Texas Cattle Movement Survey

2015

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Introduction

At the national scale there were 51 experts from 19 states and territories participating in the Cattle Movement Survey including Alaska, California, Colorado, Iowa, Idaho, Minnesota, Mississippi, Montana, North Carolina, Nebraska, Nevada, New York, Oklahoma, Pennsylvania, Tennessee, Texas, US Virgin Islands, Virginia and Wisconsin. At the final stage of the survey, there were 8 experts from Texas participating. In general, the estimate for interstate shipments was lower in Texas than estimates at the Plains regional and national level. The estimated median number of shipments overall (questions 7–10c & 12–13c) in the beef section was 15 interstate shipments out of every 100 shipments. One question that had a large range of estimates at the state, regional and national levels asked for the number of interstate shipments moving to graze on public land (question 11). This type of movement may be less well understood by respondents than other movements included in the survey. For this reason, this question was left out of the overall beef shipment estimate. The estimated median number of shipments overall (questions 15–21) in the dairy section was also 15 interstate shipments out of every 100 shipments.

The national, Plains regional and Texas level results for each survey question are presented below and in Appendix I. For each question the national, regional, and state results are presented in separate color-coded box plots. On the national box plot the state specific median is shown as a red X for comparison. Additionally, the median and weighted mean are presented for each question in the survey. Explanations of the box plots (Figure 1) and weighted means can be found below. The first question reported in the results is question 6 because the the first 5 questions dealt with participant information.
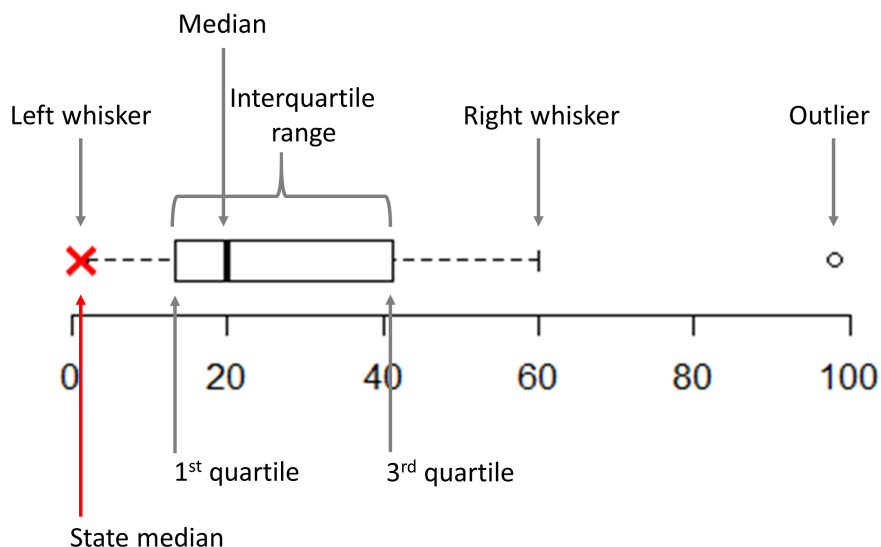
Figure 1: **Example box plot.** The box plots in this report are on a scale from 0 to 100. The national box plots are black, the Plains plots are in orange and the state plots are in red. The center bar of the box represents the median and the edges of the box show the 1st and 3rd quartiles. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are considered outliers and are shown on the plots as open circles. Box plots without whiskers do not have points that extend beyond the 1st and or 3rd quartiles. The red X on the national plots corresponds to the state median.

Weighted means: The national and regional means presented in this report have been weighted, meaning that some data points contribute more than others to the overall mean. This was done to allow data points from states with larger cattle populations to have greater weight. Specifically, states were weighted by the beef and dairy cattle inventory data from the 2015 National Agricultural Statistics Service annual report.

Acknowledgements

We extend a particular thank you to the experts who participated in this survey. Without the support of the 51 experts who participated this survey would not have been a success.
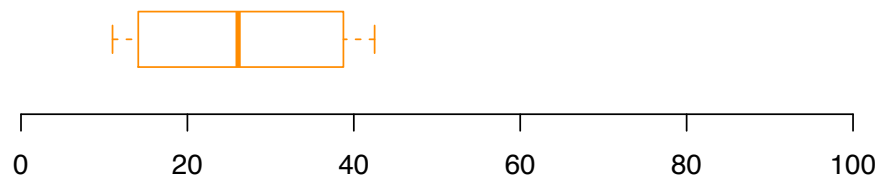
Beef Shipments

6. Consider 100 farms or ranches that have beef cattle. How many of these farms will routinely send cattle out of the state?
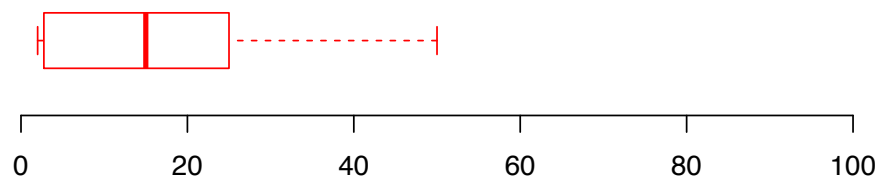
National, Median: 44.58; Weighted mean: 42.21
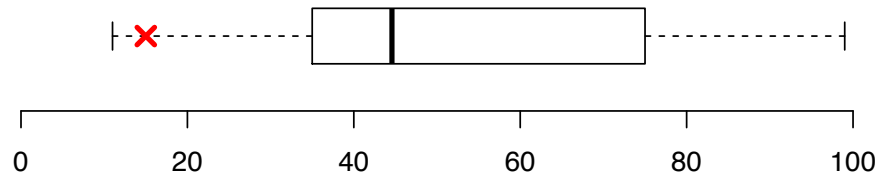
Plains, Median: 26.09; Weighted mean: 21.71
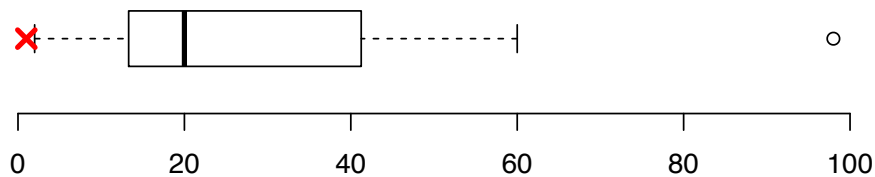

Texas, Median: 15; Weighted mean: 17.19

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

7. Consider 100 shipments of beef cattle and calves originating from operations that have herds of the following sizes. For each of the following, out of 100 shipments, how many will leave the state?
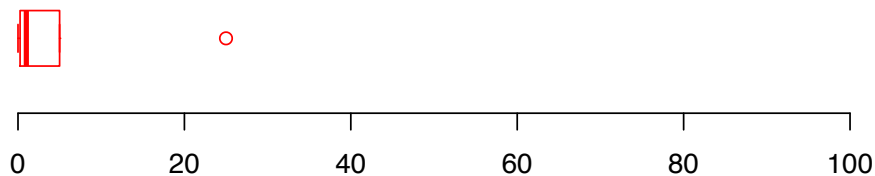
(a) Herds with 1-49 head

National, Median: 20; Weighted mean: 26.67
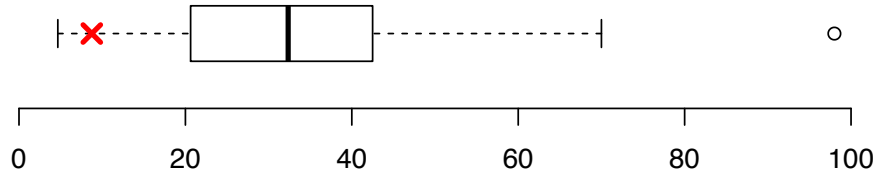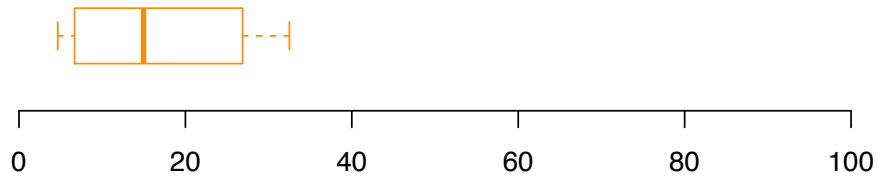

Plains, Median: 10.47; Weighted mean: 10.34
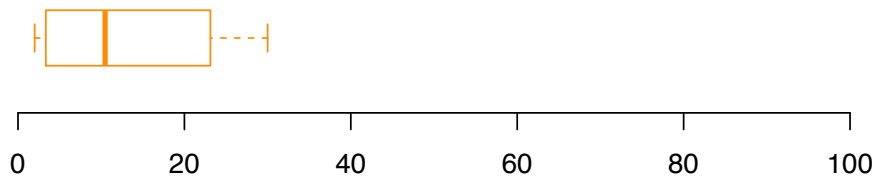
Texas, Median: 1; Weighted mean: 4.69

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
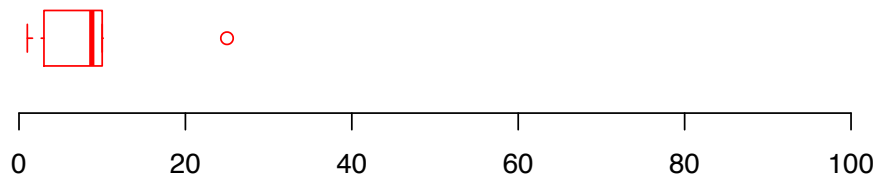
(b) Herds with 50-99 head

National, Median: 32.35; Weighted mean: 29.65

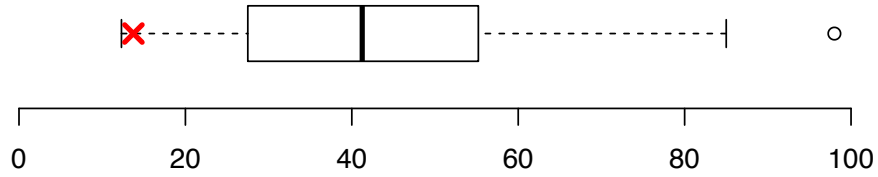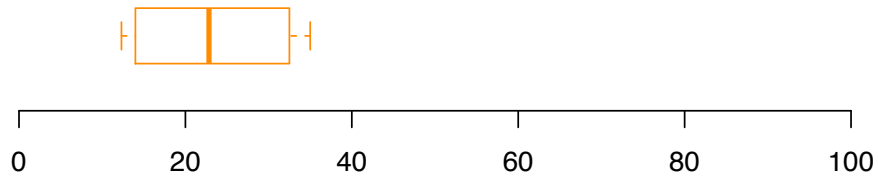**Plains**, Median: 14.97; Weighted mean: 13.83

Texas, Median: 8.75; Weighted mean: 8.69

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
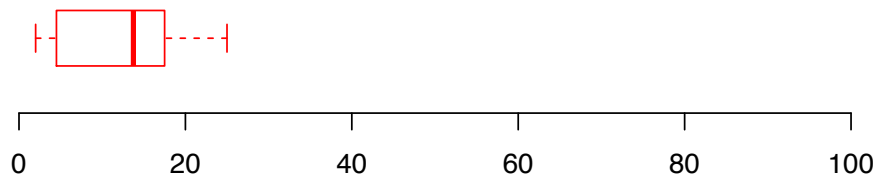
(c) Herds with 100-199 head

National, Median: 41.25; Weighted mean: 36.65

Plains, Median: 22.83; Weighted mean: 19.29

Texas, Median: 13.75; Weighted mean: 12.31

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
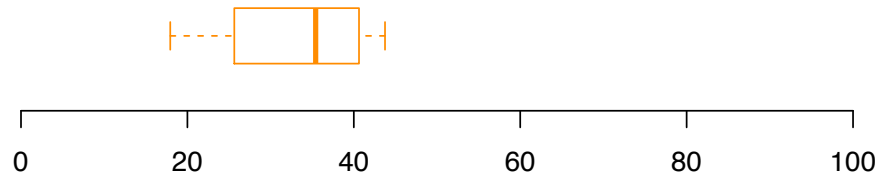
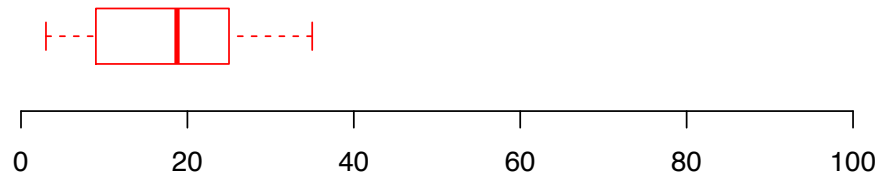(d) Herds with 200 or more head

