

# Responsive Management



## **SOUTH CAROLINA RESIDENTS' KNOWLEDGE OF, PERCEPTIONS OF, AND OPINIONS ON WILDFIRES AND CONTROLLED BURNING**

**Conducted for the South Carolina Forestry Commission**

**by Responsive Management**

**2007**

# **SOUTH CAROLINA RESIDENTS' KNOWLEDGE OF, PERCEPTIONS OF, AND OPINIONS ON WILDFIRES AND CONTROLLED BURNING**

**2007**

## **Responsive Management National Office**

Mark Damian Duda, Executive Director  
Martin Jones, Research Associate  
Andrea Criscione, Research Associate  
Chad Craun, Research Associate  
Tom Beppler, Research Associate  
Tim Winegord, Survey Center Manager  
Alison Lanier, Business Manager  
Steven J. Bissell, Ph.D., Qualitative Research Associate  
James B. Herrick, Ph.D., Research Associate

130 Franklin Street  
Harrisonburg, VA 22801  
Phone: 540/432-1888 Fax: 540/432-1892  
E-mail: [mark@responsivemanagement.com](mailto:mark@responsivemanagement.com)  
[www.responsivemanagement.com](http://www.responsivemanagement.com)

## **Acknowledgements**

Responsive Management would like to thank Bill Boykin, Mike Bozzo, Darryl Jones, Jennie Morris, and Paul Watts of the South Carolina Forestry Commission for their input, support, and guidance on this project.

## **EXECUTIVE SUMMARY**

### **INTRODUCTION AND METHODOLOGY**

This study was conducted for the South Carolina Forestry Commission (hereinafter referred to as “the Commission”) to determine South Carolina residents’ perceptions of, knowledge of, and opinions on wildfires and controlled burning. The study entailed a telephone survey of South Carolina registered voters at least 25 years of age.

For the survey, telephones were selected as the preferred sampling medium because of the universality of telephone ownership. Responsive Management developed the telephone survey questionnaire cooperatively with the Commission. Responsive Management conducted a pre-test of the questionnaire and made revisions based on the pre-test. Interviews were conducted Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday noon to 5:00 p.m., and Sunday from 5:00 p.m. to 9:00 p.m., local time. The software used for data collection was Questionnaire Programming Language 4.1.

The analysis of data was performed using Statistical Package for the Social Sciences software as well as proprietary software developed by Responsive Management. Throughout this report, findings of the telephone survey are reported at a 95% confidence interval. For the entire sample of South Carolina registered voters at least 25 years old, the sampling error is at most plus or minus 4.36 percentage points.

A wildfire is defined as any forest fire, brush fire, grass fire, or any other outdoor fire that is not controlled and supervised. There are eight categories of wildfire causes: debris burning, incendiary (also known as “woods arson,” which is divided into “willful and malicious” and “intentional”), equipment use (this includes such things as a vehicle’s hot catalytic converter setting leaves on fire), children’s actions, smoking (e.g. throwing of cigarette butts out of vehicle windows), campfires, lightning, railroads (typically caused by sparks from brakes or from carbon buildup in the diesel engine that causes sparks), and a “miscellaneous” category (the latter including such things as an adult’s misuse of fireworks or a structure fire that spreads to a forest).

One way of mitigating the threat of wildfire is through the use of fire: prescribed fire, also called controlled burning. Prescribed fire is an intentionally set and carefully managed fire and is an important land management tool. A prescribed fire has several benefits: it removes fuel, thereby reducing the risk of a subsequent, high-intensity wildfire; it benefits many species of plants and animals; and it benefits forest managers by removing unwanted brush. Prescribed fire also can be used to control brownspot, a common disease in longleaf pine forests. Management techniques of prescribed fires reduce their danger to humans and wildlife and mitigate potential smoke problems.

### **PERCEPTIONS OF WILDFIRES AND THE THREAT OF WILDFIRES**

- A large majority of South Carolina voters (79%) believe that wildfires are a very or somewhat significant threat in South Carolina, about evenly split between believing them to be a *very* significant threat or a *somewhat* significant threat. When asked specifically about their home or property, the perceived threat is less: 52% believe that wildfires are a very or somewhat significant threat to their home or property.
- A substantial percentage of South Carolina voters (8%) indicate that a wildfire has threatened their community in the past 10 years.

### **KNOWLEDGE OF FIRE'S ROLE IN NATURAL ECOSYSTEMS AND KNOWLEDGE OF CONTROLLED BURNING**

- A large majority of South Carolina voters (85%) have seen or heard the term, “controlled burning.” The term, “prescribed burning,” is not as well known: only 34% of voters have seen or heard that term. A majority of South Carolina voters (83%) have heard only a little or nothing about controlled burning or prescribed burning in the past 12 months.
  - Those who have seen or heard anything about controlled burning or prescribed burning in the past 12 months most commonly said they had seen/heard the information on television (53% of those who saw/heard), followed by word-of-mouth (39%) and newspapers (34%).

- Knowledge levels regarding wildfires' place in the natural ecosystem is moderate, with most giving correct answers to the questions, ranging from 66% to 41% correct; however, substantial percentages answered incorrectly or answered that they did not know.
  - 66% of South Carolina voters correctly answered that fire is beneficial to some of South Carolina's native plants and trees.
  - 54% of respondents answered "false" to the statement, "Fire is *not* necessary to maintain a natural balance in South Carolina's ecosystems." False is considered the correct answer.
  - 41% of South Carolina voters correctly answered that fire is beneficial for wildlife habitat.
  - 60% of South Carolina voters correctly agree that some plants and animals benefit from the use of prescribed fire.
  
- Knowledge of the use of prescribed fire for wildfire prevention is well known: 78% of South Carolina voters agree that prescribed fire is an effective method used to prevent wildfires.
  
- Knowledge of prescribed burns and the management of them is moderate, with a moderate level of knowledge about the danger prescribed fires pose to the public's safety and to animal safety, but a low level of knowledge about the health risks from the smoke.
  - A majority of South Carolina voters *disagree* (57%) that prescribed fires are as dangerous to public safety as are wildfires.
  - A majority of South Carolina voters (57%) appear to know (i.e., they agree) that animals are usually able to find safety during prescribed fires.
  - South Carolina voters lack knowledge about smoke management when prescribed fires are used: a majority (57%) appear *not* to know that smoke from prescribed fires does not pose as great a threat as smoke from wildfires (i.e., they agreed that smoke from prescribed fires is as great a threat to public health as is smoke from wildfires).

## PERCEPTIONS OF AND OPINIONS ON CONTROLLED BURNING

- Most South Carolina voters appear to approve of or support controlled burning.
  - 67% *disagree* with the statement that prescribed fires should *not* be allowed in South Carolina's woodlands.
  - 60% agree that some plants and animals benefit from the use of prescribed fire.
  - 78% agree that prescribed fire is an effective method used to prevent wildfires.
  - 57% *disagree* that prescribed fires and wildfires are equally dangerous to the public's safety.
  - 76% agree that, given the benefits of prescribed fires, they are willing to accept occasional smoke, as long as the smoke does not affect health and safety.
  
- More South Carolina voters agree than disagree that the smoke from prescribed fires poses as much of a threat to public health as does smoke from wildfires: 57% agree with this statement, but 33% disagree.
  
- More South Carolina voters agree (57%) than disagree (27%) that animals are usually able to find safety during prescribed fires.

## **TABLE OF CONTENTS**

Introduction and Methodology.....	1
Background .....	4
Perceptions of Wildfires and the Threat of Wildfires .....	8
Knowledge of Fire's Role in Natural Ecosystems and Knowledge of Controlled Burning .....	12
Perceptions of and Opinions on Controlled Burning .....	26
Demographic Characteristics .....	34
Additional Comments .....	50
About Responsive Management.....	51



## **INTRODUCTION AND METHODOLOGY**

This study was conducted for the South Carolina Forestry Commission (hereinafter referred to as “the Commission”) to determine South Carolina residents’ perceptions of, knowledge of, and opinions on wildfires and controlled burning. The study entailed a telephone survey of South Carolina registered voters at least 25 years of age. Specific aspects of the research methodology are discussed below.

For the survey, telephones were selected as the preferred sampling medium because of the universality of telephone ownership. In addition, a central polling site at the Responsive Management office allowed for rigorous quality control over the interviews and data collection. Responsive Management maintains its own in-house telephone interviewing facilities. These facilities are staffed by interviewers with experience conducting computer-assisted telephone interviews on the subjects of natural resources and outdoor recreation. The telephone survey questionnaire was developed cooperatively by Responsive Management and the Commission. Responsive Management conducted a pre-test of the questionnaire and made revisions to the questionnaire based on the pre-test.

To ensure the integrity of the telephone survey data, Responsive Management has interviewers who have been trained according to the standards established by the Council of American Survey Research Organizations. Methods of instruction included lecture and role-playing. The Survey Center Managers and other professional staff conducted project briefings with the interviewers prior to the administration of this survey. Interviewers were instructed on type of study, study goals and objectives, handling of survey questions, interview length, termination points and qualifiers for participation, interviewer instructions within the survey instrument, reading of the survey instrument, skip patterns, and probing and clarifying techniques necessary for specific questions on the survey instrument. The Survey Center Managers and statisticians monitored the data collection, including monitoring of the actual telephone interviews without the interviewers’ knowledge, to evaluate the performance of each interviewer and ensure the integrity of the data. After the surveys were obtained by the interviewers, the Survey Center Managers and/or statisticians edited each completed survey to ensure clarity and completeness.

Interviews were conducted Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday noon to 5:00 p.m., and Sunday from 5:00 p.m. to 9:00 p.m., local time. A five-callback design was used to maintain the representativeness of the sample, to avoid bias toward people easy to reach by telephone, and to provide an equal opportunity for all to participate. When a respondent could not be reached on the first call, subsequent calls were placed on different days of the week and at different times of the day. The survey was conducted in January 2007. Responsive Management obtained a total of 504 completed interviews of South Carolina registered voters.

The software used for data collection was Questionnaire Programming Language 4.1 (QPL). The survey data were entered into the computer as each interview was being conducted, eliminating manual data entry after the completion of the survey and the concomitant data entry errors that may occur with manual data entry. The survey instrument was programmed so that QPL branched, coded, and substituted phrases in the survey based on previous responses to ensure the integrity and consistency of the data collection. The analysis of data was performed using Statistical Package for the Social Sciences software as well as proprietary software developed by Responsive Management.

Throughout this report, findings of the telephone survey are reported at a 95% confidence interval. For the entire sample of South Carolina registered voters at least 25 years old, the sampling error is at most plus or minus 4.36 percentage points. This means that if the survey were conducted 100 times on different samples that were selected in the same way, the findings of 95 out of the 100 surveys would fall within plus or minus 4.36 percentage points of each other. Sampling error was calculated using the formula that follows, with a sample size of 504 and a population size of 2,038,000 registered voters 25 years old or older.

**Sampling error equation:**

$$B = \left( \sqrt{\frac{N_p(.25)}{N_s} - .25} \right) (1.96)$$

Where: B = maximum sampling error (as decimal)  
 N<sub>P</sub> = population size (i.e., total number who could be surveyed)  
 N<sub>S</sub> = sample size (i.e., total number of respondents surveyed)

Derived from formula: p. 206 in Dillman, D. A. 2000. *Mail and Internet Surveys*. John Wiley & Sons, NY.

**Note:** This is a simplified version of the formula that calculates the maximum sampling error using a 50:50 split (the most conservative calculation because a 50:50 split would give maximum variation).

Note that some results may not sum to exactly 100% because of rounding. Additionally, rounding on the graphs may cause apparent discrepancies of 1 percentage point between the graphs and the reported results of combined responses (e.g., when “strongly support” and “moderately support” are summed to determine the total percentage in support).

