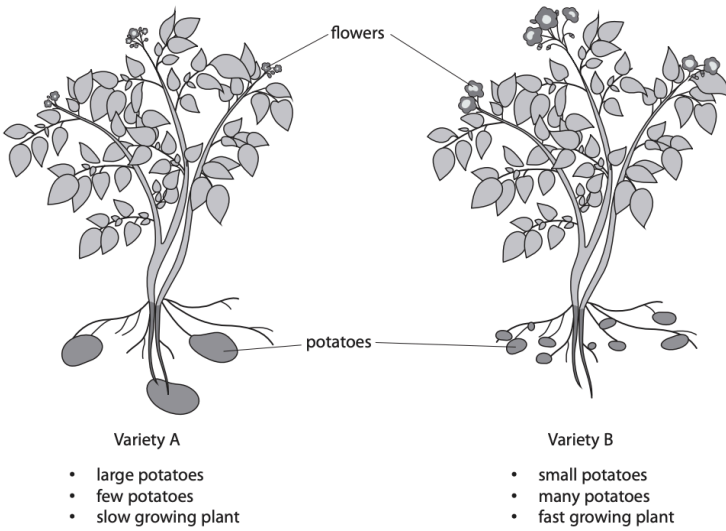


Figure 11

Q2.a(2020)

Farmers selectively breed chickens to produce larger chickens.

Figure 4 shows how the size of chickens has changed over time.

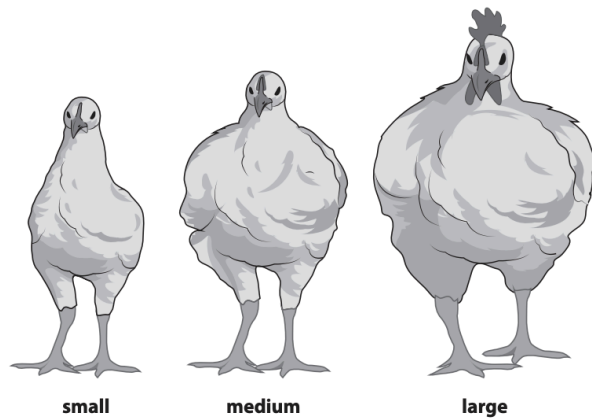


Figure 4

(i) Explain how farmers have used selective breeding to produce larger chickens.

(3)

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Q2.b(2020)

(ii) Describe **one** benefit and **one** risk of selectively breeding chickens.

(2)

benefit.....

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risk.....

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Q2.c(2020)

The body cells of chickens have 78 chromosomes in their nuclei.

(i) State the number of chromosomes found in each sex cell of a chicken.

(1)

.....

Q2.d(2020)

Name the type of cell division which produces sex cells.

(1)

.....

Q3.(2021)

Figure 2 shows some information about two types of cattle.

type of cattle	survival in high temperatures	meat quality
Brahman	good	poor
Shorthorn	poor	good

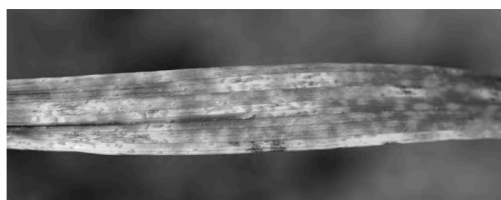
Figure 2

Describe how these types of cattle could be selectively bred to produce cattle that can survive high temperatures and have good meat quality.

(2)

Q4.(2021)

Figure 3 shows the leaf of a wheat plant with a fungal disease.



(Source: © Kazakov Maksim/Shutterstock)

Figure 3

Give **two** benefits of breeding wheat plants that are resistant to fungal disease.

(2)

Q5.a(2023)

Our human ancestors domesticated animals.

Animals were domesticated to use as working animals and to keep as pets.

(i) Use words from the box to complete the sentences.

(2)

asexual	characteristics	evidence
ideas	inherited	selective

Animals with the most desirable were bred together.

This is called breeding.

Q5.b(2023)

(ii) Scientists have analysed the genomes of domestic animals.

Which is the definition of a genome?

(1)

- ☐ A all the cells of an organism
- ☐ B all the enzymes of an organism
- ☐ C all the DNA of an organism
- ☐ D all the structures of an organism

Q5.c(2023)

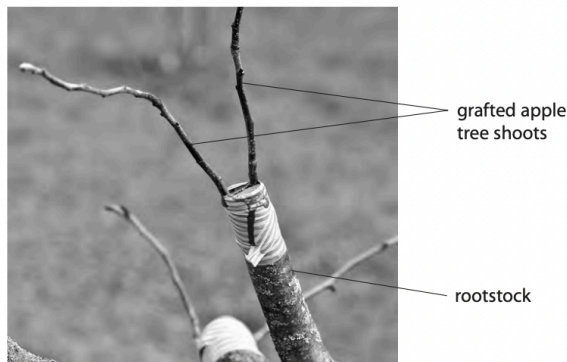
Give **one** advantage of domesticating animals.

(1)

Q6.(2023)

Grafting is a technique used to grow some varieties of apple tree.

Figure 9 shows apple tree shoots grafted on to a rootstock.



(Source: © ATTILA Barsan/Shutterstock)

Figure 9

Grafting can be used to produce apple trees that are genetically identical.

Give **one** advantage and **one** disadvantage of growing genetically identical apple trees.

(2)

advantage

disadvantage

Q7.(2024)

Scientists think that chickens were domesticated from red junglefowl thousands of years ago.

Figure 4 shows some information about these birds.

information	red junglefowl	domesticated chicken
photograph	 (Source: © Jamil Bin Mat Isa/Shutterstock)	 (Source: © Tsekhmister/Shutterstock)
mass of adult in kg	0.75 to 1.2	2.5 to 3.0
number of eggs laid per year	10 to 15	250 to 300

Figure 4

(a) Describe how selective breeding has produced chickens that lay large numbers of eggs.

(3)