National, Median: 48.75; Weighted mean: 45.19
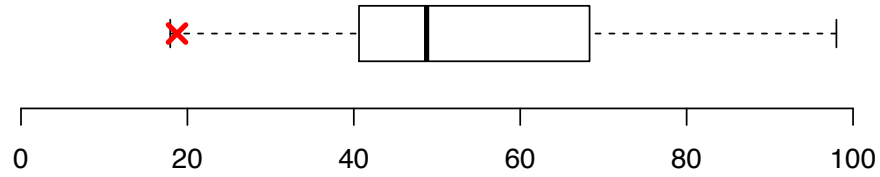
Plains, Median: 35.42; Weighted mean: 27.63

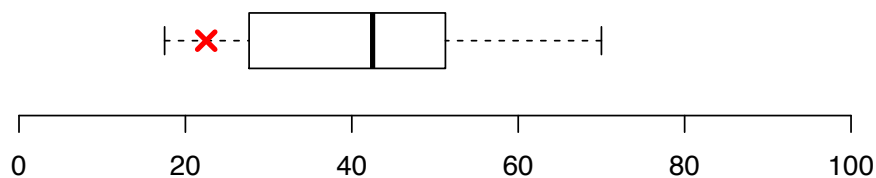**Texas**, Median: 18.75; Weighted mean: 17.94

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
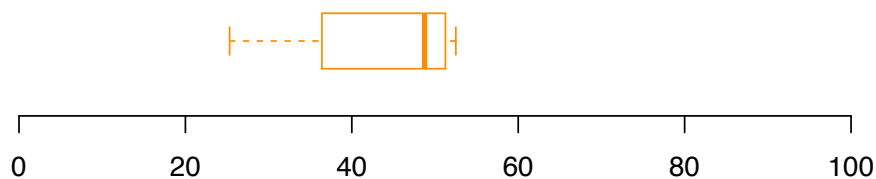
8. Consider 100 shipments of beef cattle and calves originating at the following types of operations. For each of the following, out of 100 shipments, out of 100 shipments, how many will leave the state?
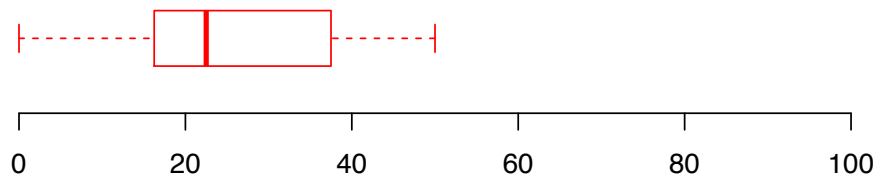
(a) Seedstock operation

National, Median: 42.5; Weighted mean: 41.33

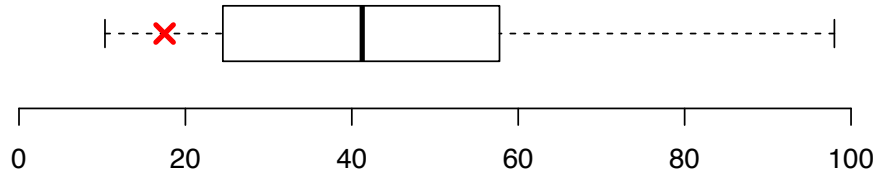**Plains**, Median: 48.75; Weighted mean: 37.71
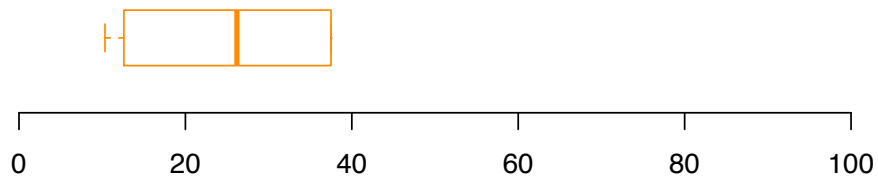
Texas, Median: 22.5; Weighted mean: 25.31

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
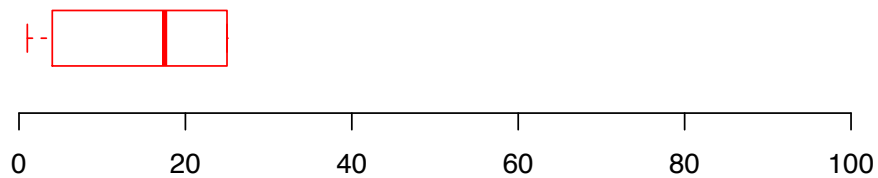
(b) Cow-calf operation

National, Median: 41.25; Weighted mean: 39.19

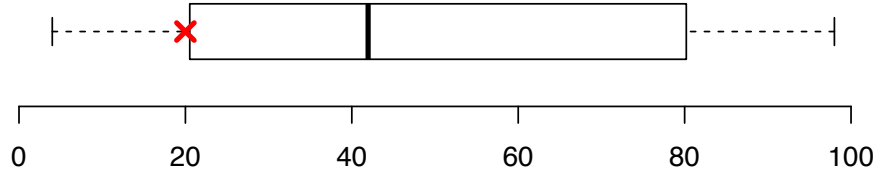**Plains**, Median: 26.19; Weighted mean: 20.52

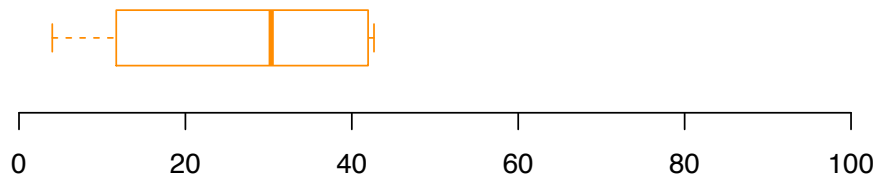**Texas**, Median: 17.5; Weighted mean: 14.88

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
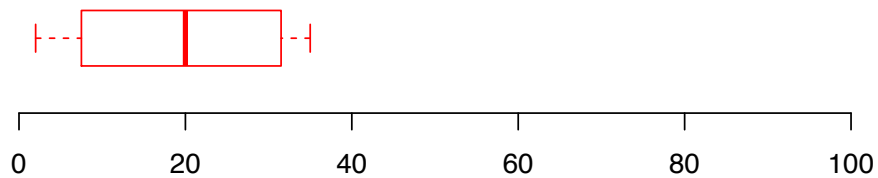
(c) Backgrounder operation

National, Median: 41.96; Weighted mean: 41.1

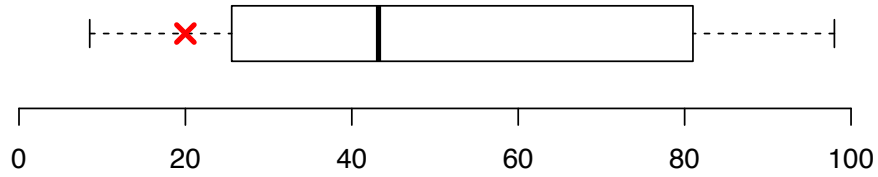**Plains**, Median: 30.31; Weighted mean: 23.22

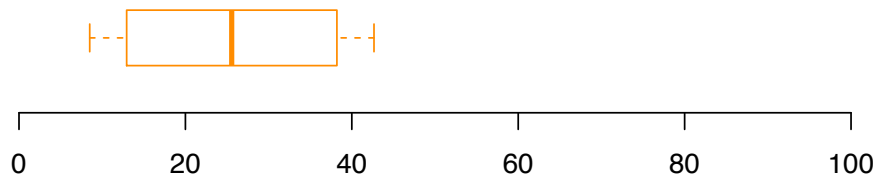**Texas**, Median: 20; Weighted mean: 19.38

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
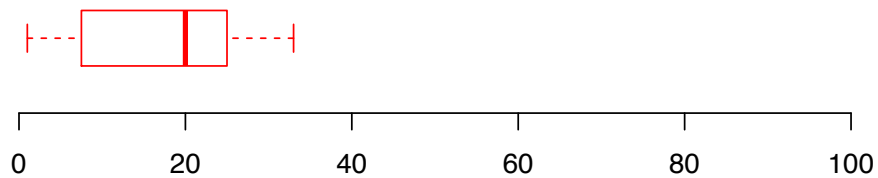
(d) Stocker operation

National, Median: 43.21; Weighted mean: 41.11

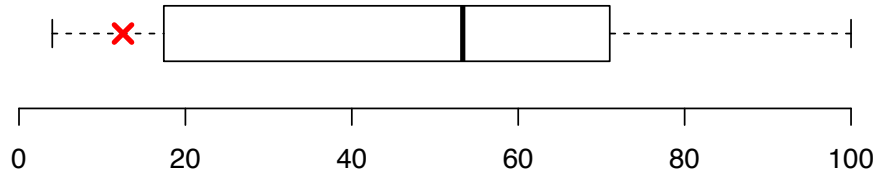**Plains**, Median: 25.56; Weighted mean: 22.53

Texas, Median: 20; Weighted mean: 17.38

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(e) Feedlot

National, Median: 53.33; Weighted mean: 40.17

Plains, Median: 22.41; Weighted mean: 24.21

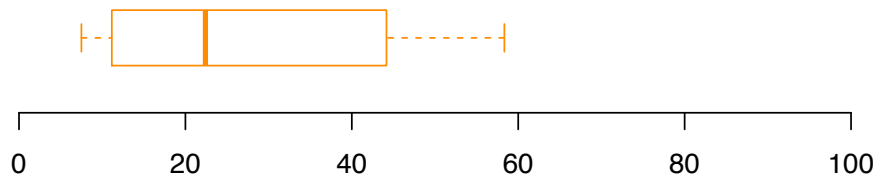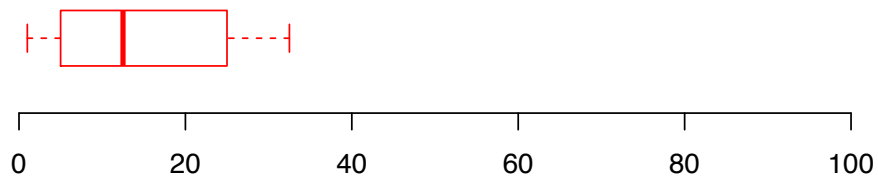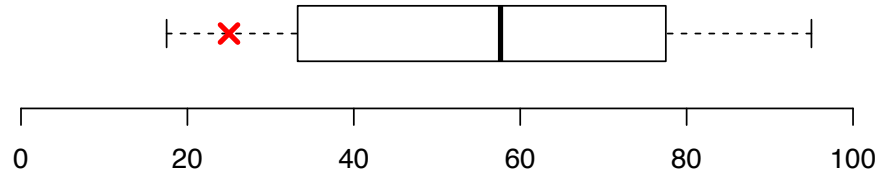**Texas**, Median: 12.5; Weighted mean: 14.81

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(f) Market or Salebarn

National, Median: 57.63; Weighted mean: 46.33

Plains, Median: 33.25; Weighted mean: 28.22

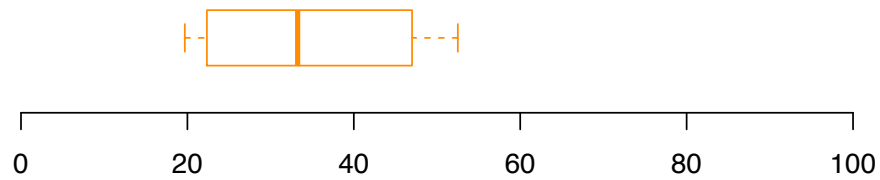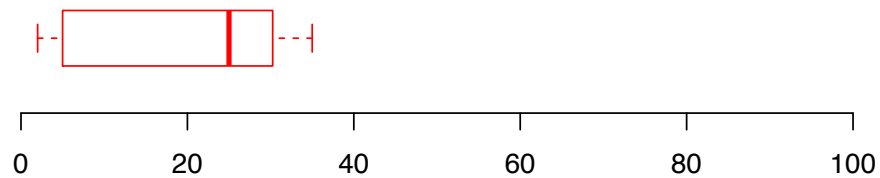**Texas**, Median: 25; Weighted mean: 19.69

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

9. Consider 100 shipments of beef cattle and calves from anywhere in your state traveling to the following types of operations. For each of the following, out of 100 shipments, how many will leave the state?