Note that some graphs are included twice in this report, as the results to the question apply to more than one section of the report. For instance, many questions that test knowledge are included in both the section titled “Knowledge of Fire’s Role in Natural Ecosystems and Knowledge of Controlled Burning” as well as the section titled “Perceptions of and Opinions on Controlled Burning.” The reasons for this is that perceptions are dependent upon a person’s understanding as well as misunderstanding of an issue. In other words, even if a belief is incorrect, this incorrect belief will affect the perceptions of the issue.

## BACKGROUND

A wildfire is defined as any forest fire, brush fire, grass fire, or any other outdoor fire that is not controlled and supervised. Wildfire is a substantial problem in South Carolina: the state has one of the higher rates of wildfires, with a five-year average of 3,800 wildfires per year (based on 2000 to 2005 Forestry Commission data) that are extinguished or brought under control by the Forestry Commission (other fires extinguished/controlled solely by local fire departments or by timber company personnel are not included in this total). The 2005 Annual Report of the Commission indicated that Commission firefighters recorded 2,283 wildfires that burned a total of 13,478 acres. These fires also destroyed 17 homes, damaged 6 others, destroyed 5 other buildings, and damaged 3 vehicles.

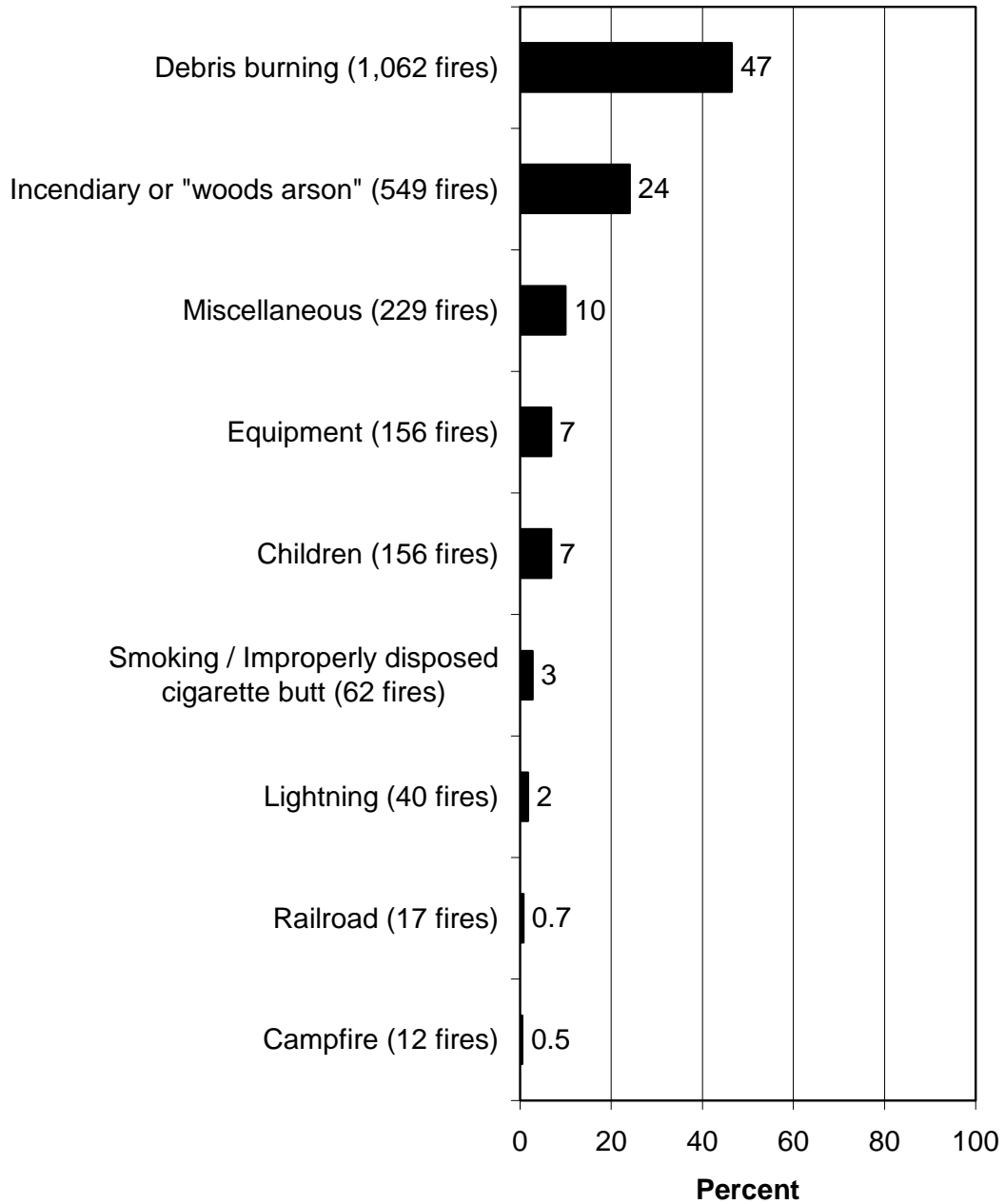
Typically, the most dangerous time of the year for wildfires in South Carolina is January through mid-April (indeed, the worst week in South Carolina history for wildfires was March 30 to April 5, 1966, with ten fires of more than 1,500 acres—and this includes the Gaston Fire, one of the worst in the state's history). Two other important fires—the Clear Pond Fire (largest in South Carolina history) and the Red Fox Road Fire (most costly in human terms, with 8 houses burned)—both occurred in March or April. February 1947 was the worst wildfire month, during which time 119,000 acres burned; 1950 was the worst year, during which 230,000 acres burned.

There are eight categories of wildfire causes: debris burning, incendiary (also known as “woods arson,” which is divided into “willful and malicious” and “intentional”), equipment use (this includes such things as a vehicle's hot catalytic converter setting leaves on fire), children's actions, smoking (e.g. throwing of cigarette butts out of vehicle windows), campfires, lightning, railroads (typically caused by sparks from brakes or from carbon buildup in the diesel engine that causes sparks), and a “miscellaneous” category (the latter including such things as an adult's misuse of fireworks or a structure fire that spreads to a forest).

The percentage of fires by source (based on 2004-2005 data contained in the Forest Commission's 2005 Annual Report available from the Commission's website) is shown, as is the percentage of acreage burned by source of fire. Debris burning is, by far, the top source of wildfires in South Carolina.

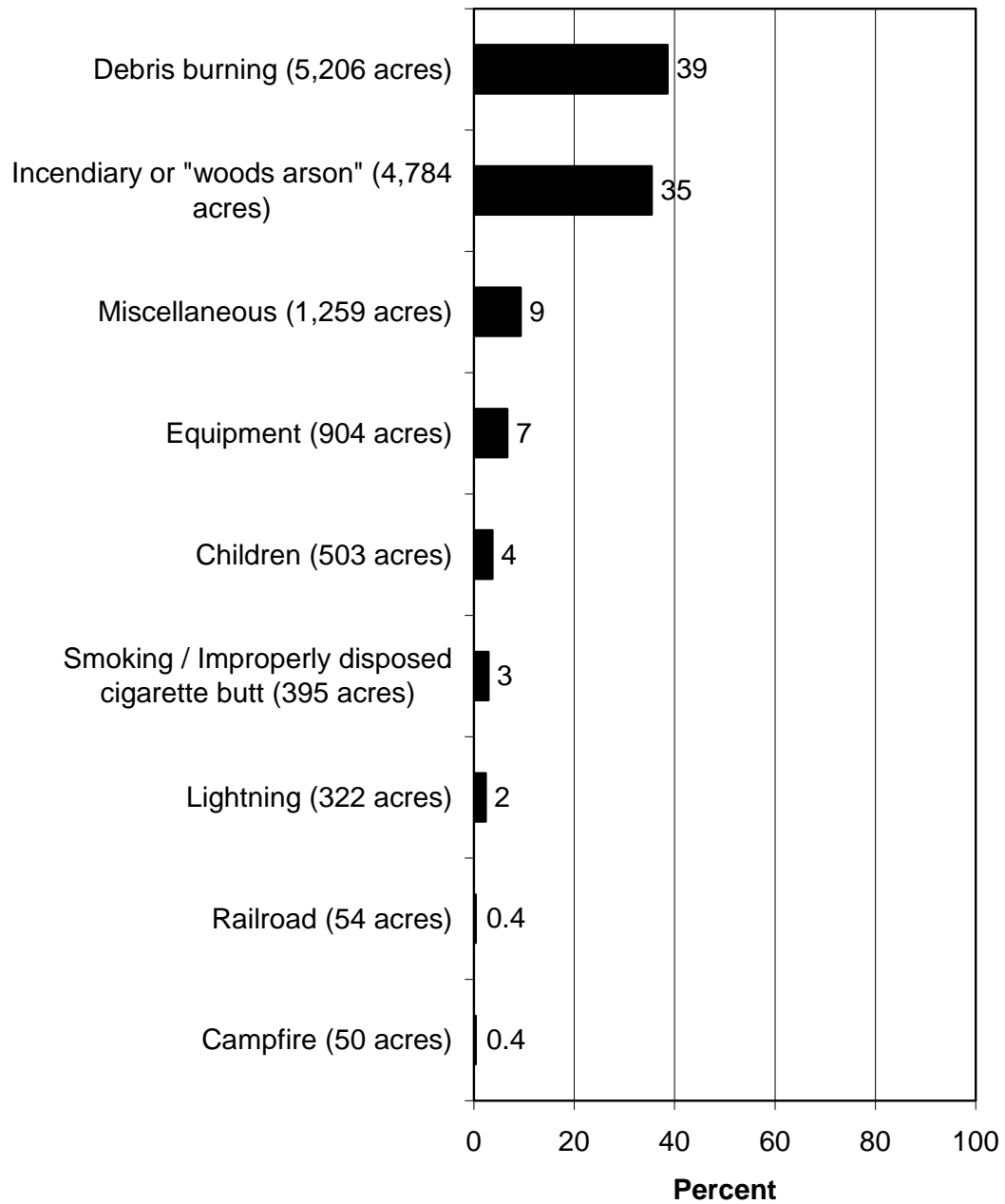
### Number of wildfires by type of source in South Carolina in 2004-2005 Fiscal Year.

(Source: South Carolina Forestry Commission.)



## Acreage burned by wildfires by type of source in South Carolina in 2004-2005 Fiscal Year.

(Source: South Carolina Forestry Commission.)



Partly because of the threat of wildfires, the South Carolina State Legislature created the Forestry Commission in April 1927 (not the sole reason for its creation), and an important part of its original mission was forest fire protection. Presently, the Commission is responsible for protecting 13.7 million acres of forestlands in South Carolina.

One way of mitigating the threat of wildfire is through the use of fire: prescribed fire, also called controlled burning. Prescribed fire is an intentionally set and carefully managed fire and is an important land management tool. A prescribed fire has several benefits:

- It removes fuel, like leaves/pine needles and small branches/brush, in a lower-heat fire, thereby reducing the threat of a high-intensity wildfire that could otherwise result when large amounts of forest fuel accumulate.
- It benefits many species of wildlife: it makes travel and feeding easier for big game; it provides nutrients for the soil and promotes growth of many food sources for wildlife.
- Some species of plants and animals appear to be highly dependent upon forest stands that periodically experience fire, and these include wild orchids and red-cockaded woodpeckers.

Forest managers also use prescribed fire as a management tool that benefits their interests. Prescribed fire is a valuable tool to get rid of unwanted brush in a growing pine stand. Fire also controls brownspot, a common disease in longleaf pine forests.

Management techniques of prescribed fires reduces their danger to humans and wildlife. For instance, prescribed fires are slower moving than are wildfires (because they are set only when weather conditions are appropriate), and they are set to allow escape for wildlife (i.e., they are set in such a way as to *not* entrap animals). Additionally, there are smoke management techniques, which include burning only in appropriate weather conditions, to reduce the harmful effects of smoke on dwellings and highways.

