

## **CB 3.2**

### Reading Passage 1

#### **A Remarkable Beetle**

Some of the most remarkable beetles are the dung beetles, which spend almost their whole lives eating and breeding in dung'.

More than 4,000 species of these remarkable creatures have evolved and adapted to the world's different climates and the dung of its many animals. Australia's native dung beetles are scrub and woodland dwellers, specialising in coarse marsupial droppings and avoiding the soft cattle dung in which bush flies and buffalo flies breed.

In the early 1960s George Bornemissza, then a scientist at the Australian Government's premier research organisation, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), suggested that dung beetles should be introduced to Australia to control dung-breeding flies. Between 1968 and 1982, the CSIRO imported insects from about 50 different species of dung beetle, from Asia, Europe and Africa, aiming to match them to different climatic zones in Australia. Of the 26 species that are known to have become successfully integrated into the local environment, only one, an African species released in northern Australia, has reached its natural boundary.

Introducing dung beetles into a pasture is a simple process: approximately 1,500 beetles are released; a handful at a time, into fresh cow pats 2 in the cow pasture. The beetles immediately disappear beneath the pats digging and tunnelling and, if they successfully adapt to their new environment, soon become a permanent, self-sustaining part of the local ecology. In time they multiply and within three or four years the benefits to the pasture are obvious.

Dung beetles work from the inside of the pat so they are sheltered from predators such as birds and foxes. Most species burrow into the soil and bury dung in tunnels directly underneath the pats, which are hollowed out from within. Some large species originating from France excavate tunnels to a depth of approximately 30 cm below the dung pat. These beetles make sausage-shaped brood chambers along the tunnels. The shallowest tunnels belong to a much smaller Spanish species that buries dung in chambers that hang like fruit from the branches of a pear tree. South African beetles dig narrow tunnels of approximately 20 cm below the surface of the pat. Some surface-dwelling beetles, including a South African species, cut perfectly-shaped balls from the pat, which are rolled away and attached to the bases of plants.

For maximum dung burial in spring, summer and autumn, farmers require a variety of species with overlapping periods of activity. In the cooler environments of the state of Victoria, the large French species (2.5 cms long) is matched with smaller (half this size), temperate-climate Spanish species. The former are slow to recover from the winter cold and produce only one or two generations of offspring from late spring until autumn. The latter, which multiplies rapidly in early spring, produce two to five generations annually. The South African ball-rolling species, being a subtropical beetle, prefers the climate of northern and coastal New South Wales where it commonly works with the South African tunnelling species. In warmer climates, many species are active for longer periods of the year.

Dung beetles were initially introduced in the late 1960s with a view to controlling buffalo flies by removing the dung within a day or two and so preventing flies from breeding. However, other benefits have become evident. Once the beetle larvae have finished pupation, the residue is a first-rate source of fertiliser. The tunnels abandoned by the beetles provide excellent aeration and water channels for root systems. In addition, when the new generation of beetles has left the nest the abandoned burrows are an attractive habitat for soil-enriching earthworms. The digested dung in these burrows is an excellent food supply for the earthworms, which decompose it further to provide essential soil nutrients. If it were not for the dung beetle, chemical fertiliser and dung would be washed by rain into streams and rivers before it could be absorbed into the hard earth, polluting water courses and causing blooms of blue-green algae. Without the beetles to dispose of the dung, cow pats would litter pastures making grass inedible to cattle and depriving the soil of sunlight. Australia's 30 million cattle each produce 10-12 cow pats a day. This amounts to 1.7 billion tonnes a year, enough to smother about 110,000 sq km of pasture, half the area of Victoria.

Dung beetles have become an integral part of the successful management of dairy farms in Australia over the past few decades. A number of species are available from the CSIRO or through a small number of private breeders, most of whom were entomologists with the CSIRO's dung beetle unit who have taken their specialised knowledge of the insect and opened small businesses in direct competition with their former employer.