(a) Feedlot

National, Median: 52.17; Weighted mean: 42.49

Plains, Median: 27.42; Weighted mean: 20.94
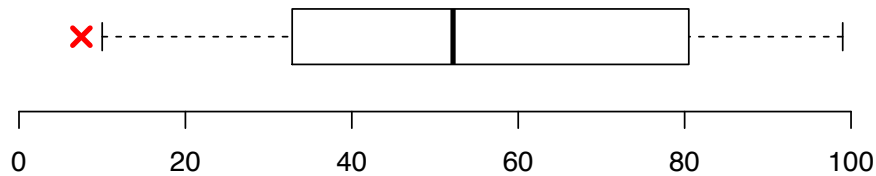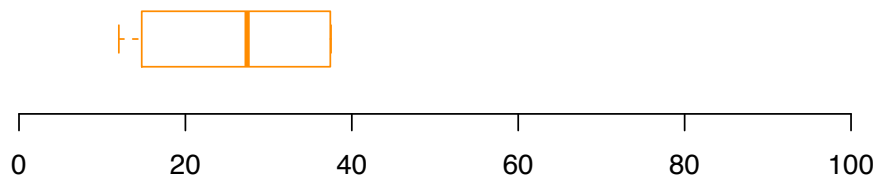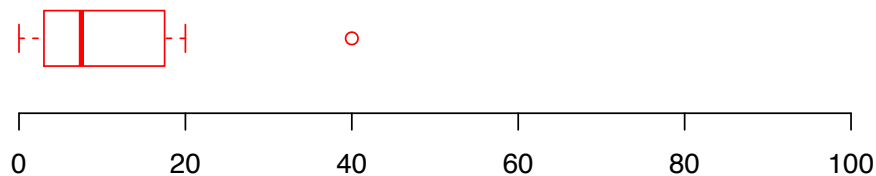

Texas, Median: 7.5; Weighted mean: 12

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(b) Market or Salebarn

National, Median: 25.5; Weighted mean: 28.65

Plains, Median: 22.35; Weighted mean: 26.47

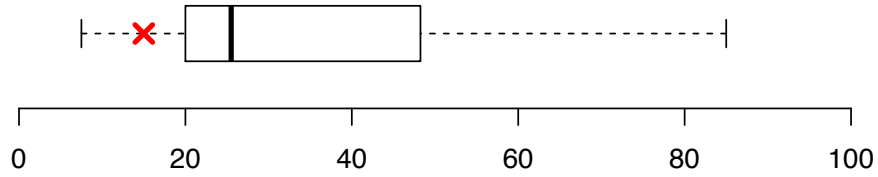**Texas**, Median: 15; Weighted mean: 21.38

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
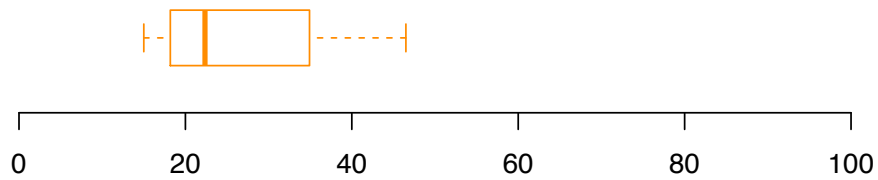
(c) Another beef operation
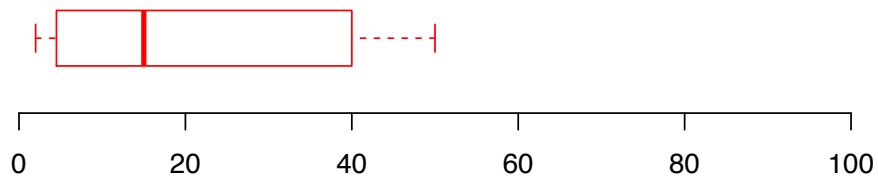
National, Median: 18.42; Weighted mean: 19.37

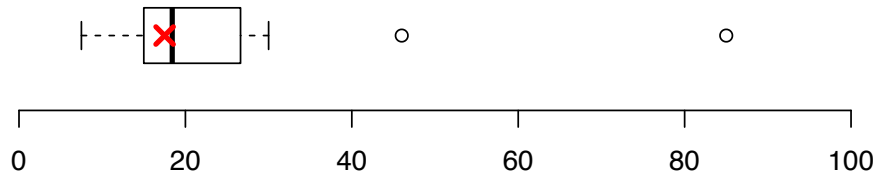**Plains**, Median: 15.56; Weighted mean: 15.58

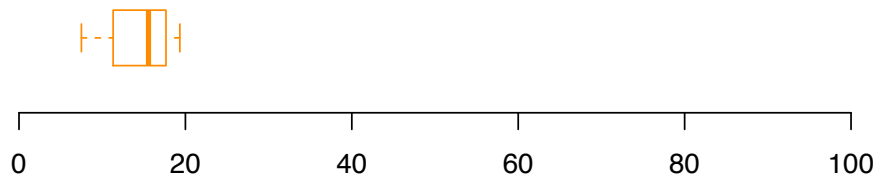**Texas**, Median: 17.5; Weighted mean: 15.12

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
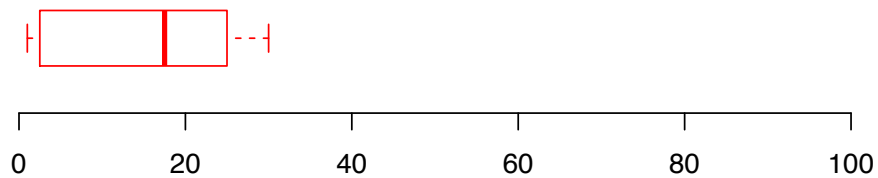
(d) Another beef operation for breeding purposes

National, Median: 18.25; Weighted mean: 18.53
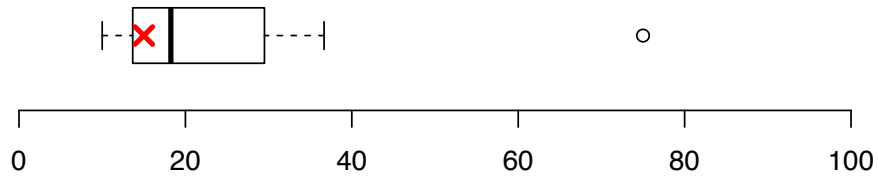

Plains, Median: 12.83; Weighted mean: 13.5
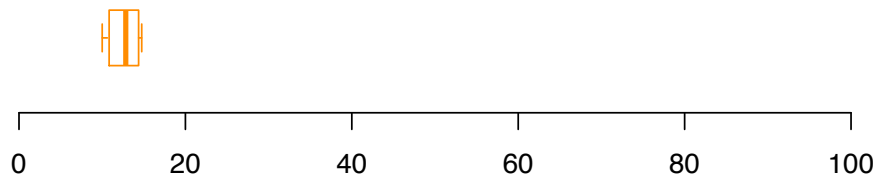

Texas, Median: 15; Weighted mean: 14.75

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

10. Consider 100 shipments of weaned calves from anywhere in your state that are moving to the following destinations. For each of the following, out of 100 shipments, how many will leave the state?

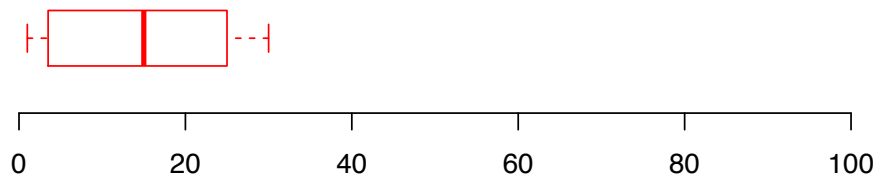   (a) Backgrounder operation

   National, Median: 32.5; Weighted mean: 30.82

   Plains, Median: 12.91; Weighted mean: 14.97

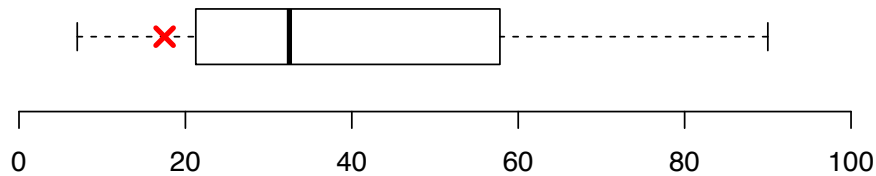   **Texas**, Median: 17.5; Weighted mean: 15.81
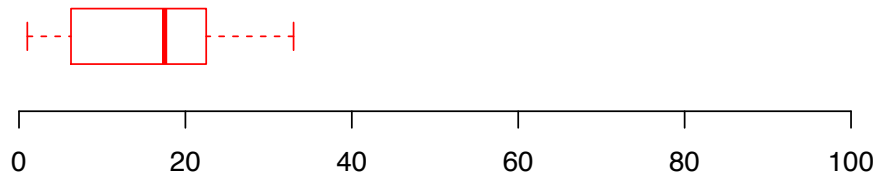
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
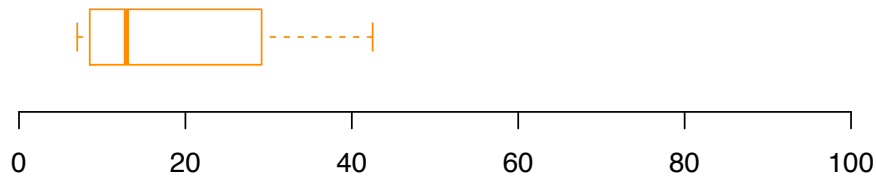
(b) Stocker operation

National, Median: 40.5; Weighted mean: 31.61

Plains, Median: 19.42; Weighted mean: 18.77

Texas, Median: 15; Weighted mean: 15.5
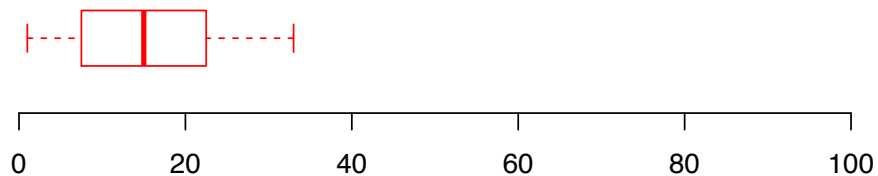
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(c) Feedlot

National, Median: 56.17; Weighted mean: 43.85

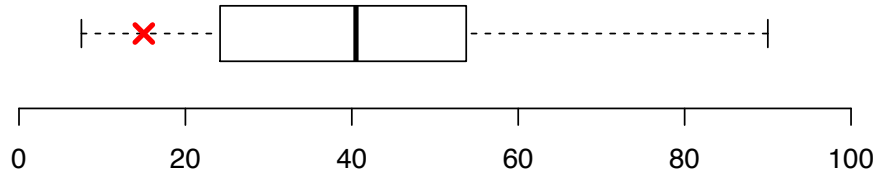**Plains**, Median: 26.25; Weighted mean: 22.79
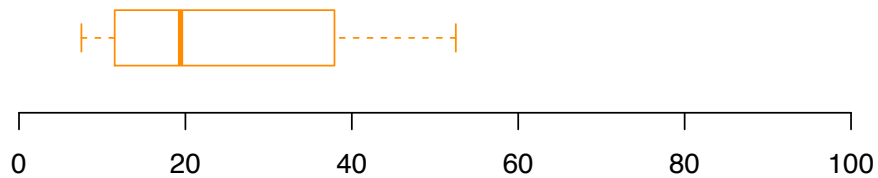

Texas, Median: 17.5; Weighted mean: 16.38
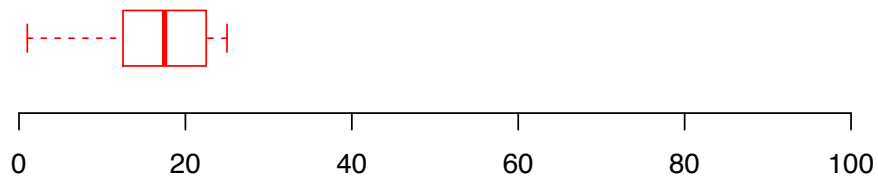
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

11. Consider 100 shipments of beef cattle and calves from anywhere in your state that are moving to graze on public lands. Of these 100 shipments, how many will leave the state?