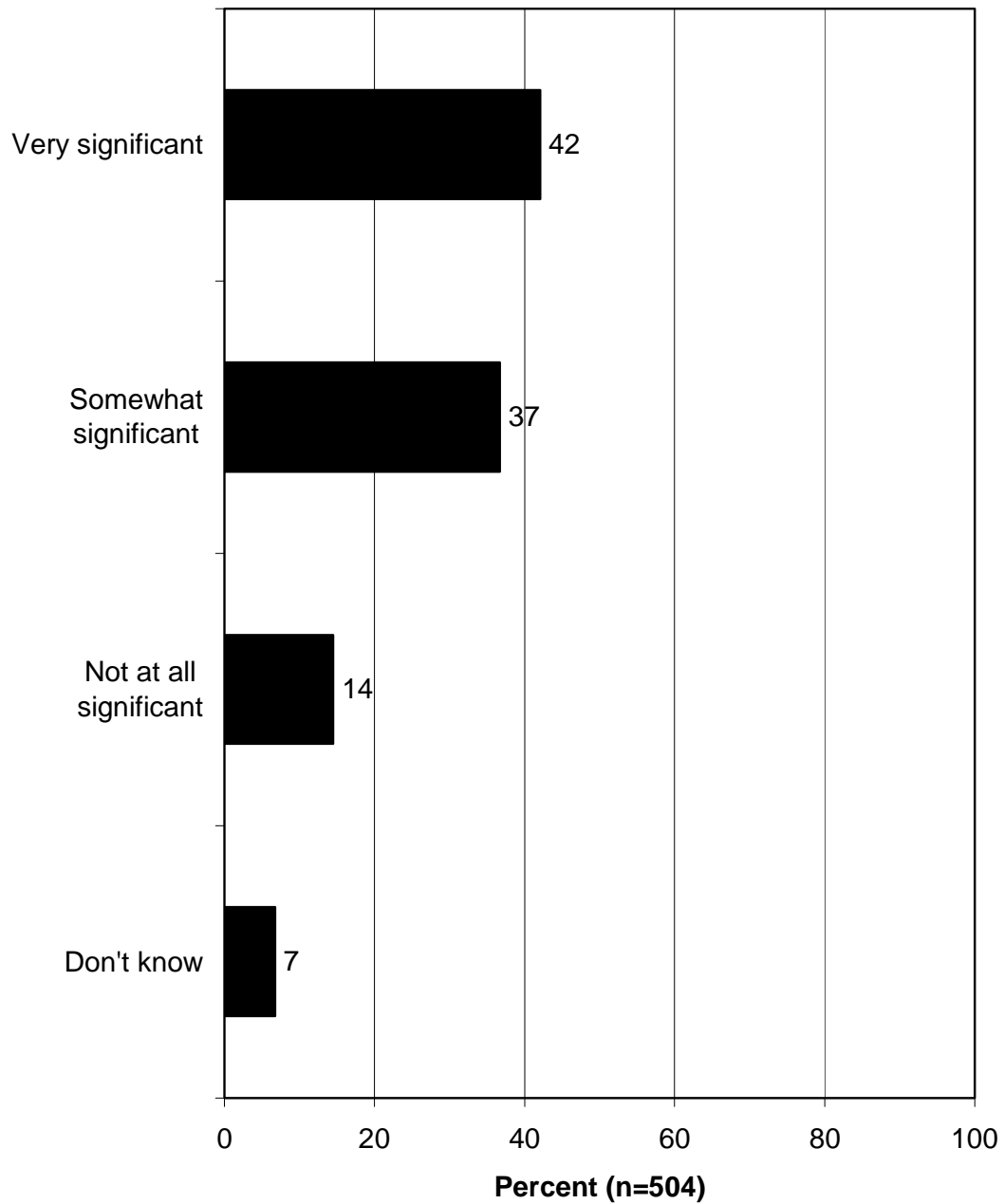
An important element of fire management, both the fighting of wildfires and the use of prescribed fire, is the human dimension of fire management. This study seeks to learn what the public thinks about the threat of wildfires and the use of prescribed fire as a management tool. The rest of this report discusses a telephone survey of South Carolina voters aged 25 or older about wildfires and prescribed fires.

## PERCEPTIONS OF WILDFIRES AND THE THREAT OF WILDFIRES

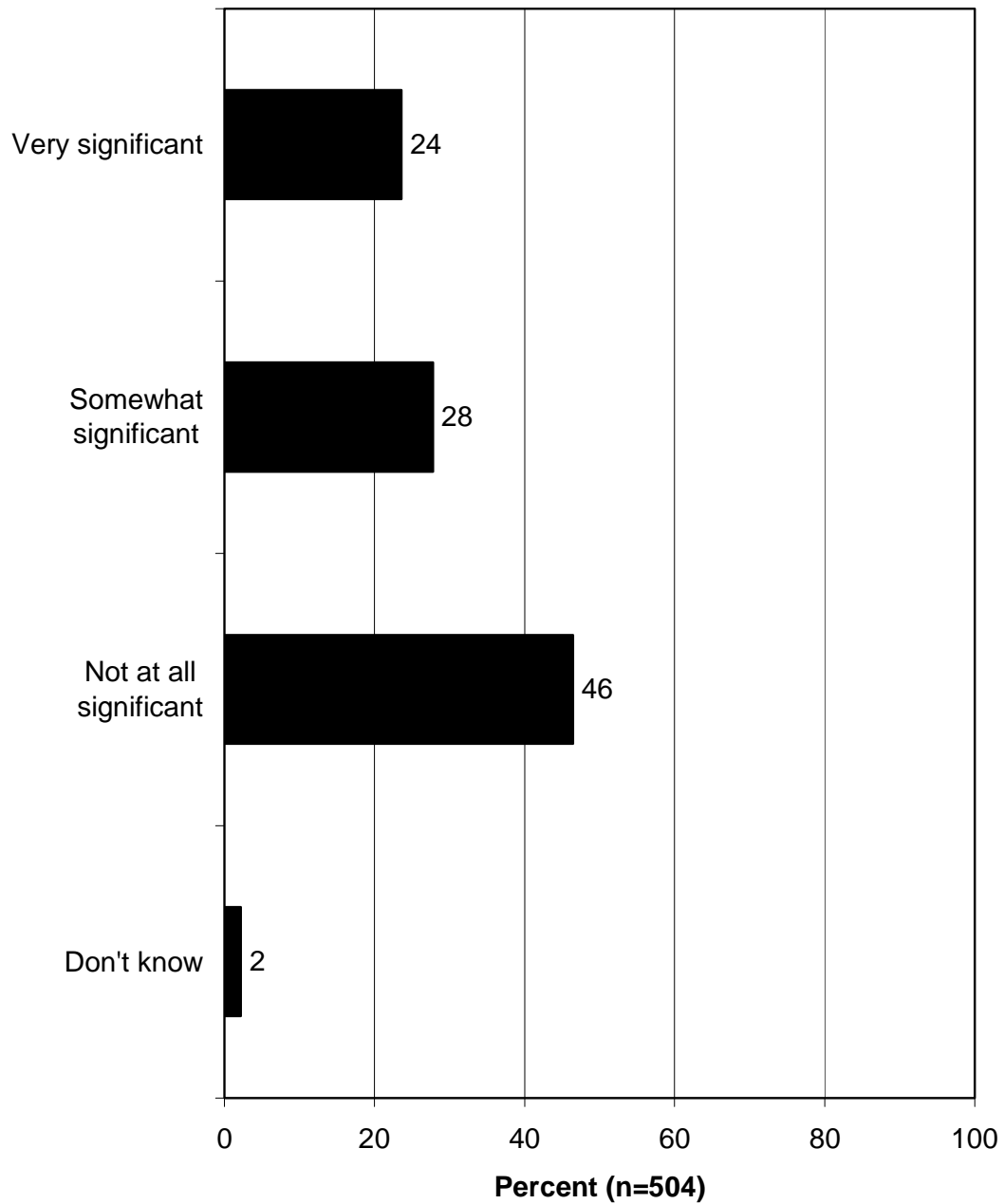
- A large majority of South Carolina voters (79%) believe that wildfires are a very or somewhat significant threat in South Carolina, about evenly split between believing them to be a *very* significant threat or a *somewhat* significant threat. When asked specifically about their home or property, the perceived threat is less: 52% believe that wildfires are a very or somewhat significant threat to their home or property.
  
- A substantial percentage of South Carolina voters (8%) indicate that a wildfire has threatened their community in the past 10 years.



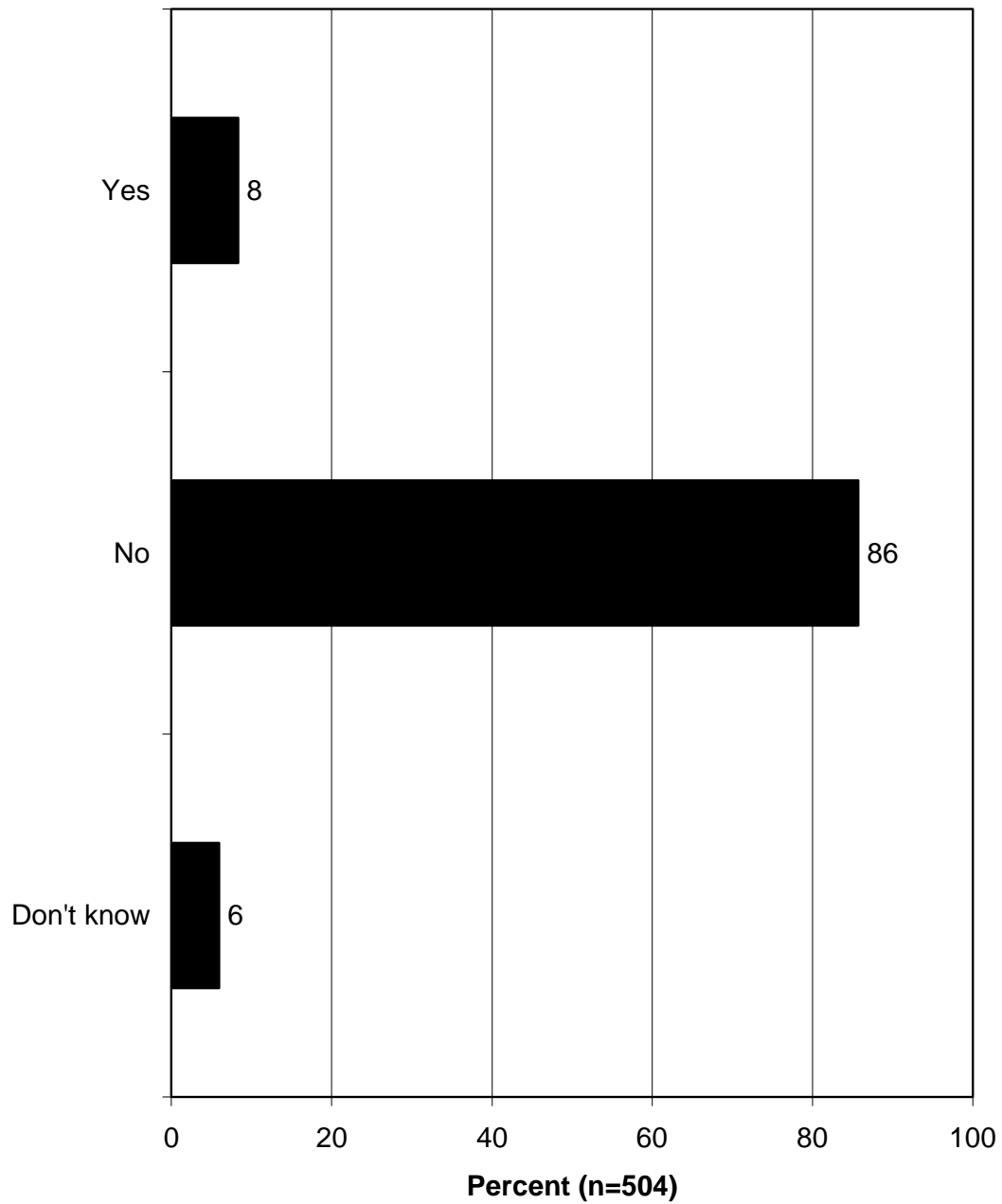
**Q7. First, do you believe wildfires are a very, somewhat, or not at all significant threat in South Carolina?**