#### *Glossary*

1. dung:- the droppings or excreta of animals
2. cow pats:- droppings of cows

Questions 1-5

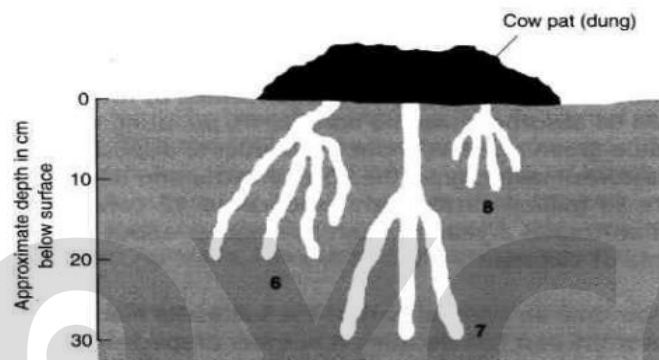
Do the following statements reflect the claims of the writer in Reading Passage 1? In boxes 1-5 on your answer sheet write:

- YES if the statement reflects the claims of the writer  
 NO if the statement contradicts the claims of the writer  
 NOT GIVEN if it is impossible to say what the writer thinks about this

1. Bush flies are easier to control than buffalo flies.
2. Four thousand species of dung beetle were initially brought to Australia by the CSIRO.
3. Dung beetles were brought to Australia by the CSIRO over a fourteen-year period.
4. At least twenty-six of the introduced species have become established in Australia.
5. The dung beetles cause an immediate improvement to the quality of a cow pasture.

Questions 6-8

Label the tunnels on the diagram below. Choose your labels from the box below the diagram. Write your answers in boxes 6-8 on your answer sheet.



- | Dung Beetle Types |                           |
|-------------------|---------------------------|
| French            | Spanish                   |
| Mediterranean     | South African             |
| Australian native | South African ball roller |

Question 9-13

Complete the table below.

Choose NO MORE THAN THREE WORDS OR A NUMBER from Reading Passage 1 for each answer.

Write your answers in boxes 9—13 on your answer sheet.

Species	Size	Preferred Climate	Complementary Species	Start of active period	Number of Generations per year
French	2.5 cm	Cool	Spanish	Late spring	1-2
Spanish	1.25 cm	9. _____		10. _____	11. _____
South African ball roller		12. _____	13. _____		

Reading Passage 2

Reading Passage 2 has six sections A-F.

Choose the most suitable headings for sections A-D and F from the list of headings below.

Example Paragraph	Answer
E	vi

- 14. Section A
- 15. Section B
- 16. Section C
- 17. Section D
- 18. Section F

List of Headings	
i.	The probable effects of the new international trade agreement
ii.	The environmental impact of modern farming
iii.	Farming and soil erosion
iv.	The effects of government policy in rich countries
v.	Governments and management of the environment
vi.	The effects of government policy in poor countries
vii.	Farming and food output
viii.	The effects of government policy on food output
ix.	The new prospects for world trade

**Section A**

The role of governments in environmental management is difficult but inescapable. Sometimes, the state tries to manage the resources it owns, and does so badly. Often, however, governments act in an even more harmful way. They actually subsidise the exploitation and consumption of natural resources. A whole range of policies, from farm price support to protection for coal-mining, do environmental damage and (often) make no economic sense. Scrapping them offers a two-fold bonus: a cleaner environment and a more efficient economy. Growth and environmentalism can actually go hand in hand if politicians have the courage to confront the vested interest that subsidies create.

**Section B**

No activity affects more of the earth's surface than farming. It shapes a third of the planet's land area, not counting Antarctica, and the proportion is rising. World food output per head has risen by 4 per cent between the 1970s and 1980s mainly as a result of increases in yields from land already in cultivation, but also because more land has been brought under the plough. Higher yields have been achieved by increased irrigation, better crop breeding, and a doubling in the use of pesticides and chemical fertilisers in the 1970s and 1980s.

**Section C**

All these activities may have damaging environmental impacts. For example, land clearing for agriculture is the largest single cause of deforestation; chemical fertilisers and pesticides may contaminate water supplies; more intensive farming and the abandonment of fallow periods tend to exacerbate soil erosion; and the spread of mono-culture and use of high-yielding varieties of crops have been accompanied by the disappearance of old varieties of food plants which might have provided some insurance against pests or diseases in future. Soil erosion threatens the productivity of land in both rich and poor countries. The United States, where the most careful measurements have been done, discovered in 1982 that about one-fifth of its farmland is losing topsoil at a rate likely to diminish the soil's productivity. The country subsequently embarked upon a program to convert 11 per cent of its cropped land to meadow or forest. Topsoil in India and China is vanishing much faster than in America.