National, Median: 30; Weighted mean: 37.79

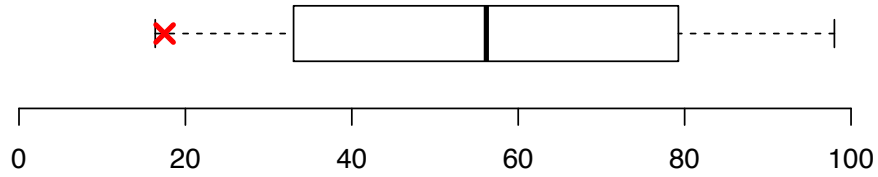**Plains**, Median: 34; Weighted mean: 37.75

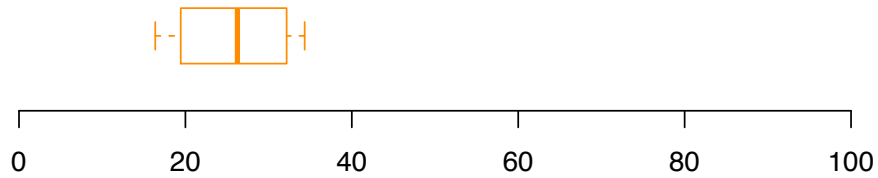**Texas**, Median: 37.5; Weighted mean: 49.5

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

12. Consider 100 shipments of beef cattle of the following types originating at a market. For each of the following, out of 100 shipments, how many will leave the state?

  (a) steers

National, Median: 58.75; Weighted mean: 42.85
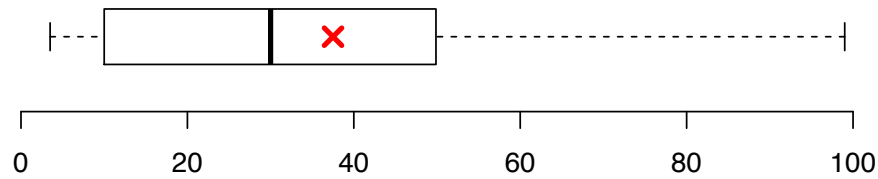

Plains, Median: 27.08; Weighted mean: 20.54

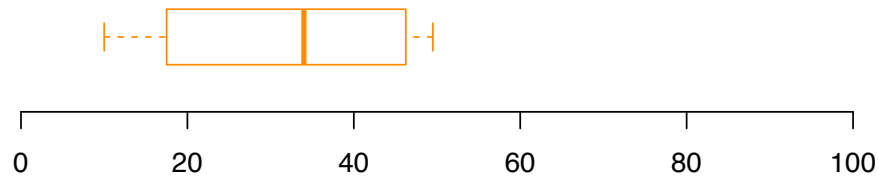**Texas**, Median: 10; Weighted mean: 11.06

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
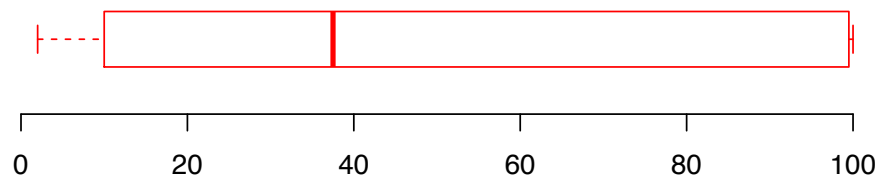
(b) bulls

National, Median: 38.17; Weighted mean: 35.14

Plains, Median: 40.83; Weighted mean: 24.97
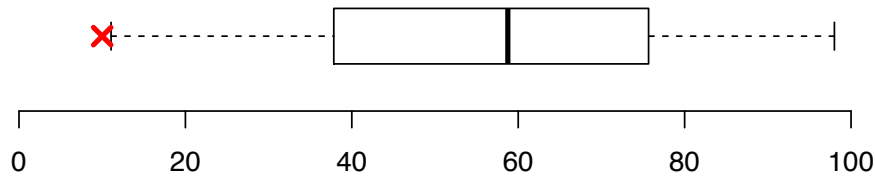

Texas, Median: 3.75; Weighted mean: 6.19

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
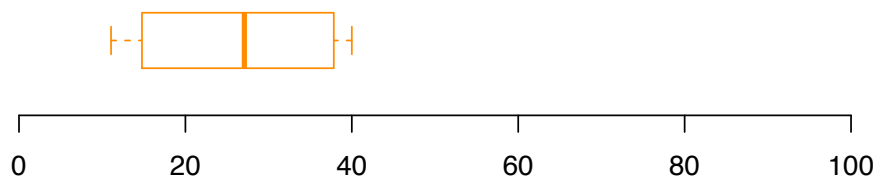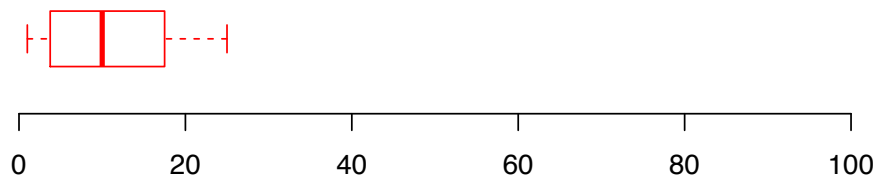
(c) cows

National, Median: 34.5; Weighted mean: 35.61
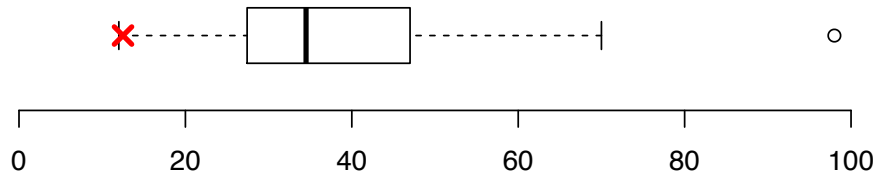
Plains, Median: 33.83; Weighted mean: 23.33
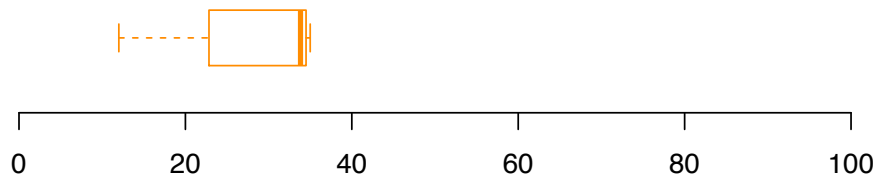
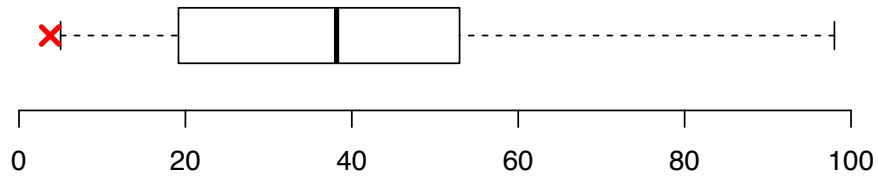

Texas, Median: 12.5; Weighted mean: 12
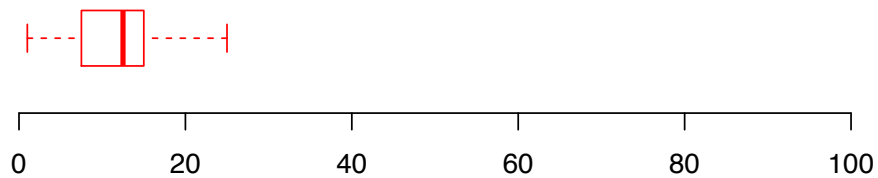
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(d) heifers

National, Median: 43.9; Weighted mean: 35.24
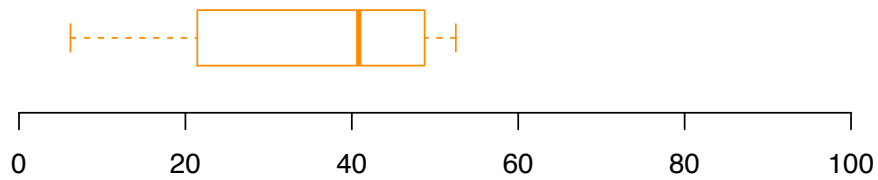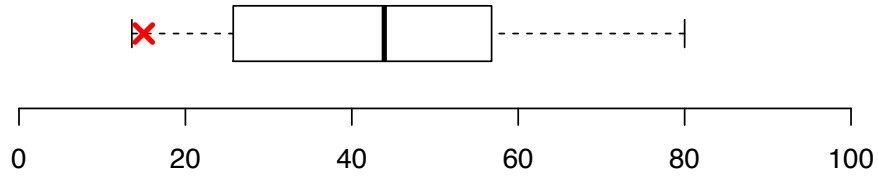

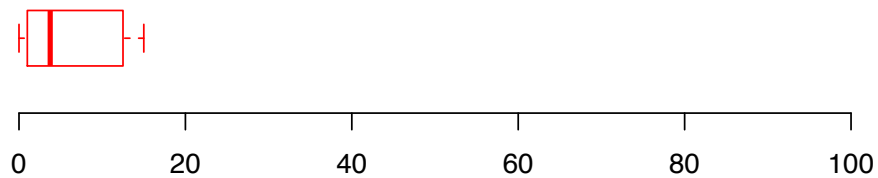**Plains**, Median: 20.42; Weighted mean: 18.82

Texas, Median: 15; Weighted mean: 13.56

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

13. Consider 100 shipments of beef cattle originating from the following locations traveling directly to slaughter. For each of the following, out of 100 shipments, how many will leave the state?

(a) Anywhere in the state

National, Median: 55; Weighted mean: 42.53

Plains, Median: 17.62; Weighted mean: 23.28
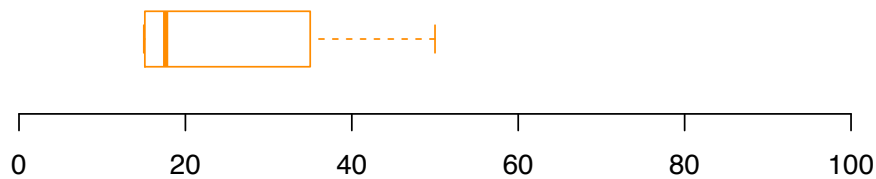
Texas, Median: 14.75; Weighted mean: 15.25

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(b) Cow-Calf operations

National, Median: 51.33; Weighted mean: 44.8

Plains, Median: 35.08; Weighted mean: 29.33

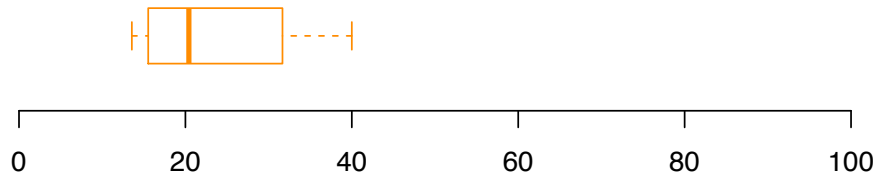**Texas**, Median: 12.5; Weighted mean: 12.81
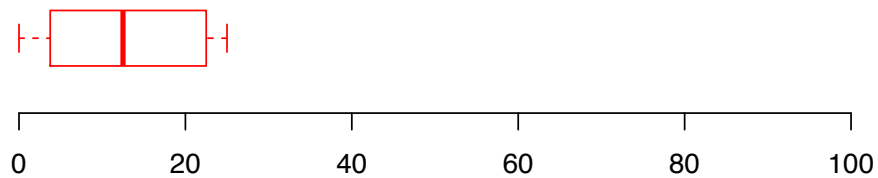
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(c) Feedlot
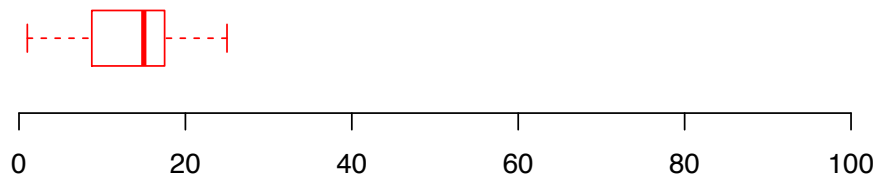
National, Median: 55; Weighted mean: 42.69