**Q9. Would you say that the threat of wildfire to your home or property is very, somewhat, or not at all significant?**



**Q10. Has your community been threatened by wildfire in the past 10 years?**

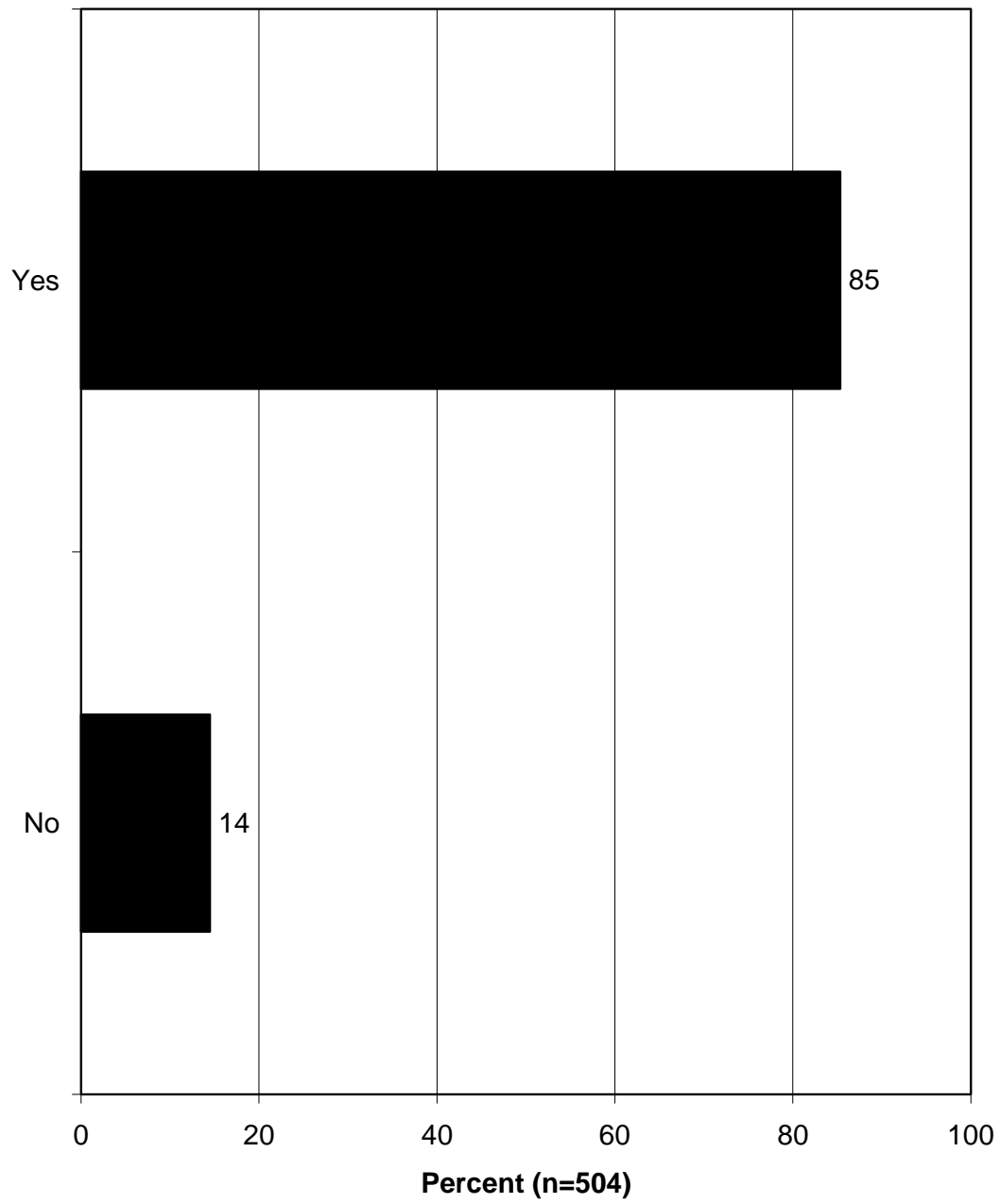


## KNOWLEDGE OF FIRE'S ROLE IN NATURAL ECOSYSTEMS AND KNOWLEDGE OF CONTROLLED BURNING

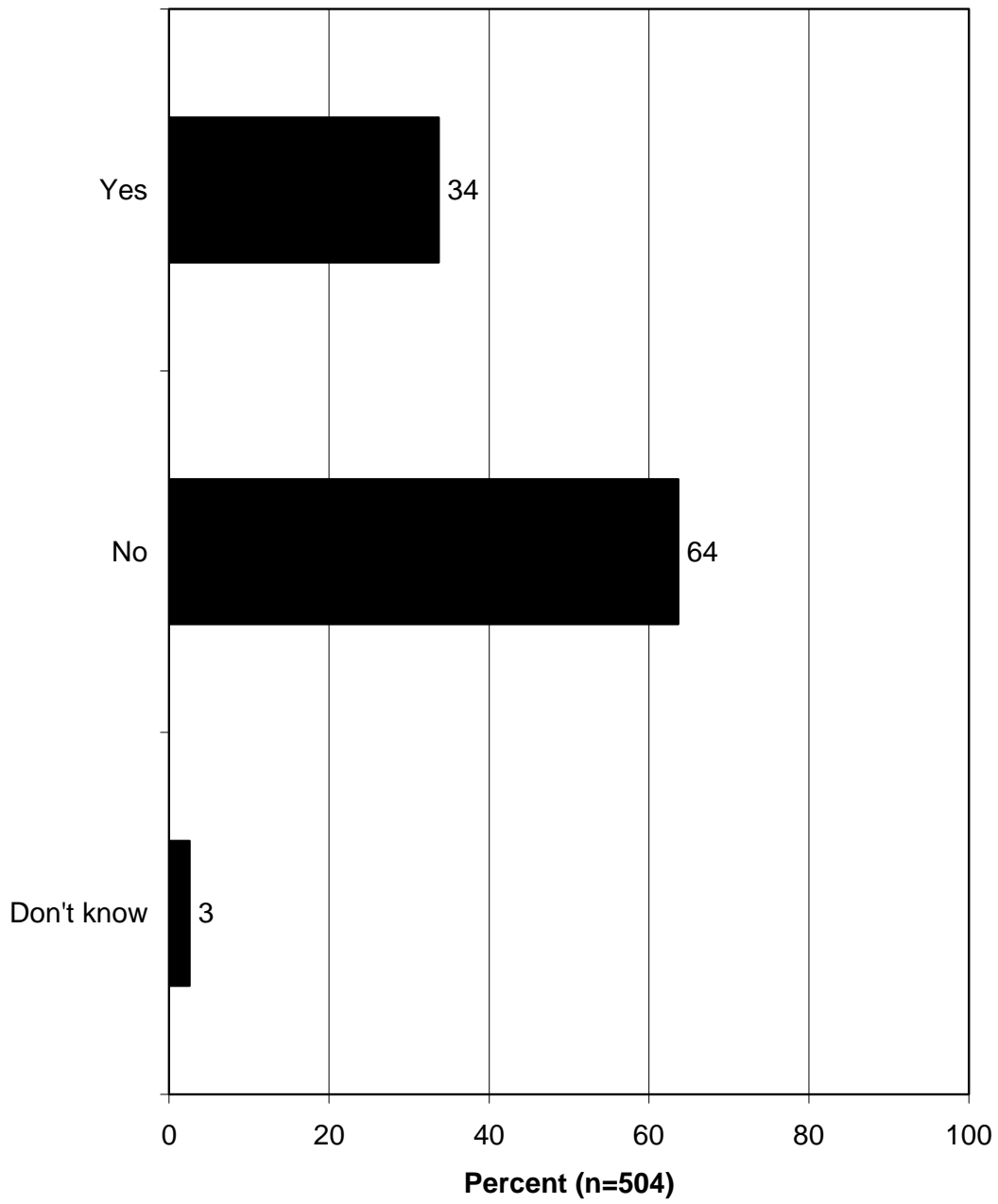
- A large majority of South Carolina voters (85%) have seen or heard the term, “controlled burning.” The term, “prescribed burning,” is not as well known: only 34% of voters have seen or heard that term. A majority of South Carolina voters (83%) have heard only a little or nothing about controlled burning or prescribed burning in the past 12 months.
  - Those who have seen or heard anything about controlled burning or prescribed burning in the past 12 months most commonly said they had seen/heard the information on television (53% of those who saw/heard), followed by word-of-mouth (39%) and newspapers (34%).
  
- Knowledge levels regarding wildfires’ place in the natural ecosystem is moderate, with most giving correct answers to the questions, ranging from 66% to 41% correct; however, substantial percentages answered incorrectly or answered that they did not know.
  - 66% of South Carolina voters correctly answered that fire is beneficial to some of South Carolina’s native plants and trees.
  - 54% of respondents answered “false” to the statement, “Fire is *not* necessary to maintain a natural balance in South Carolina’s ecosystems.” False is considered the correct answer.
  - 41% of South Carolina voters correctly answered that fire is beneficial for wildlife habitat.
  - 60% of South Carolina voters correctly agree that some plants and animals benefit from the use of prescribed fire.
  
- Knowledge of the use of prescribed fire for wildfire prevention is well known: 78% of South Carolina voters agree that prescribed fire is an effective method used to prevent wildfires.

- Knowledge of prescribed burns and the management of them is moderate, with a moderate level of knowledge about the danger prescribed fires pose to the public's safety and to animal safety, but a low level of knowledge about the health risks from the smoke.
  - A majority of South Carolina voters *disagree* (57%) that prescribed fires are as dangerous to public safety as are wildfires. (In actuality, they are not.)
  - A majority of South Carolina voters (57%) appear to know (i.e., they agree) that animals are usually able to find safety during prescribed fires.
  - South Carolina voters lack knowledge about smoke management when prescribed fires are used: a majority (57%) appear *not* to know that smoke from prescribed fires does not pose as great a threat as smoke from wildfires (i.e., they agreed that smoke from prescribed fires is as great a threat to public health as is smoke from wildfires).