**Section D**

Government policies have frequently compounded the environmental damage that farming can cause. In the rich countries, subsidies for growing crops and price supports for farm output drive up the price of land. The annual value of these subsidies is immense: about \$250 billion, or more than all World Bank lending in the 1980s. To increase the output of crops per acre, a farmer's easiest option is to use more of the most readily available inputs: fertilisers and pesticides. Fertiliser use doubled in Denmark in the period 1960-1985 and increased in The Netherlands by 150 per cent. The quantity of pesticides applied has risen too; by 69 per cent in 1975-1984 in Denmark, for example, with a rise of 115 per cent in the frequency of application in the three years from 1981.

In the late 1980s and early 1990s some efforts were made to reduce farm subsidies. The most dramatic example was that of New Zealand, which scrapped most farm support in 1984. A study of the environmental effects, conducted in 1993, found that the end of fertiliser subsidies had been followed by a fall in fertiliser use (a fall compounded by the decline in world commodity prices, which cut farm incomes). The removal of subsidies also stopped land-clearing and over-stocking, which in the past had been the principal causes of erosion. Farms began to diversify. The one kind of subsidy whose removal appeared to have been bad for the environment was the subsidy to manage soil erosion.

In less enlightened countries, and in the European Union, the trend has been to reduce rather than eliminate subsidies and to introduce new payments to encourage farmers to treat their land in environmentally friendlier ways, or to leave it fallow. It may sound strange but such payments need to be higher than the existing incentives for farmers to grow food crops. Farmers, however, dislike being paid to do nothing. In several countries, they have become interested in the possibility of using fuel produced from crop residues either as a replacement for petrol (as ethanol) or as fuel for

power stations (as biomass). Such fuels produce far less carbon dioxide than coal or oil, and absorb carbon dioxide as they grow. They are therefore less likely to contribute to the greenhouse effect. But they die rarely competitive with fossil fuels unless subsidised - and growing them does no less environmental harm than other crops.

**Section E**

In poor countries, governments aggravate other sorts of damage. Subsidies for pesticides and artificial fertilisers encourage farmers to use greater quantities than are needed to get the highest economic crop yield. A study by the International Rice Research Institute Of pesticide use by farmers in South East Asia found that, with pest-resistant varieties of rice, even moderate applications of pesticide frequently cost farmers more than they saved. Such waste puts farmers on a chemical treadmill: bugs and weeds become resistant to poisons, so next year's poisons must be more lethal. One cost is to human health, Every year some 10,000 people die from pesticide poisoning, almost all of them in the developing countries, and another 400,000 become seriously ill. As for artificial fertilisers, their use worldwide increased by 40 per cent per unit of farmed land between the mid-1970s and late 1980s, mostly in the developing countries. Overuse of fertilisers may cause farmers to stop rotating crops or leaving their land fallow. That, In turn, may make soil erosion worse.

**Section F**

A result of the Uruguay Round of world trade negotiations Is likely to be a reduction of 36 percent In the average levels of farm subsidies paid by the rich countries in 1986-1990. Some of the world's food production will move from Western Europe to regions where subsidies are lower or non-existent, such as the former communist countries and parts of the developing world. Some environmentalists worry about this outcome. It will be undoubtedly mean more pressure to convert natural habitat into farmland. But it will also have many desirable environmental effects. The intensity of farming in the rich world should decline, and the use of chemical inputs will diminish. Crops are more likely to be grown p the environments to which they are naturally suited. And more farmers in poor countries will have the money and the incentive to manage their land in ways that are sustainable in the long run. That is important. To feed an increasingly hungry world, farmers need every incentive to use their soil and water effectively and efficiently.

Questions 19-22

Complete the table below using the information in sections B and C of Reading Passage 2.

Choose your answers A-G from the box below the table and write them in boxes 19-22 on your answer sheet.