Plains, Median: 13.75; Weighted mean: 22.59

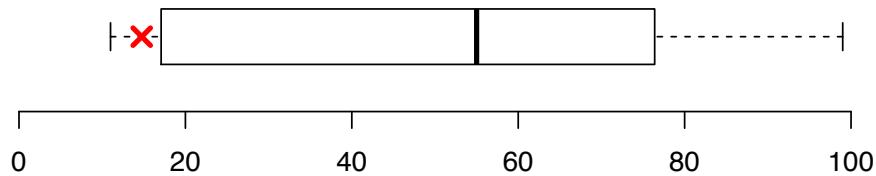**Texas**, Median: 7.5; Weighted mean: 11.25

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

Dairy Shipments

14. Consider 100 farms that have dairy cattle. How many of these farms will routinely send cattle out of state?
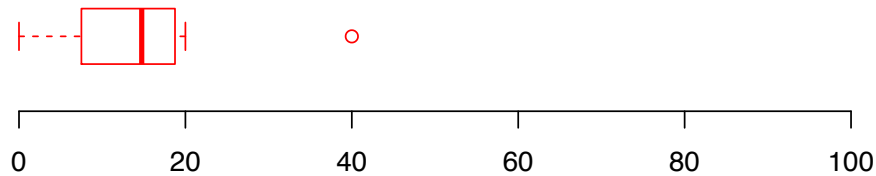
National, Median: 35.75; Weighted mean: 21.8
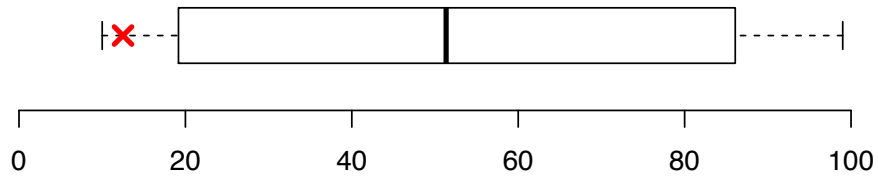

Plains, Median: 52.5; Weighted mean: 30
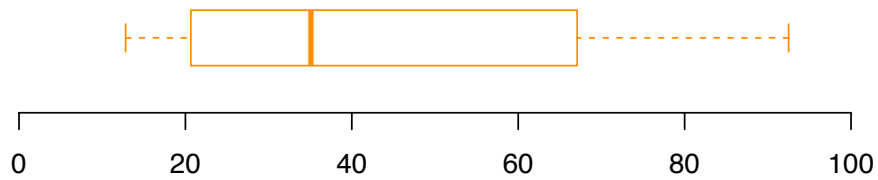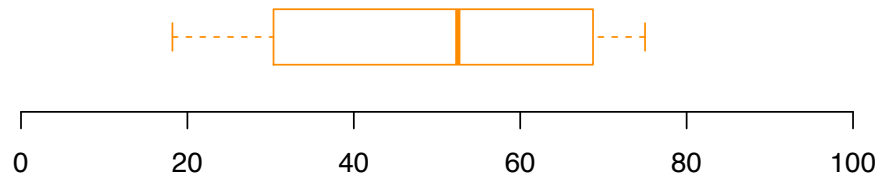

Texas, Median: 20; Weighted mean: 18.2
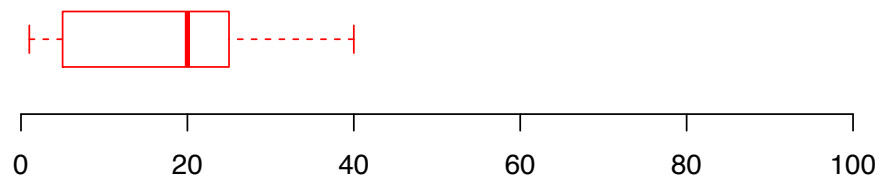
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

15. Consider 100 shipments of dairy cattle and calves originating from operations that have herds of the following sizes. For each of the following, out of 100 shipments, how many will leave the state?

(a) Herds with 1-99 head

National, Median: 14.38; Weighted mean: 12.98

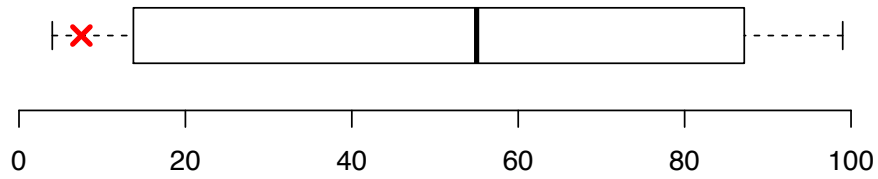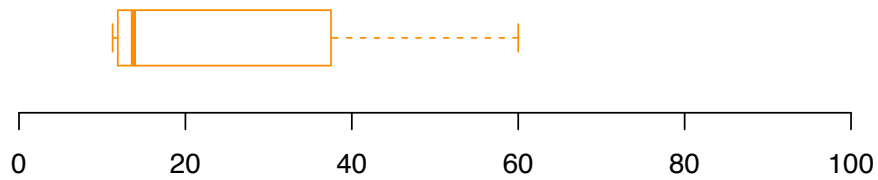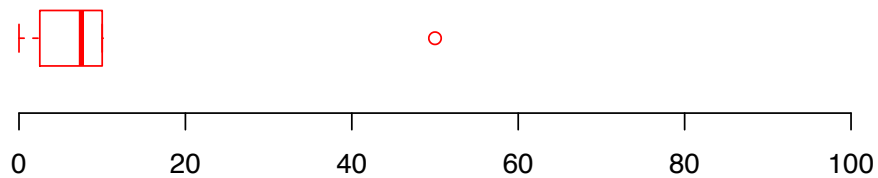**Plains**, Median: 22.75; Weighted mean: 18.49
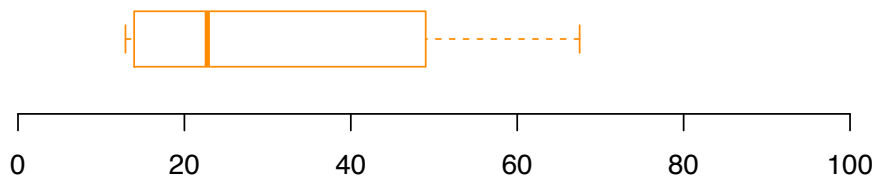
Texas, Median: 8.75; Weighted mean: 12.92
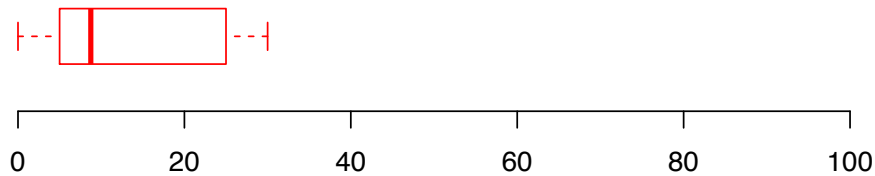
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
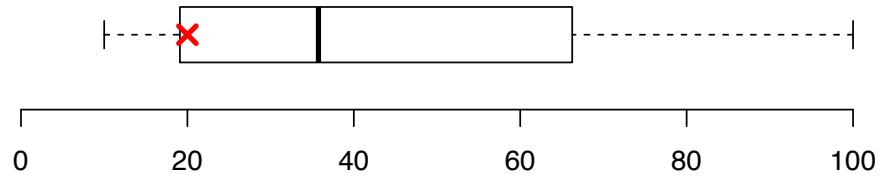
(b) Herds with 100-499 head

National, Median: 27.5; Weighted mean: 23.99

Plains, Median: 43.25; Weighted mean: 24.27

Texas, Median: 15; Weighted mean: 15.33

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(c) Herds with 500 or more head

National, Median: 42.5; Weighted mean: 25.74

Plains, Median: 61.25; Weighted mean: 36.41

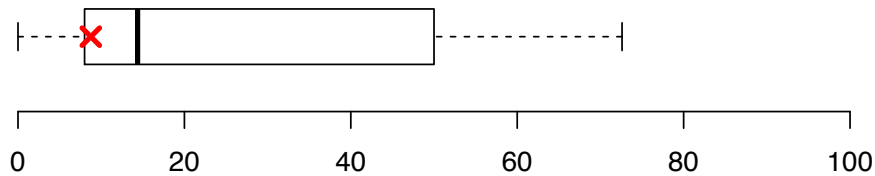**Texas**, Median: 25; Weighted mean: 25.2

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

16. Consider 100 shipments of dairy cattle and calves originating at the following types of operations. For each of the following, how many will leave the state?

(a) Feedlot or grazing operation

National, Median: 38.33; Weighted mean: 23.39
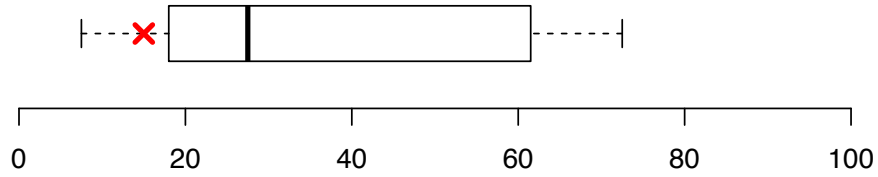

Plains, Median: 25; Weighted mean: 25.15

Texas, Median: 20; Weighted mean: 20

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(b) Market or Salebarn

National, Median: 47.5; Weighted mean: 28.21

Plains, Median: 48.75; Weighted mean: 27.36
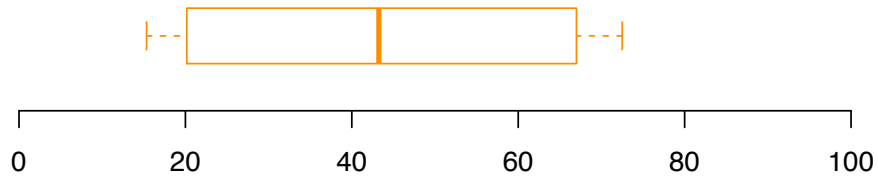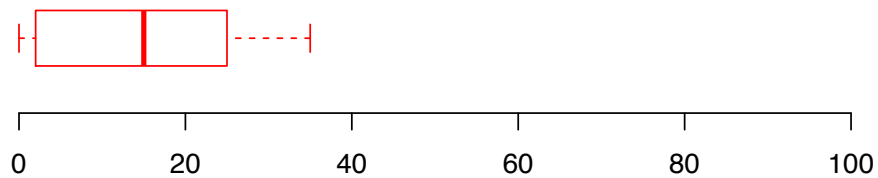

Texas, Median: 15; Weighted mean: 15.17

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(c) Heifer-raising facility (e.g. calf-ranch, calf-nursery, heifer-raiser, etc)

National, Median: 30; Weighted mean: 22.1
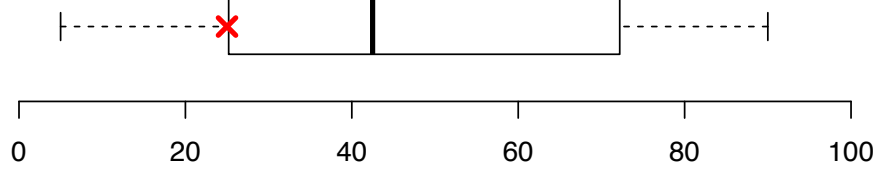

Plains, Median: 32.5; Weighted mean: 24.24
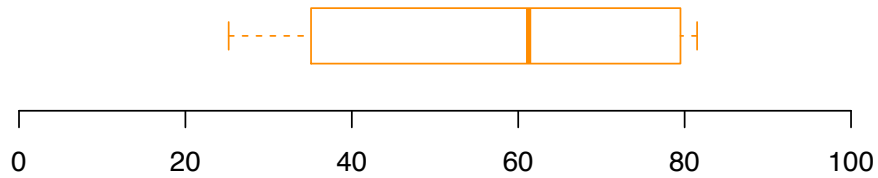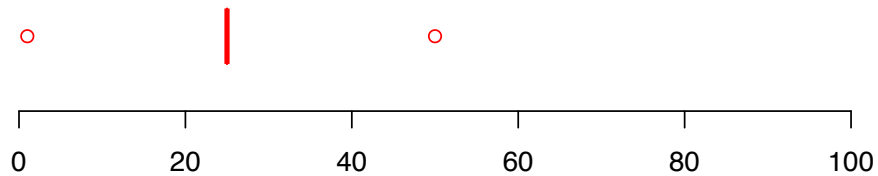

Texas, Median: 15; Weighted mean: 17

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

17. Consider 100 shipments of dairy cattle and calves from anywhere in your state traveling to the following destinations. For each of the following, out of 100 shipments, how many will leave the state?