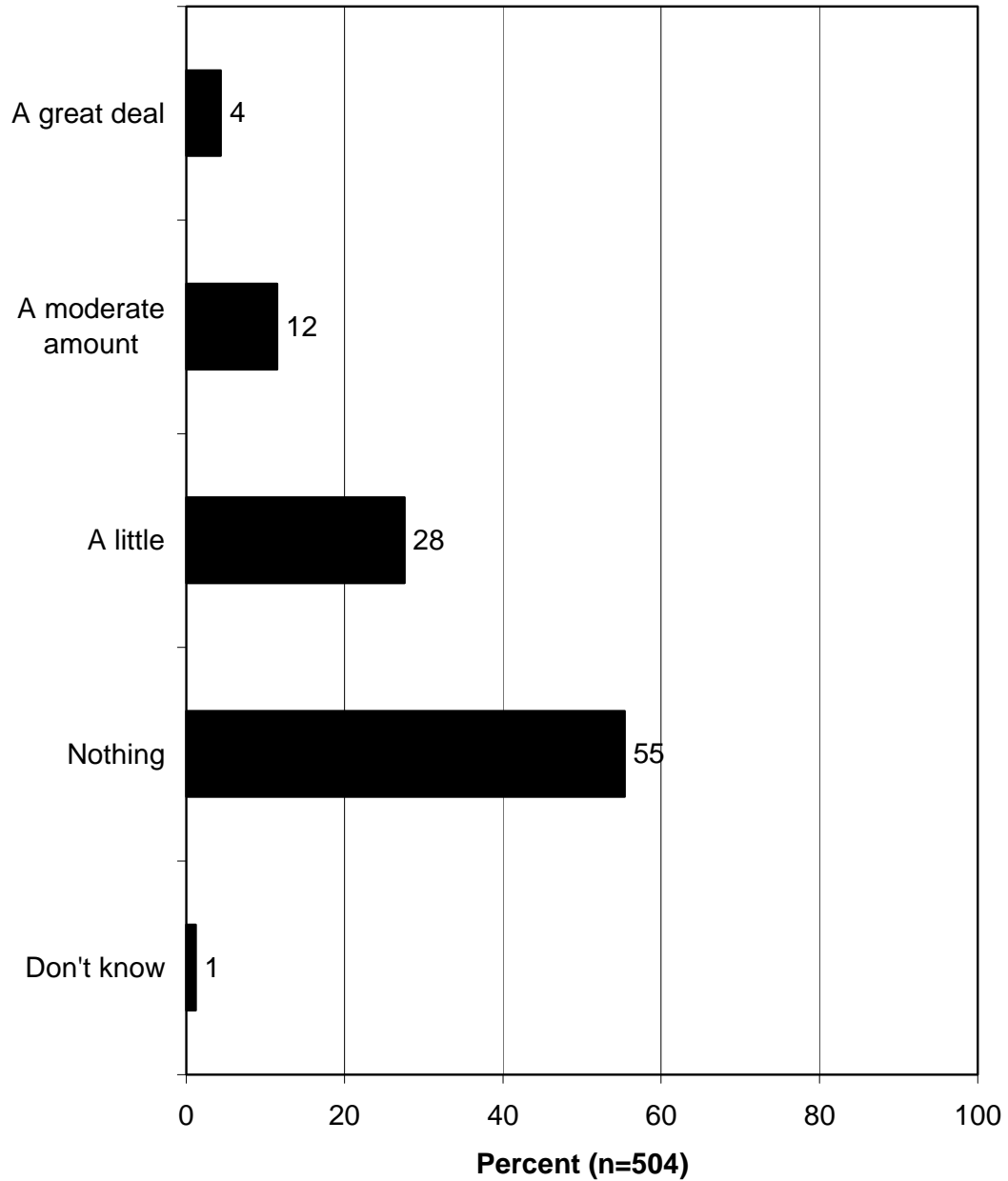
**Q15. Have you seen or heard the term controlled burning?**



**Q16. Have you seen or heard the term prescribed burning?**

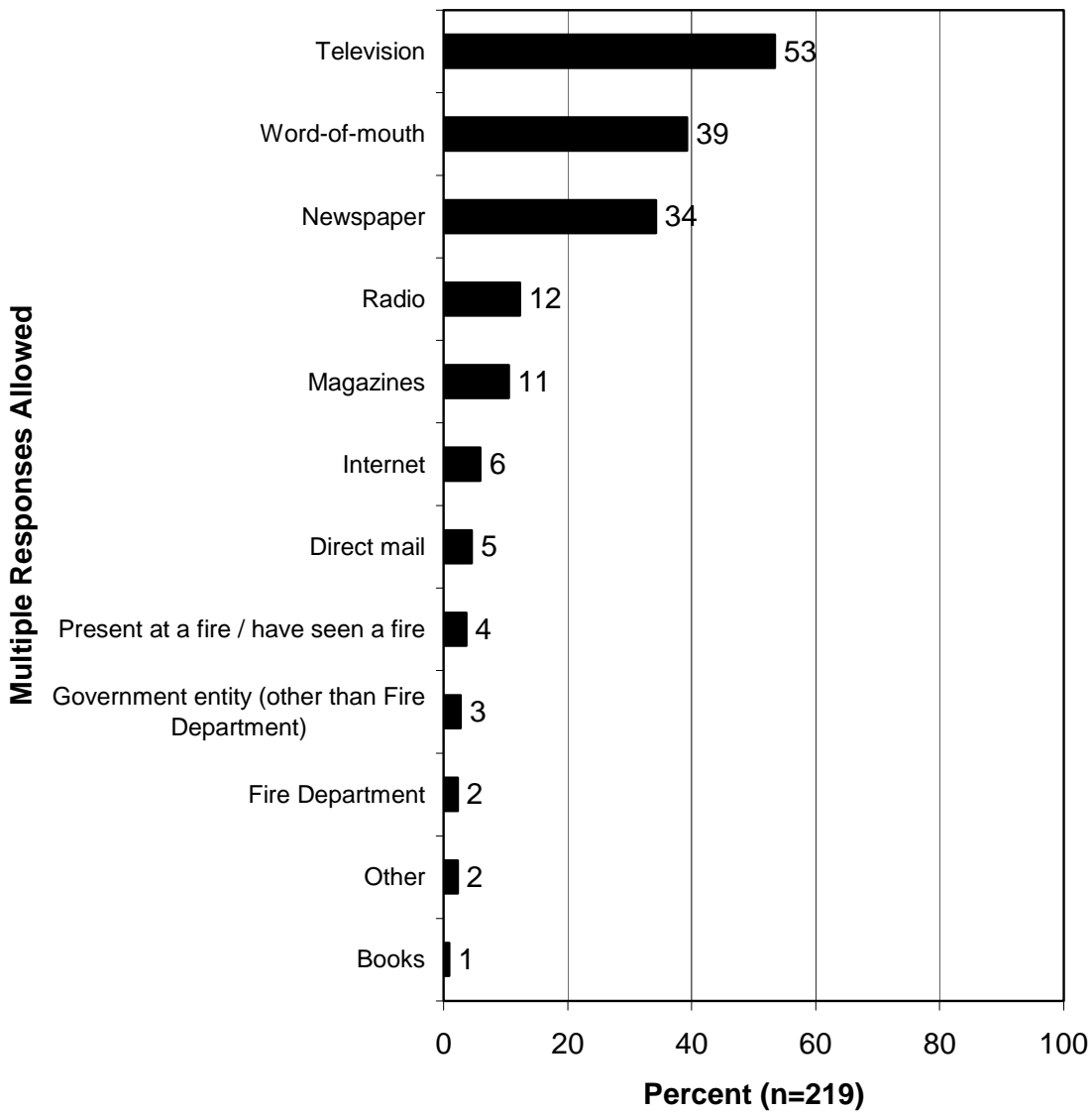


**Q26. In the past 12 months, have you seen or heard a great deal, a moderate amount, a little, or nothing about controlled burning or prescribed fire?**