Agricultural Practice	Environmental Damage that may result
19. _____	Deforestation
20. _____	Degraded water supply
More intensive farming	21. _____
Expansion of monoculture	22. _____

- |  |
|--|
| <ul style="list-style-type: none"> <li>A. Abandonment of fallow period</li> <li>B. Disappearance of old plant varieties</li> <li>C. Increased use of chemical inputs</li> <li>D. Increased irrigation</li> <li>E. Insurance against pests and diseases</li> <li>F. Soil erosion</li> <li>G. Clearing land for cultivation</li> </ul> |
|--|

Questions 23-27

Choose the appropriate letters A-D and write them in boxes 23-27 on your answer sheet.

23. Research completed in 1982 found that in the United States soil erosion

- A. reduced the productivity of farmland by 20 per cent.
- B. was almost as severe as in India and China.
- C. was causing significant damage to 20 per cent of farmland.
- D. could be reduced by converting cultivated land to meadow or forest.

24. By the mid-1980s, farmers in Denmark

- A. used 50 per cent less fertiliser than Dutch farmers.
- B. used twice as much fertiliser as they had in 1960.
- C. appliedfertiliser much more frequently than in 1960.
- D. more than doubled the amount of pesticide they used in just 3 years.

25. Which one of the following increased in New Zealand after 1984?

- A. farm incomes
- B. use of fertiliser
- C. over-stocking
- D. farm diversification

26. The writer refers to some rich countries as being 'less enlightened' than New Zealand because

- A. they disapprove of paying farmers for not cultivating the land.
- B. their new fuel crops are as harmful as the ones they have replaced.
- C. their policies do not recognise the long-term benefit of ending subsidies.
- D. they have not encouraged their farmers to follow environmentally friendly practices.

27. The writer believes that the Uruguay Round agreements on trade will
- A. encourage more sustainable farming practices in the long term.
  - B. do more harm than good to the international environment.
  - C. increase pressure to cultivate land in the rich countries.
  - D. be more beneficial to rich than to poor countries.

### Reading Passage 3

You should spend about 20 minutes on Questions 28-40 which are based on Reading Passage 3 below.

#### **The History of Early Cinema**

The history of the cinema in its first thirty years is one of major and, to this day, unparalleled expansion and growth. Beginning as something unusual in a handful of big cities - New York, London, Paris and Berlin - the new medium quickly found its way across the world, attracting larger and larger audiences wherever it was shown and replacing other forms of entertainment as it did so. As audiences grew, so did the places where films were shown, finishing up with the 'great picture palaces' of the 1920s, which rivalled, and occasionally superseded, theatres and opera-houses in terms of opulence and splendour. Meanwhile, films themselves developed from being short 'attractions' only a couple of minutes long, to the full-length feature that has dominated the world's screens up to the present day.

Although French, German, American and British pioneers have all been credited with the invention of cinema, the British and the Germans played a relatively small role in its worldwide exploitation. It was above all the French, followed closely by the Americans, who were the most passionate exporters of the new invention, helping to start cinema in China, Japan, Latin America and Russia. In terms of artistic development it was again the French and the Americans who took the lead, though in the years before the First World War, Italy, Denmark and Russia also played a part.

In the end, it was the United States that was to become, and remain, the largest single market for films. By protecting their own market and pursuing a vigorous export policy, the Americans achieved a dominant position on the world market by the start of the First World War. The centre of film-making had moved westwards, to Hollywood, and it was films from these new Hollywood studios that flooded onto the world's film markets in the years after the First World War, and have done so ever since. Faced with total Hollywood domination, few film industries proved competitive. The Italian industry, which had pioneered the feature film with spectacular films like *Quo vadis?* (1913) and *Cabiria* (1914), almost collapsed. In Scandinavia, the Swedish cinema had a brief period of glory, notably with powerful epic films and comedies. Even the French cinema found itself in a difficult position. In Europe, only Germany proved industrially capable, while in the new Soviet Union and in Japan the development of the cinema took place in conditions of commercial isolation.

Hollywood took the lead artistically as well as industrially. Hollywood films appealed because they had better-constructed narratives, their special effects were more impressive, and the star system added a new dimension to screen acting. If Hollywood did not have enough of its own resources, it had a great deal of money to buy up artists and technical innovations from Europe to ensure its continued dominance over present or future competition.