   (a) Feedlot or grazing operation

   National, Median: 43; Weighted mean: 25.9

   Plains, Median: 18.75; Weighted mean: 14.56
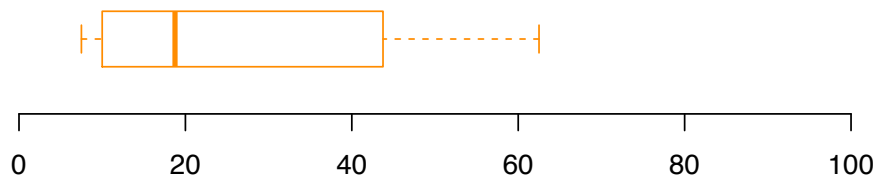
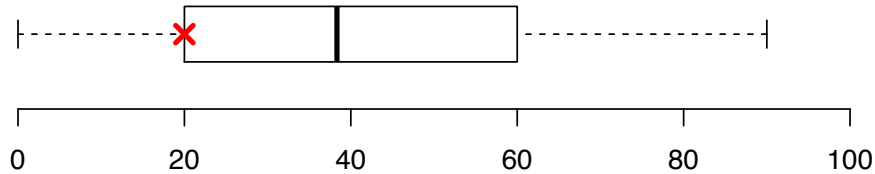   **Texas**, Median: 10; Weighted mean: 7.5
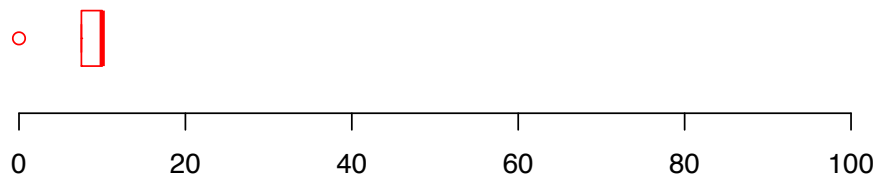
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
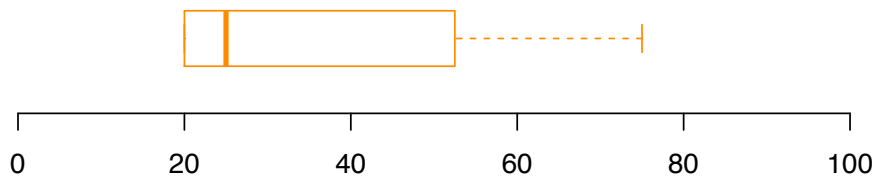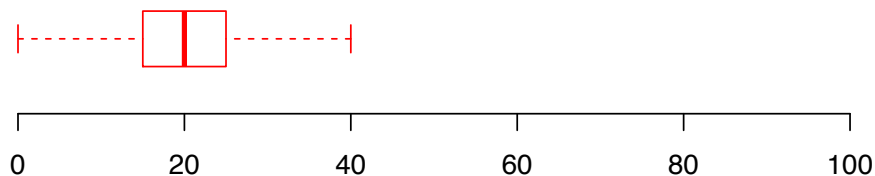
(b) Market or salebarn

National, Median: 27.62; Weighted mean: 16.22

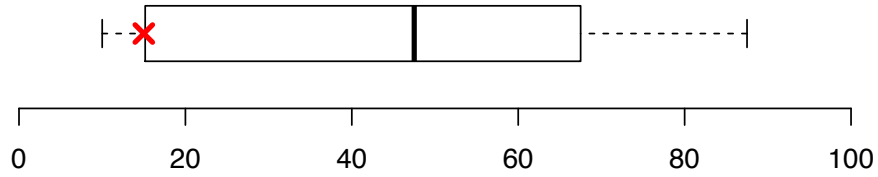**Plains**, Median: 37.5; Weighted mean: 19
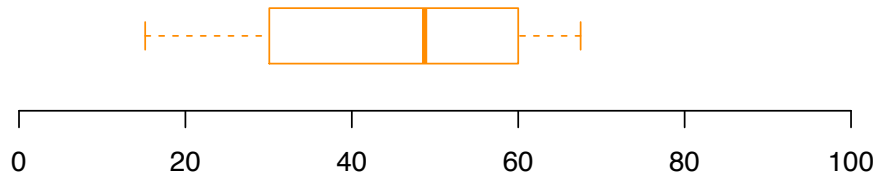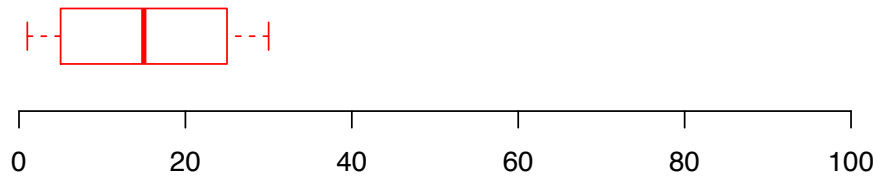

Texas, Median: 10; Weighted mean: 11.2
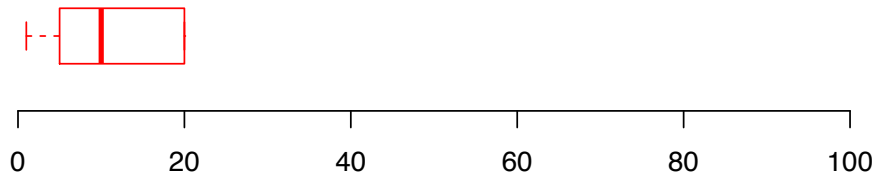
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(c) Slaughter

National, Median: 65.75; Weighted mean: 33.31

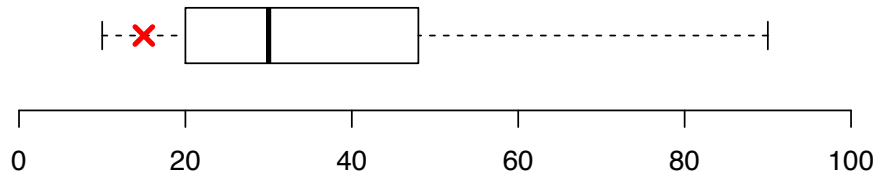**Plains**, Median: 61.25; Weighted mean: 36.06
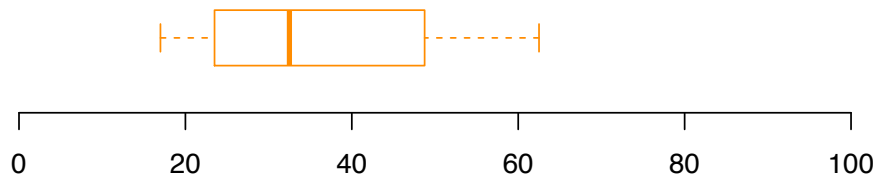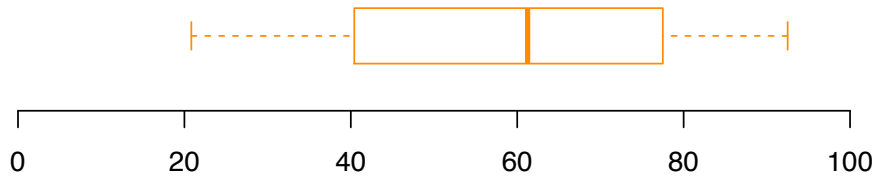
Texas, Median: 15; Weighted mean: 20.83
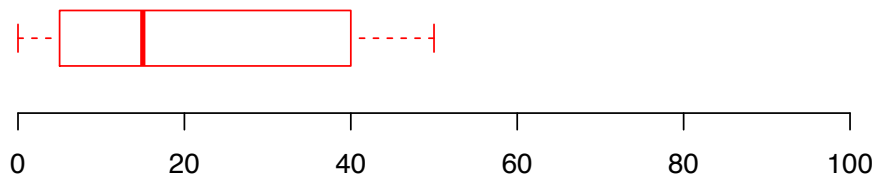
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
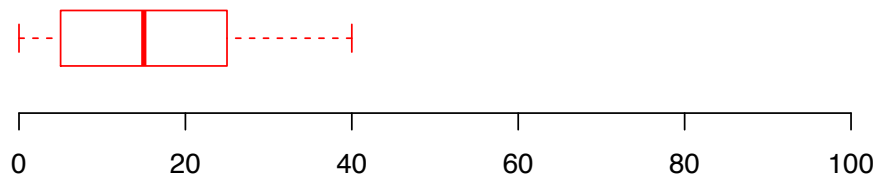
(d) Show or exhibition

National, Median: 19; Weighted mean: 13.12

Plains, Median: 13.75; Weighted mean: 20.75
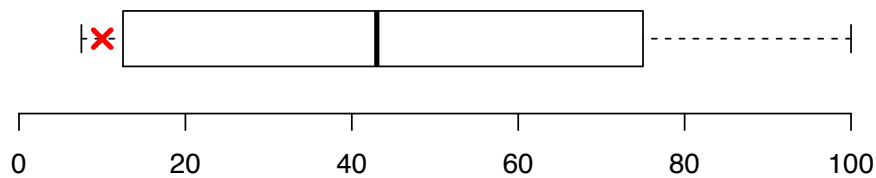

Texas, Median: 25; Weighted mean: 25
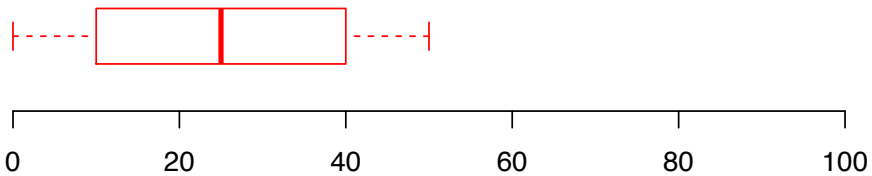
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(e) Another dairy operation

National, Median: 15; Weighted mean: 16.22

Plains, Median: 13.5; Weighted mean: 12.41

Texas, Median: 15; Weighted mean: 12

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(f) Another dairy operation for breeding purposes

National, Median: 16.5; Weighted mean: 14.99
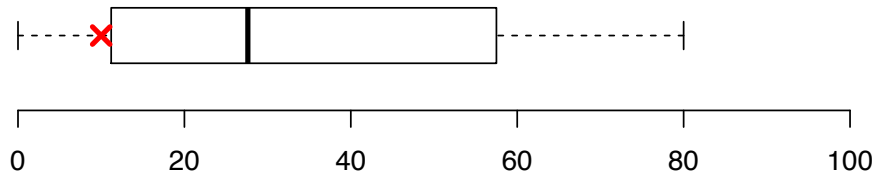

Plains, Median: 15.75; Weighted mean: 16.46
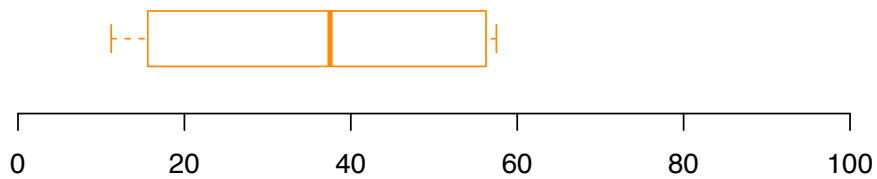

Texas, Median: 20; Weighted mean: 18
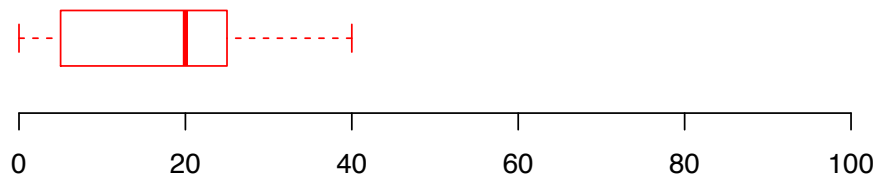
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

18. Consider 100 shipments of dairy heifer calves from anywhere in your state traveling to the following locations. For each of the following, out of100 shipments, how many will leave the state?