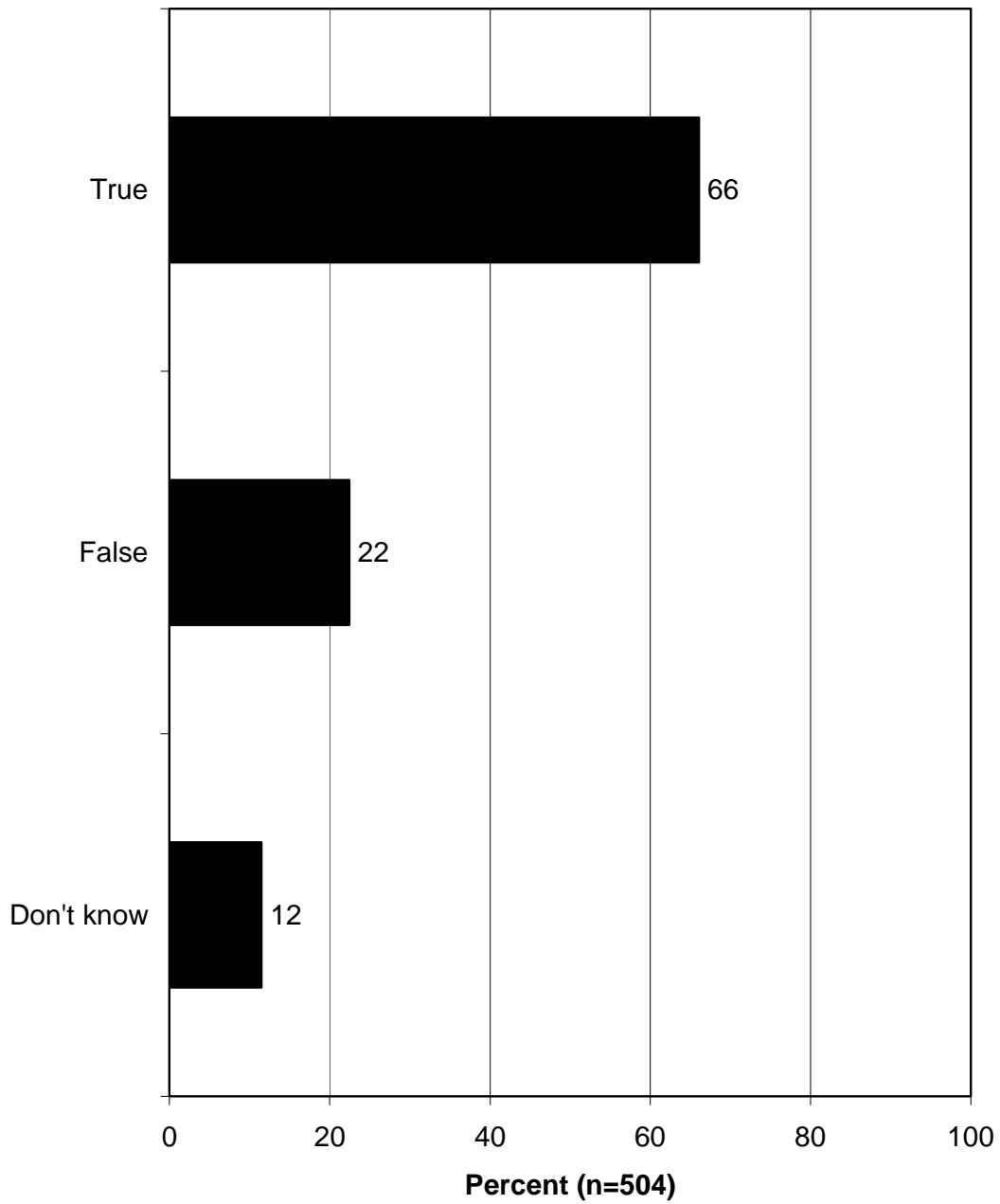




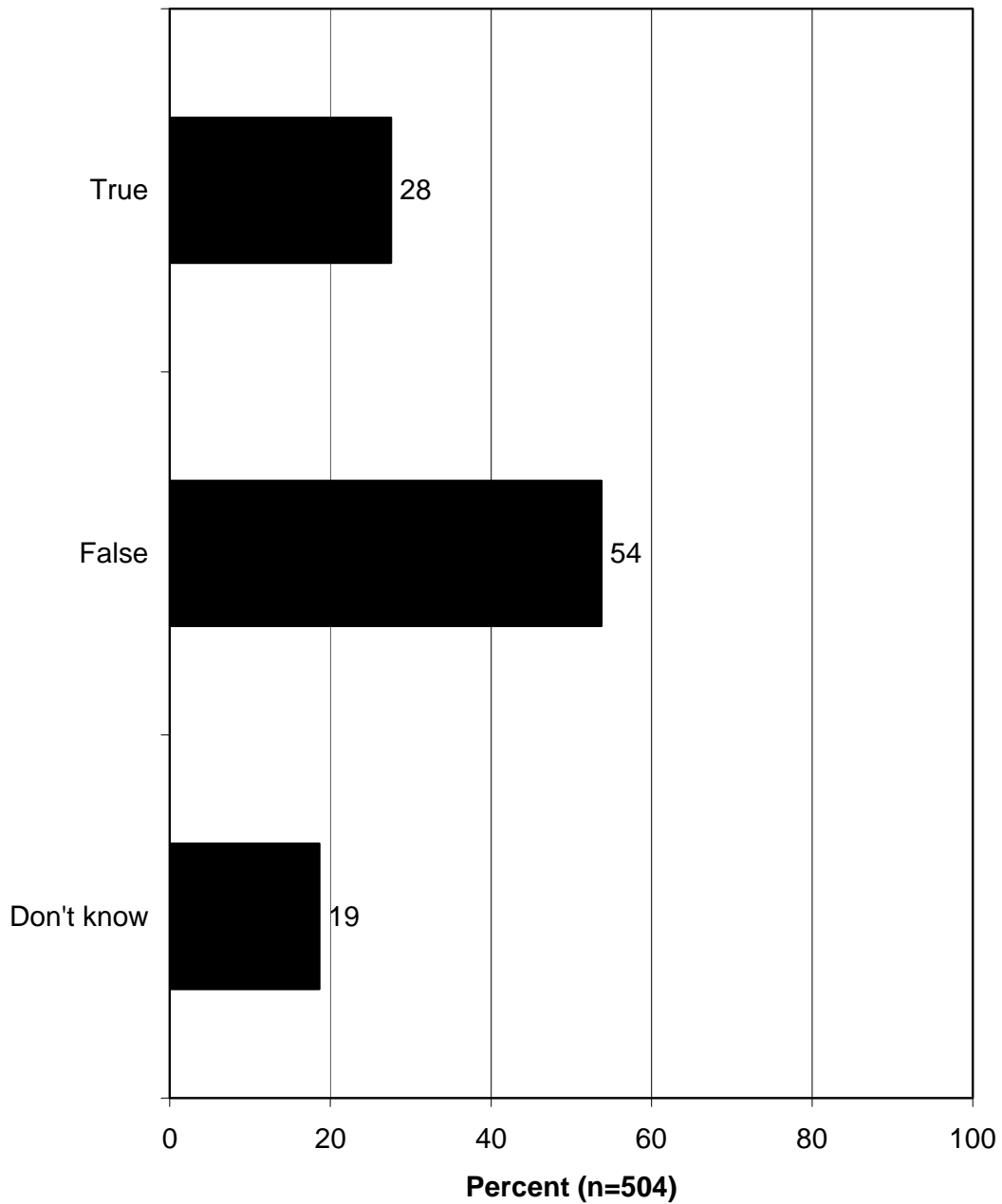
**Q29/30. Please tell me from which of the following sources you have received information on controlled burning or prescribed fire? (Asked of those who have seen or heard about controlled burning or prescribed fire in the last 12 months.)**



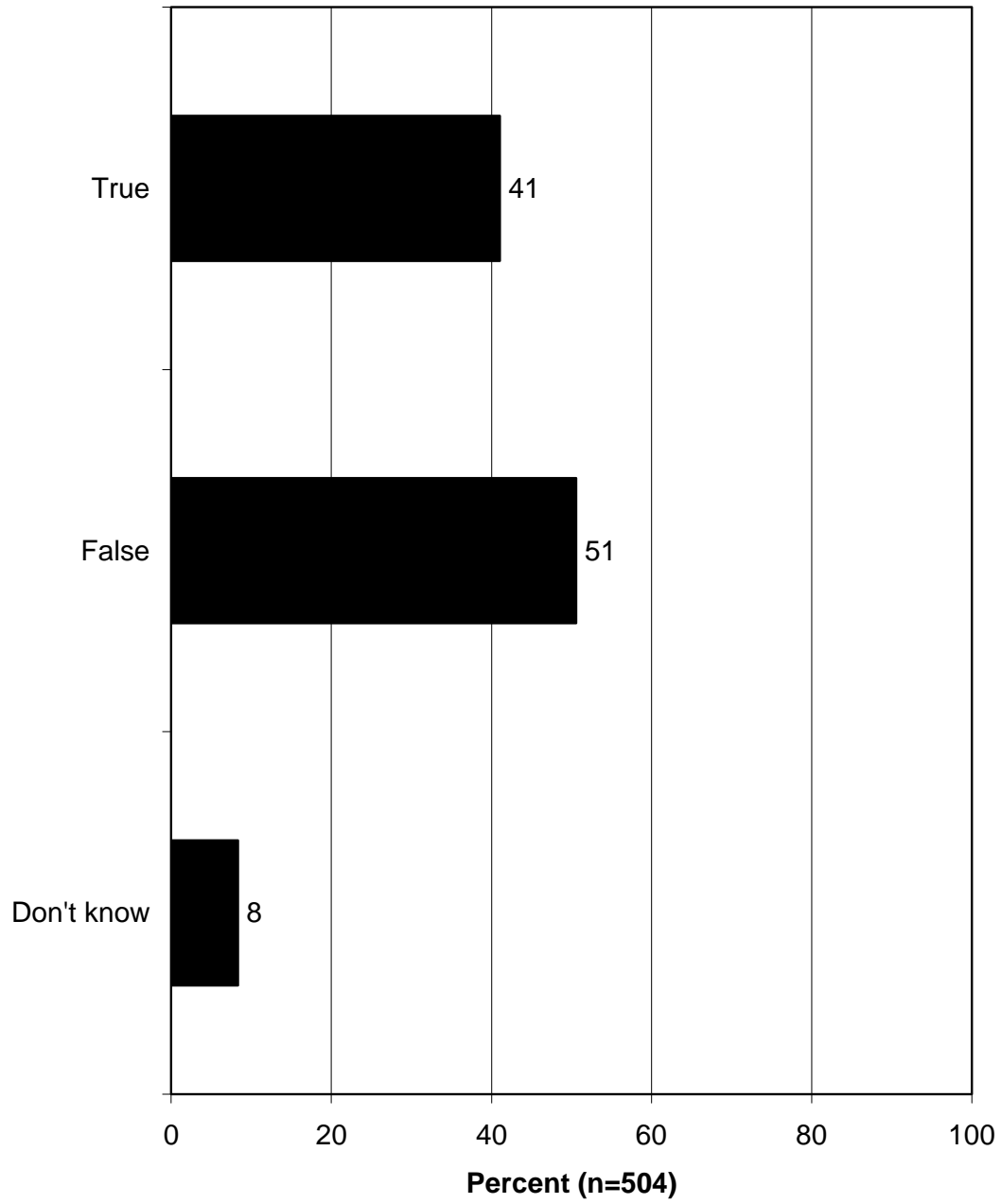
**Q12. Fire is beneficial to some of South Carolina's native plants and trees. (Do you think this statement is true or false?)**



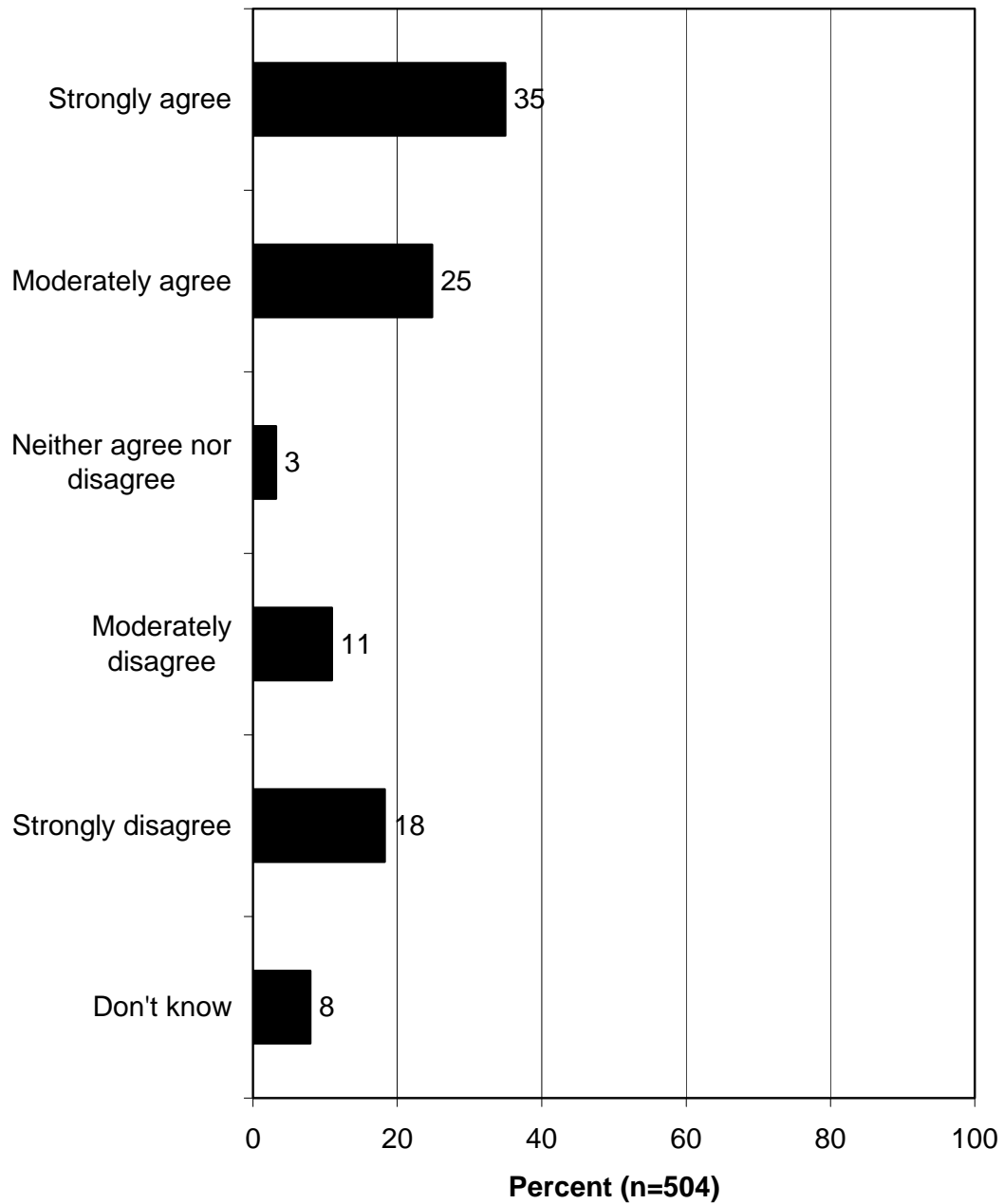
**Q13. Fire is not necessary to maintain a natural balance in South Carolina's ecosystems. (Do you think this statement is true or false?)**