The zest of the world survived partly by learning from Hollywood and partly because audiences continued to exist for a product which corresponded to needs which Hollywood could not supply. As well as popular audiences, there were also increasing audiences for films which were artistically more adventurous or which dealt with the issues in the outer world.

None of this would have happened without technology, and cinema is in fact unique as an art form. In the early years, this art form was quite primitive, similar to the original French idea of using a lantern and slides back in the seventeenth century. Early cinema programmes were a mixture of items, combining comic sketches, free-standing narratives, serial episodes and the occasional trick or animated film. With the arrival of the feature length narrative as the main attraction, other types of films became less important. The making of cartoons became a separate branch of film-making, generally practised outside the major studios, and the same was true of serials. Together with newsreels, they tended to be shown as short items in a programme which led to the feature.

From early cinema, it was only Americana slapstick comedy that successfully developed in both short and feature format. However, during this 'Silent Film' era, animation, comedy, serials and dramatic features continued to thrive, along with factual films or documentaries, which acquired an increasing distinctiveness as the period progressed. It was also at this time that the avant-garde film first achieved commercial success, this time thanks almost exclusively to the French and the occasional German film.

Of the countries which developed and maintained distinctive national cinemas in the silent period, the most important were France, Germany and the Soviet Union. Of these, the French displayed the most continuity, in spite of the war and post-war economic uncertainties. The German cinema, relatively insignificant in the pre-war years, exploded on to the world scene after 1919. Yet even they were both overshadowed by the Soviets after the 1917 Revolution. They

turned their back on the past, leaving the style of the pre-war Russian cinema to the emigres who fled westwards to escape the Revolution.

The other countries whose cinemas changed dramatically are: Britain, which had an interesting but undistinguished history in the silent period; Italy, which had a brief moment of international fame just before the war; the Scandinavian countries, particularly Denmark, which played a role in the development of silent cinema quite out of proportion to their small population; and Japan, where a cinema developed based primarily on traditional theatrical and, to a lesser extent, other art forms and only gradually adapted to western influence.

Read the text and answer Questions 28-40.

Questions 28-30

Which THREE possible reasons for American dominance of the film industry are given in the text 'The history of cinema'?

Write answers A-F in boxes 28-30 on your answer sheet.

- A. plenty of capital to purchase what it didn't have
- B. making films dealing with serious issues
- C. being first to produce a feature film
- D. well-written narratives
- E. the effect of the First World War
- F. excellent special effects

Questions 31-33

Answer the questions below using NO MORE THAN THREE WORDS from the above reading passage for each answer.

Write your answers in boxes 31-33 on your answer sheet.

- 31. Which TWO types of film were not generally made in major studios?
- 32. Which type of film did America develop in both short and feature films?
- 33. Which type of film started to become profitable in the 'silent' period?

Questions 34 - 40

Look at the following statements (Questions 34-40) and the list of countries below.

Match each statement with the correct country.

Write the correct letter A-J in boxes 34-40 on your answer sheet.

NB: You may use any letter more than once.

- 34. It helped other countries develop their own film industry.
- 35. It was the biggest producer of films.
- 36. It was first to develop the 'feature' film.
- 37. It was responsible for creating stars.
- 38. It made the most money from 'avant-garde' films.
- 39. It made movies based more on its own culture than outside influences.
- 40. It had a great influence on silent movies, despite its size.

List of countries

- |            |                 |
|------------|-----------------|
| A. France  | F. Japan        |
| B. Germany | G. Soviet Union |
| C. USA     | H. Italy        |
| D. Denmark | I. Britain      |
| E. Sweden  | J. China        |

**Answers – CB 3.2**

1. NOT GIVEN
2. NO
3. YES
4. YES
5. NO
6. South African
7. French
8. Spanish
9. temperate
10. early spring
11. two to five / 2-5
12. sub-tropical
13. South African tunneling/tunneling
14. v
15. vii
16. ii
17. iv
18. i
19. G
20. C
21. F
22. B
23. C
24. B
25. D
26. C
27. A
- 28 – 30. A, D, F (IN EITHER ORDER)
31. cartoons, serials
32. slapstick// slapstick comedy // comedy
33. (the) avant(-)garde (film(s))
34. A
35. C
36. H
37. C
38. A
39. F
40. D