   (a) calf-ranch/nursery (pre-weaned)

   National, Median: 15.85; Weighted mean: 11.51

   Plains, Median: 32.1; Weighted mean: 25.56
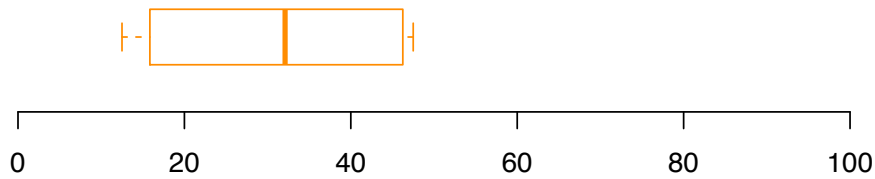
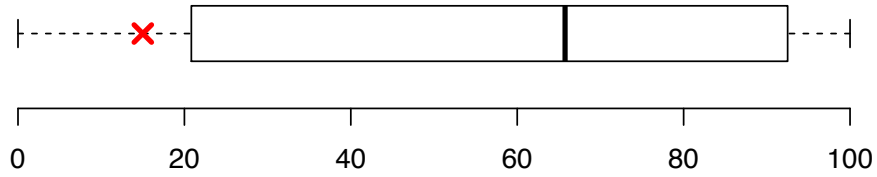   **Texas**, Median: 15; Weighted mean: 19.2

Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(b) heifer-raiser (weaned)

National, Median: 20.5; Weighted mean: 14.83
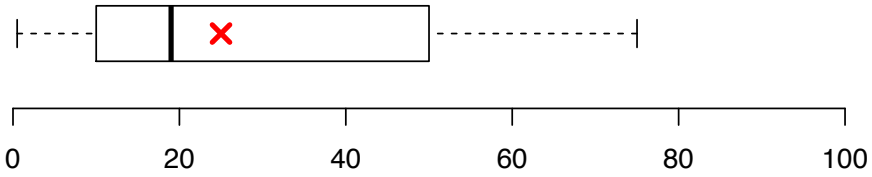

Plains, Median: 20.5; Weighted mean: 21.91

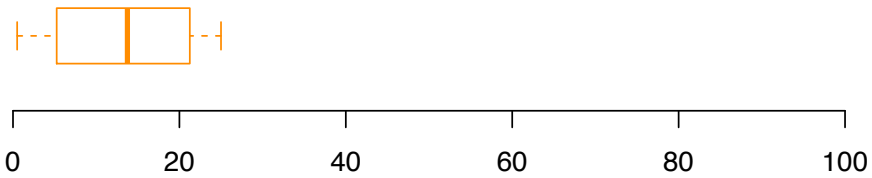**Texas**, Median: 20; Weighted mean: 21
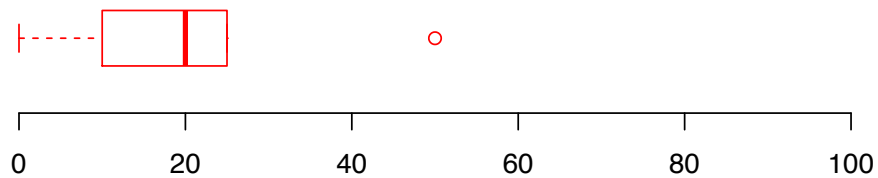
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

19. Consider 100 shipments of pre-weaned dairy steers or bulls from anywhere in your state traveling to the following locations. For each of the following, out of100 shipments, how many will leave the state?

(a) Calf-ranch/nursery

National, Median: 23.75; Weighted mean: 15.83
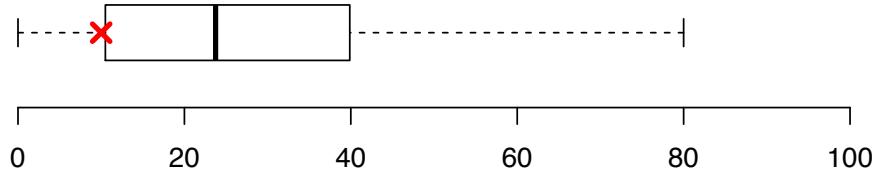
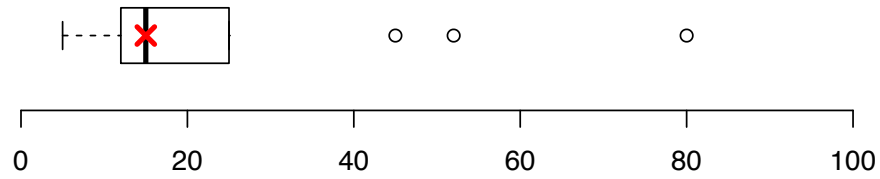**Plains**, Median: 29.75; Weighted mean: 23.25
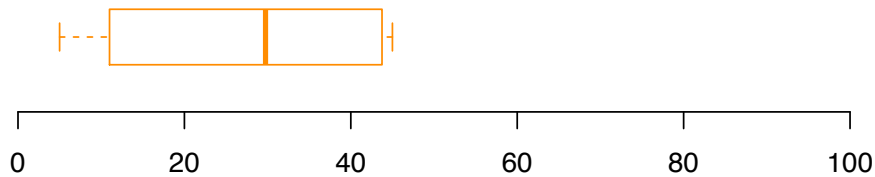
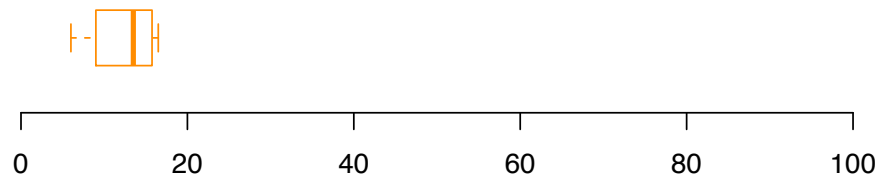**Texas**, Median: 10; Weighted mean: 17
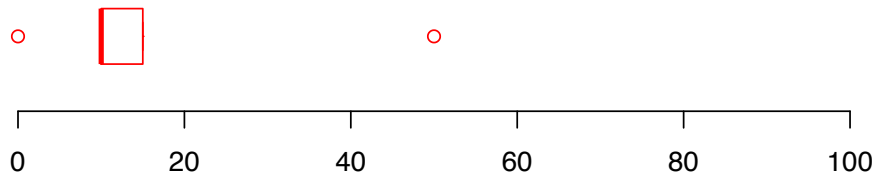
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.
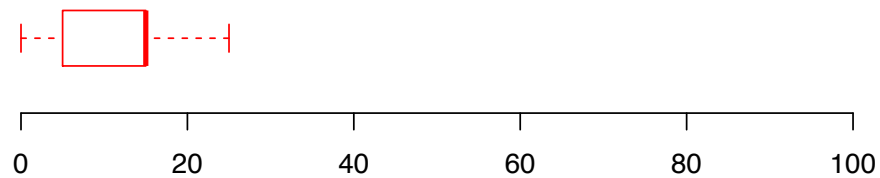
(b) Feedlot

National, Median: 38; Weighted mean: 27.46
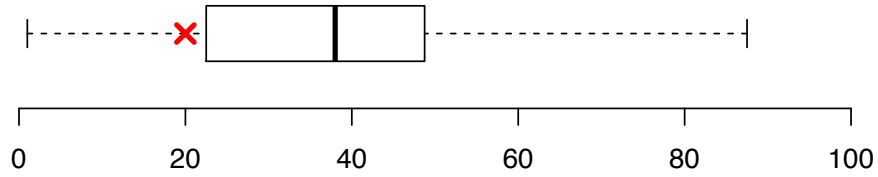
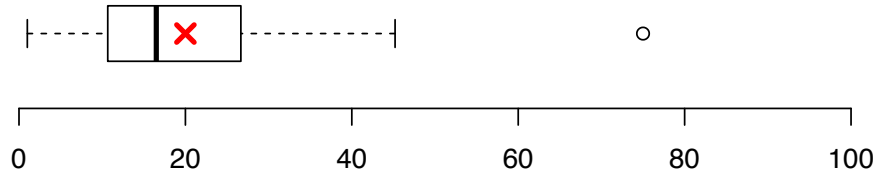**Plains**, Median: 34; Weighted mean: 35.53
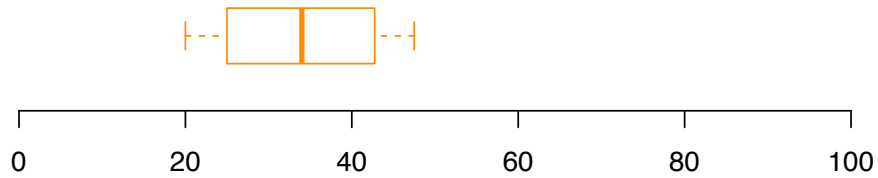
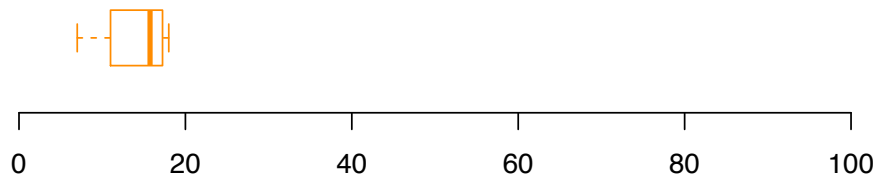**Texas**, Median: 20; Weighted mean: 38
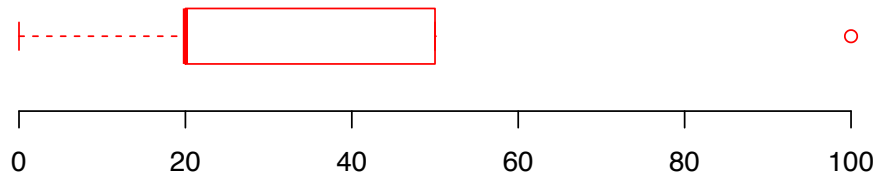
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

(c) Market or Salebarn

National, Median: 25; Weighted mean: 30.04
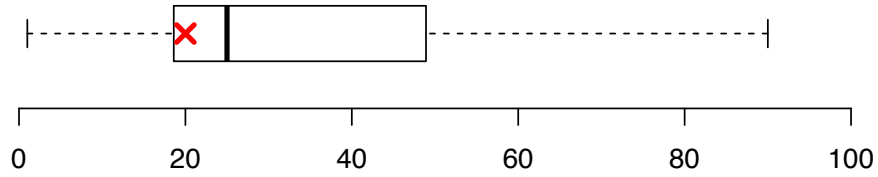
Plains, Median: 24.85; Weighted mean: 20.77
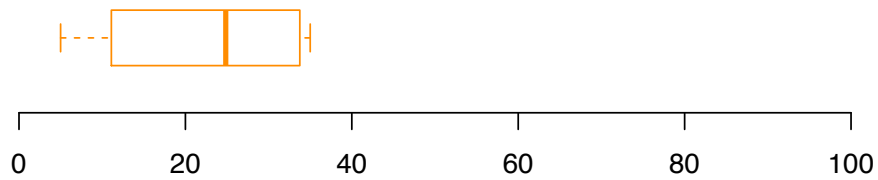
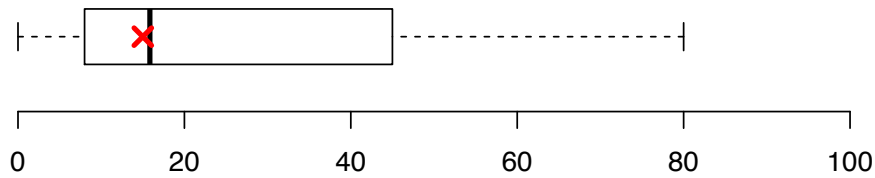**Texas**, Median: 20; Weighted mean: 17.2
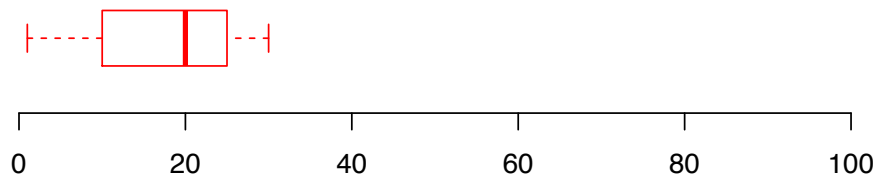
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