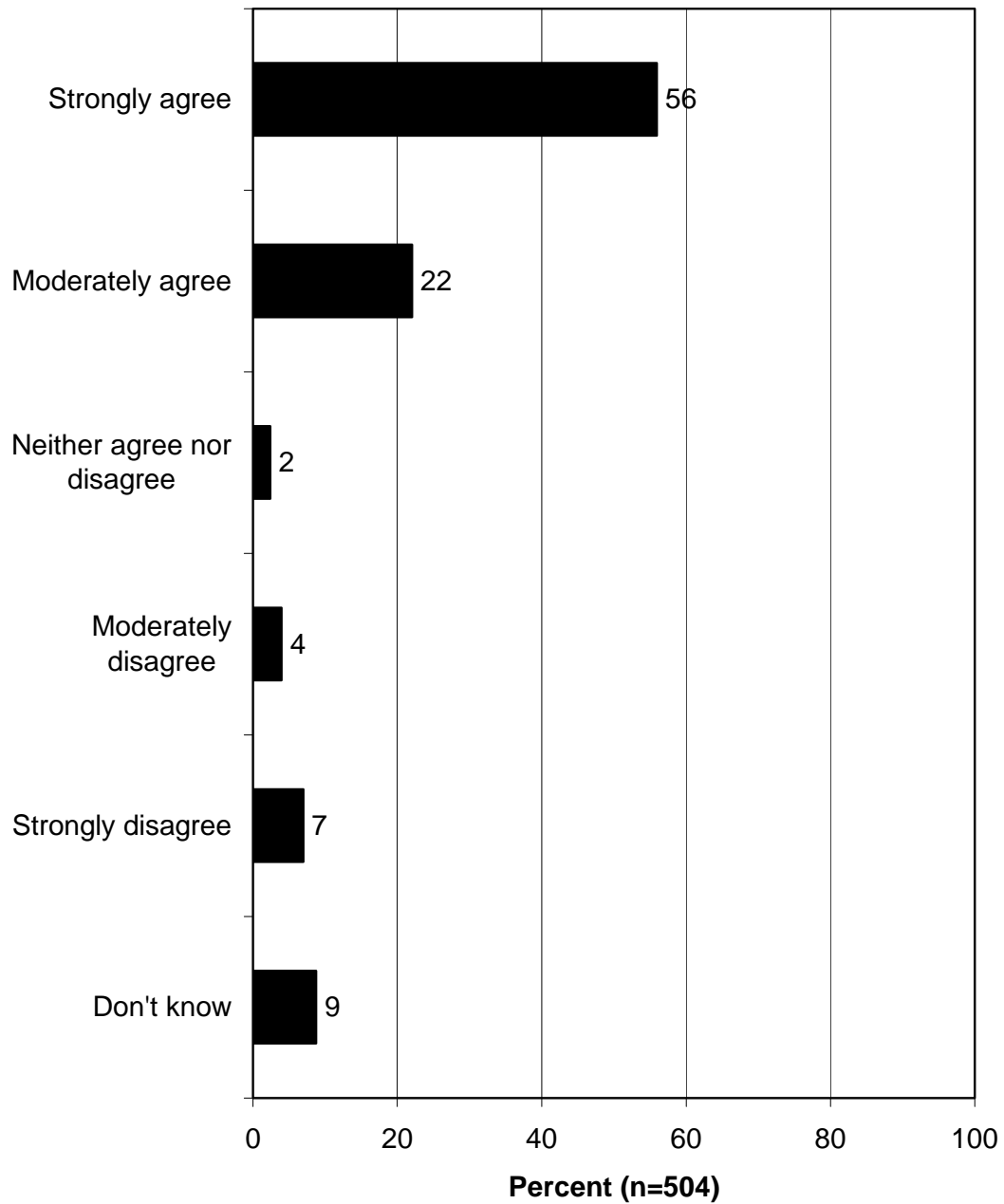
**Q14. Fire is beneficial for wildlife habitat. (Do you think this statement is true or false?)**



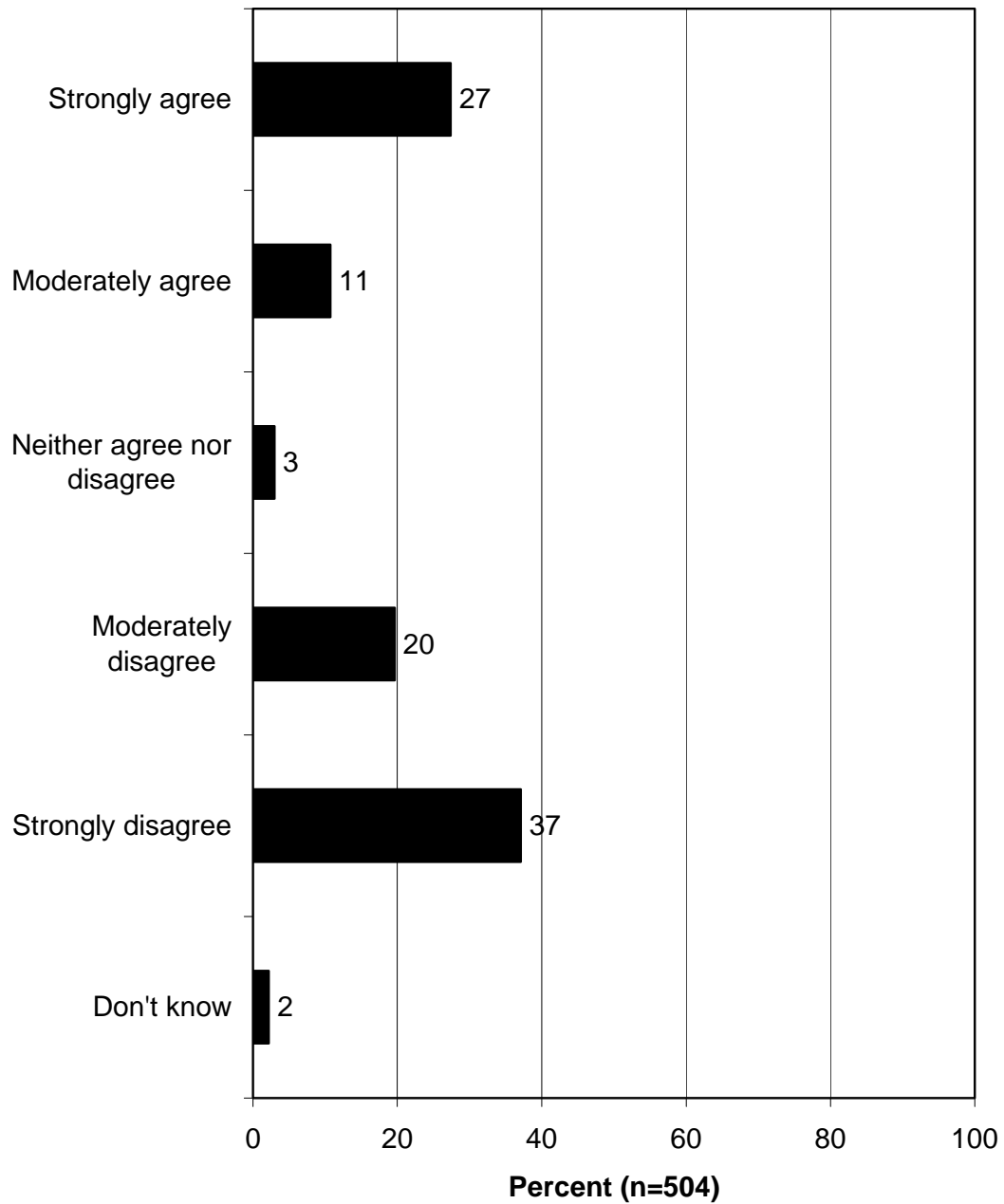
**Q20. Some plants and animals benefit from the use of prescribed fire. (Do you agree or disagree with this statement?)**



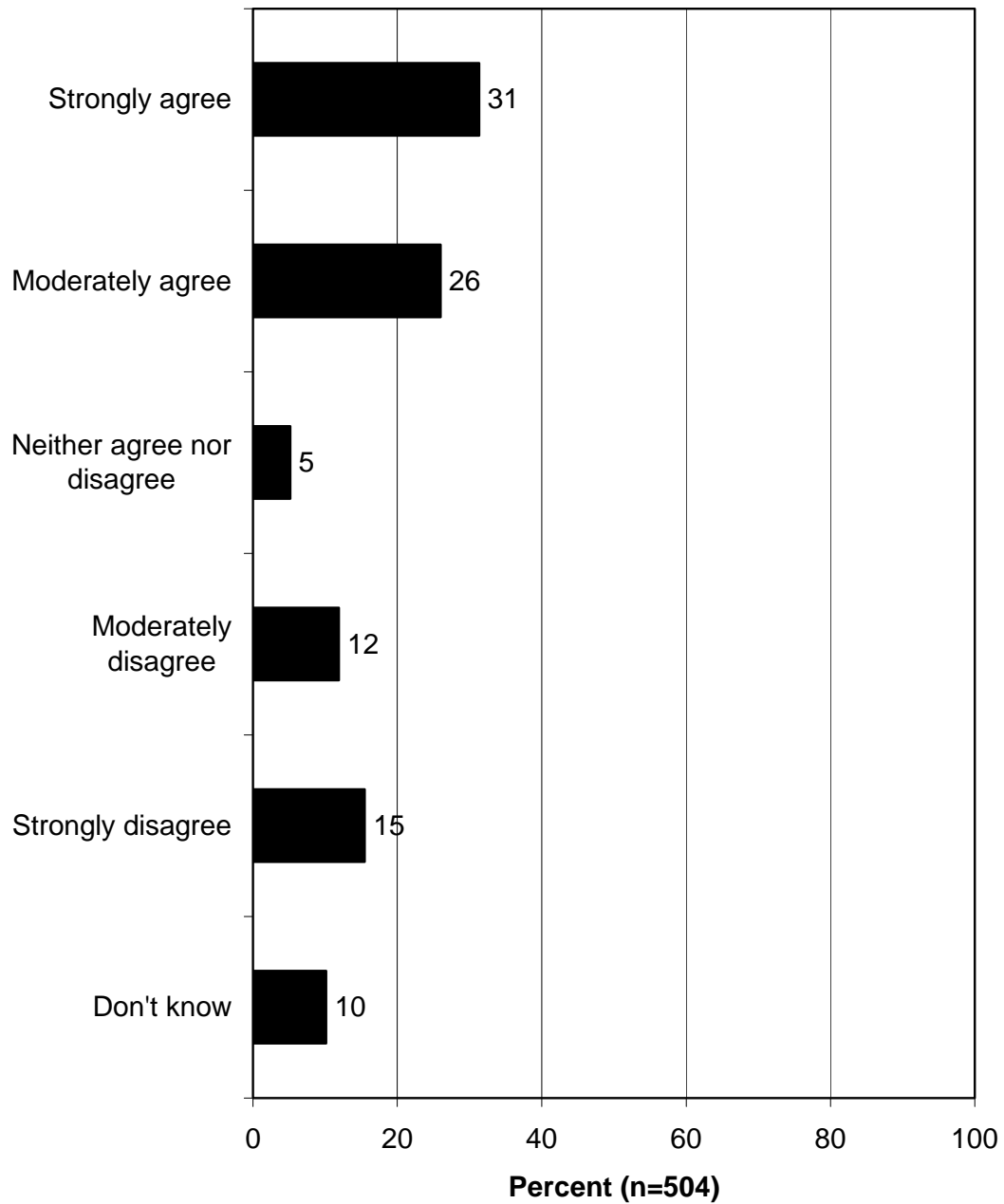
**Q21. Prescribed fire is an effective method used to prevent wildfires. (Do you agree or disagree with this statement?)**



**Q23. Prescribed fires and wildfires are equally dangerous to the public's safety. (Do you agree or disagree with this statement?)**