20. Consider 100 shipments of weaned heifers or pregnant heifers originating at a heifer-raising facility. Of these 100 shipments, how many will leave the state?
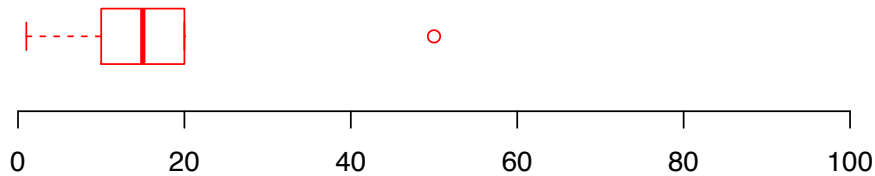
National, Median: 25; Weighted mean: 19.28
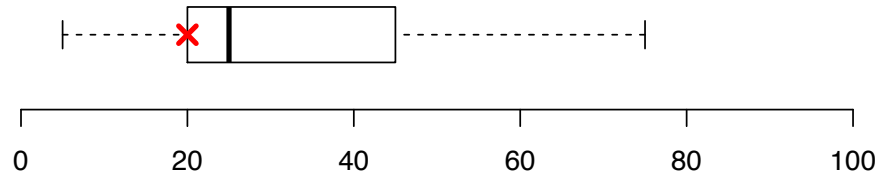
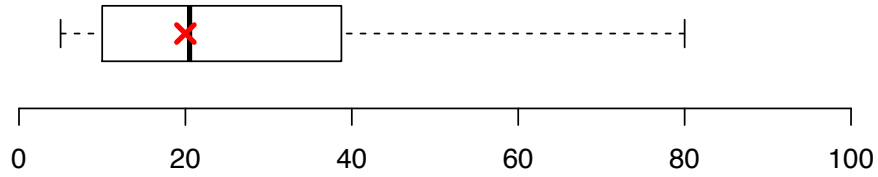**Plains**, Median: 43.75; Weighted mean: 30.87
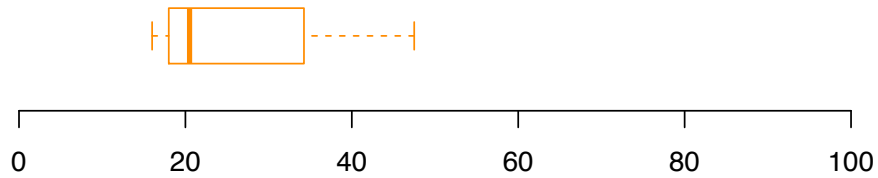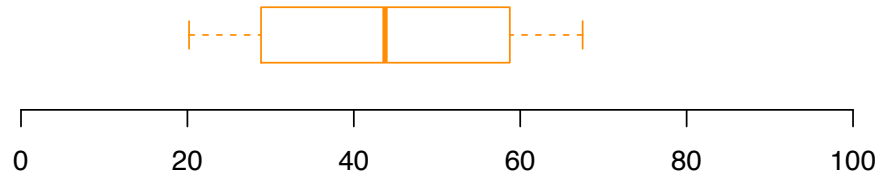

Texas, Median: 20; Weighted mean: 20.2
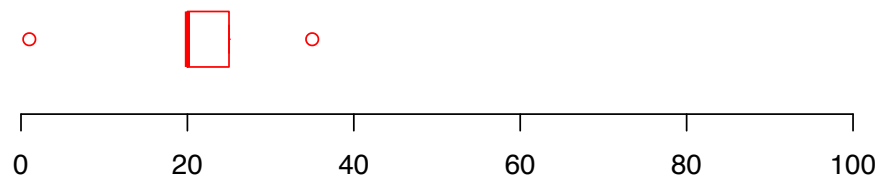
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

21. Consider 100 shipments of dairy bulls from anywhere in your state that are moving for breeding purposes. Of these shipments, how many will leave the state?

National, Median: 18.75; Weighted mean: 13.68
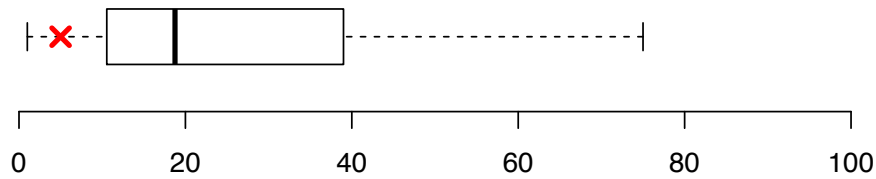
Plains, Median: 20.75; Weighted mean: 22.84
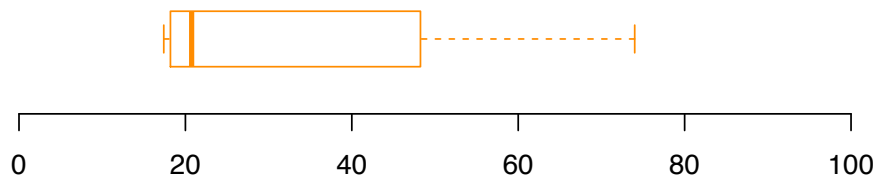
Texas, Median: 5; Weighted mean: 17.4
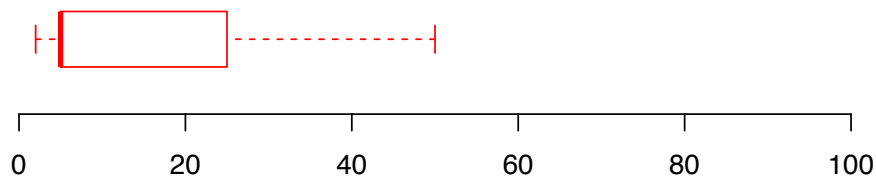
Box Plots: The center bar and edges of the box show the median and 1st and 3rd quartiles, respectively. The whiskers extend to points that are no more than 1.5 times the interquartile range, points outside this range are outliers (open circles). The red X on the national plots corresponds to the state median.

Appendix I:

Table of cattle movement results by survey question

Overview: The results from the Texas Cattle Movement Survey are presented below. Additionally, the results from the national level survey and the Plains regional survey (which includes Colorado, Nebraska, Oklahoma, and Texas) are presented. At the national level there were 51 experts from 19 states and territories participating in the Cattle Movement Survey including Alaska, California, Colorado, Iowa, Idaho, Minnesota, Mississippi, Montana, North Carolina, Nebraska, Nevada, New York, Oklahoma, Pennsylvania, Tennessee, Texas, US Virgin Islands, Virginia and Wisconsin. For each question the national, regional, and state results are presented in color-coded table cells. An explanation of the weighted means can be found below.

Weighted means: The national and regional means presented in this report have been weighted, meaning that some data points contribute more than others to the overall mean. This was done to allow data points from states with larger cattle populations to have greater weight. Specifically, states were weighted by the beef and dairy cattle inventory data from the 2015 National Agricultural Statistics Service annual report.

Beef shipments

	National	Plains	Texas
Question 6			
Median	44.58	26.09	15
Weighted mean	42.21	21.71	17.19
Question 7a			
Median	20	10.47	1
Weighted mean	26.67	10.34	4.69
Question 7b			
Median	32.35	14.97	8.75
Weighted mean	29.65	13.83	8.69
Question 7c			
Median	41.25	22.83	13.75
Weighted mean	36.65	19.29	12.31
Question 7d			
Median	48.75	35.42	18.75
Weighted mean	45.19	27.63	17.94
Question 8a			
Median	42.5	48.75	22.5
Weighted mean	41.33	37.71	25.31
Question 8b			
Median	41.25	26.19	17.5
Weighted mean	39.19	20.52	14.88
Question 8c			
Median	41.96	30.31	20
Weighted mean	41.1	23.22	19.38
Question 8d			
Median	43.21	25.56	20
Weighted mean	41.11	22.53	17.38

	National	Plains	Texas
Question 8e			
Median	53.33	22.41	12.5
Weighted mean	40.17	24.21	14.81
Question 8f			
Median	57.63	33.25	25
Weighted mean	46.33	28.22	19.69
Question 9a			
Median	52.17	27.42	7.5
Weighted mean	42.49	20.94	12
Question 9b			
Median	25.5	22.35	15
Weighted mean	28.65	26.47	21.38
Question 9c			
Median	18.42	15.56	17.5
Weighted mean	19.37	15.58	15.12
Question 9d			
Median	18.25	12.83	15
Weighted mean	18.53	13.5	14.75
Question 10a			
Median	32.5	12.91	17.5
Weighted mean	30.82	14.97	15.81
Question 10b			
Median	40.5	19.42	15
Weighted mean	31.61	18.77	15.5
Question 10c			
Median	56.17	26.25	17.5
Weighted mean	43.85	22.79	16.38
Question 11			
Median	30	34	37.5
Weighted mean	37.79	37.75	49.5

	National	Plains	Texas
Question 12a			
Median	58.75	27.08	10
Weighted mean	42.85	20.54	11.06
Question 12b			
Median	38.17	40.83	3.75
Weighted mean	35.14	24.97	6.19
Question 12c			
Median	34.5	33.83	12.5
Weighted mean	35.61	23.33	12
Question 12d			
Median	43.9	20.42	15
Weighted mean	35.24	18.82	13.56
Question 13a			
Median	55	17.62	14.75
Weighted mean	42.53	23.28	15.25
Question 13b			
Median	51.33	35.08	12.5
Weighted mean	44.8	29.33	12.81
Question 13c			
Median	55	13.75	7.5
Weighted mean	42.69	22.59	11.25

Dairy shipments

	National	Plains	Texas
Question 14			
Median	35.75	52.5	20
Weighted mean	21.8	30	18.2

	National	Plains	Texas
Question 15a			
Median	14.38	22.75	8.75
Weighted mean	12.98	18.49	12.92
Question 15b			
Median	27.5	43.25	15
Weighted mean	23.99	24.27	15.33
Question 15c			
Median	42.5	61.25	25
Weighted mean	25.74	36.41	25.2
Question 16a			
Median	38.33	25	20
Weighted mean	23.39	25.15	20
Question 16b			
Median	47.5	48.75	15
Weighted mean	28.21	27.36	15.17
Question 16c			
Median	30	32.5	15
Weighted mean	22.1	24.24	17
Question 17a			
Median	43	18.75	10
Weighted mean	25.9	14.56	7.5
Question 17b			
Median	27.62	37.5	10
Weighted mean	16.22	19	11.2
Question 17c			
Median	65.75	61.25	15
Weighted mean	33.31	36.06	20.83
Question 17d			
Median	19	13.75	25
Weighted mean	13.12	20.75	25

	National	Plains	Texas
Question 17e			
Median	15	13.5	15
Weighted mean	16.22	12.41	12
Question 17f			
Median	16.5	15.75	20
Weighted mean	14.99	16.46	18
Question 18a			
Median	15.85	32.1	15
Weighted mean	11.51	25.56	19.2
Question 18b			
Median	20.5	20.5	20
Weighted mean	14.83	21.91	21
Question 19a			
Median	23.75	29.75	10
Weighted mean	15.83	23.25	17
Question 19b			
Median	38	34	20
Weighted mean	27.46	35.53	38
Question 19c			
Median	25	24.85	20
Weighted mean	30.04	20.77	17.2
Question 20			
Median	25	43.75	20
Weighted mean	19.28	30.87	20.2
Question 21			
Median	18.75	20.75	5
Weighted mean	13.68	22.84	17.4