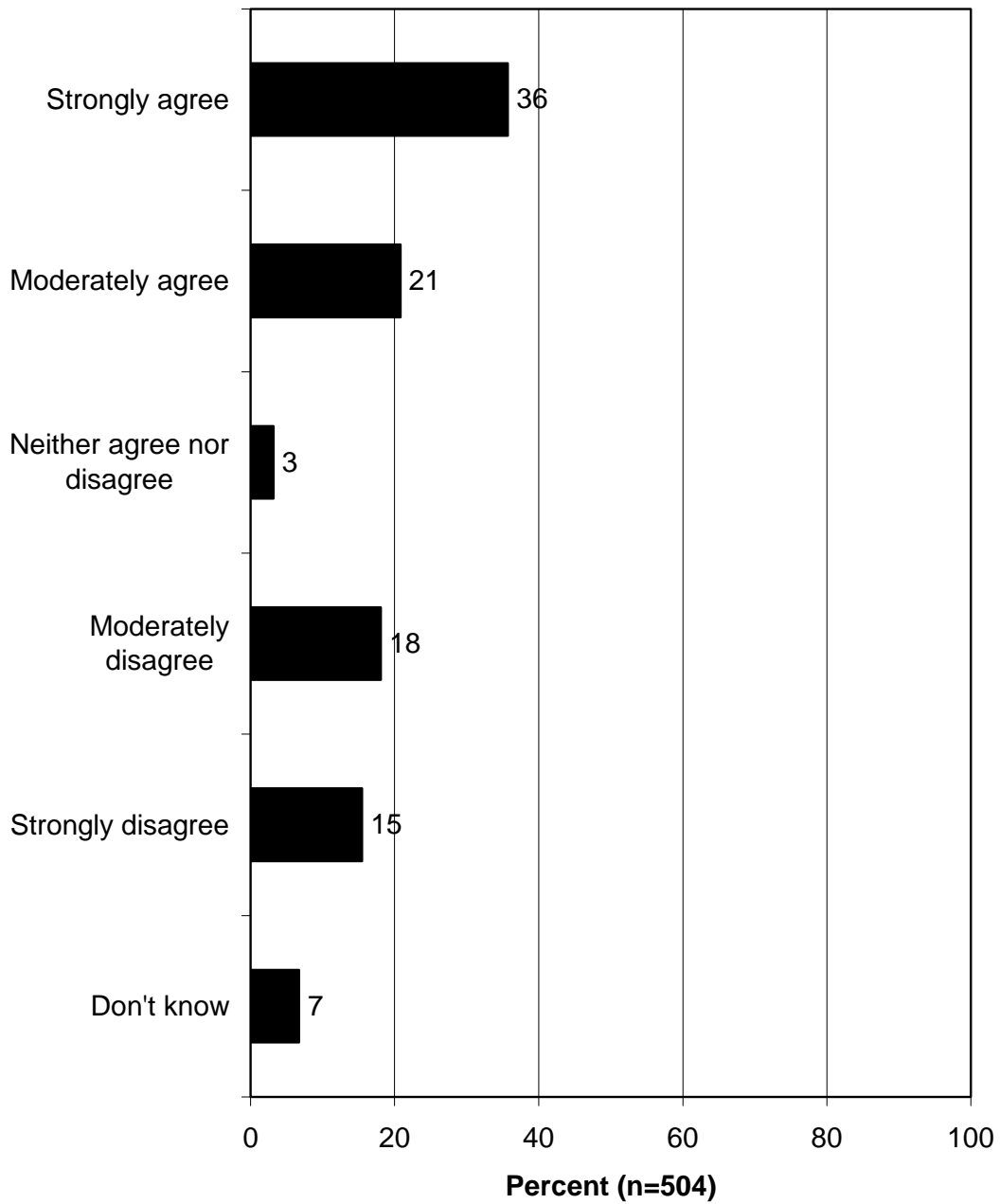


**Q24. Animals are usually able to find safety during prescribed fires. (Do you agree or disagree with this statement?)**





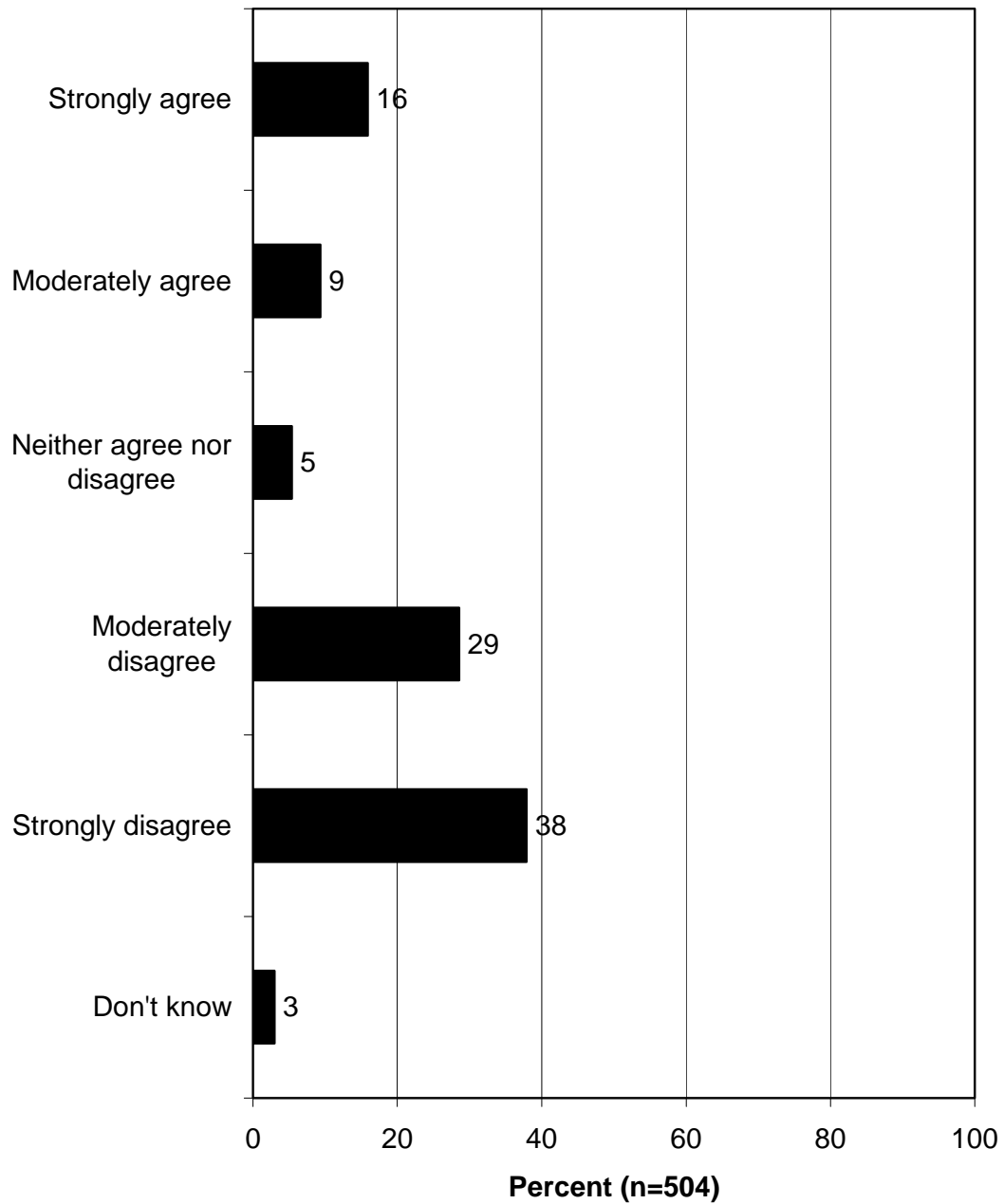
**Q22. The smoke from prescribed fires poses as much threat to public health as smoke from wildfires. (Do you agree or disagree with this statement?)**



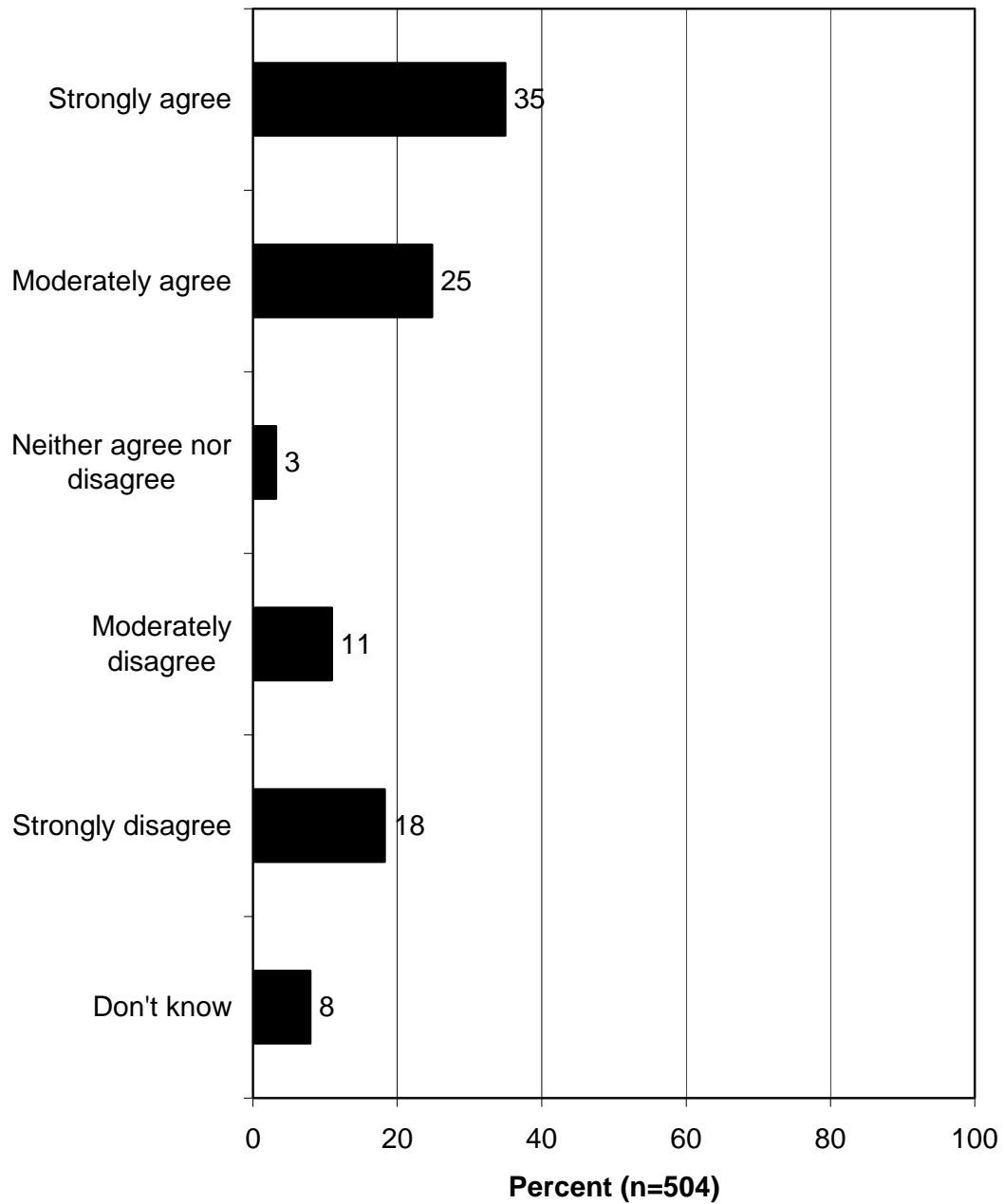
## PERCEPTIONS OF AND OPINIONS ON CONTROLLED BURNING

- Most South Carolina voters appear to approve of or support controlled burning.
  - 67% *disagree* with the statement that prescribed fires should *not* be allowed in South Carolina's woodlands.
  - 60% agree that some plants and animals benefit from the use of prescribed fire.
  - 78% agree that prescribed fire is an effective method used to prevent wildfires.
  - 57% *disagree* that prescribed fires and wildfires are equally dangerous to the public's safety.
  - 76% agree that, given the benefits of prescribed fires, they are willing to accept occasional smoke, as long as the smoke does not affect health and safety.
  
- More South Carolina voters agree than disagree that the smoke from prescribed fires poses as much of a threat to public health as does smoke from wildfires: 57% agree with this statement, but 33% disagree. On this question, most voters' beliefs are incorrect. While breathing any smoke is harmful, prescribed fires are less likely to cause unhealthy conditions to residents simply because of the smoke management rules associated with prescribed fires. For instance, managers of prescribed fires must first identify any smoke-sensitive areas (such as housing developments) and evaluate downwind conditions prior to and during burning operations. Other smoke management rules of prescribed burns include consideration of weather conditions such as transport wind direction, mixing height, and ventilation rate. These smoke management guidelines help to reduce the harmful effects of prescribed fires.
  
- More South Carolina voters agree (57%) than disagree (27%) that animals are usually able to find safety during prescribed fires. This statement is considered true, with several reasons that animals usually can find safety. Most importantly, prescribed fires are typically not fast-spreading, being set under controlled conditions. Additionally, prescribed fires can be planned to avoid prime nesting times. Another important reason prescribed fires do not cause many animal fatalities is that the practice of lighting all sides of a burn area, known as ring firing, which causes animal entrapment, is avoided.

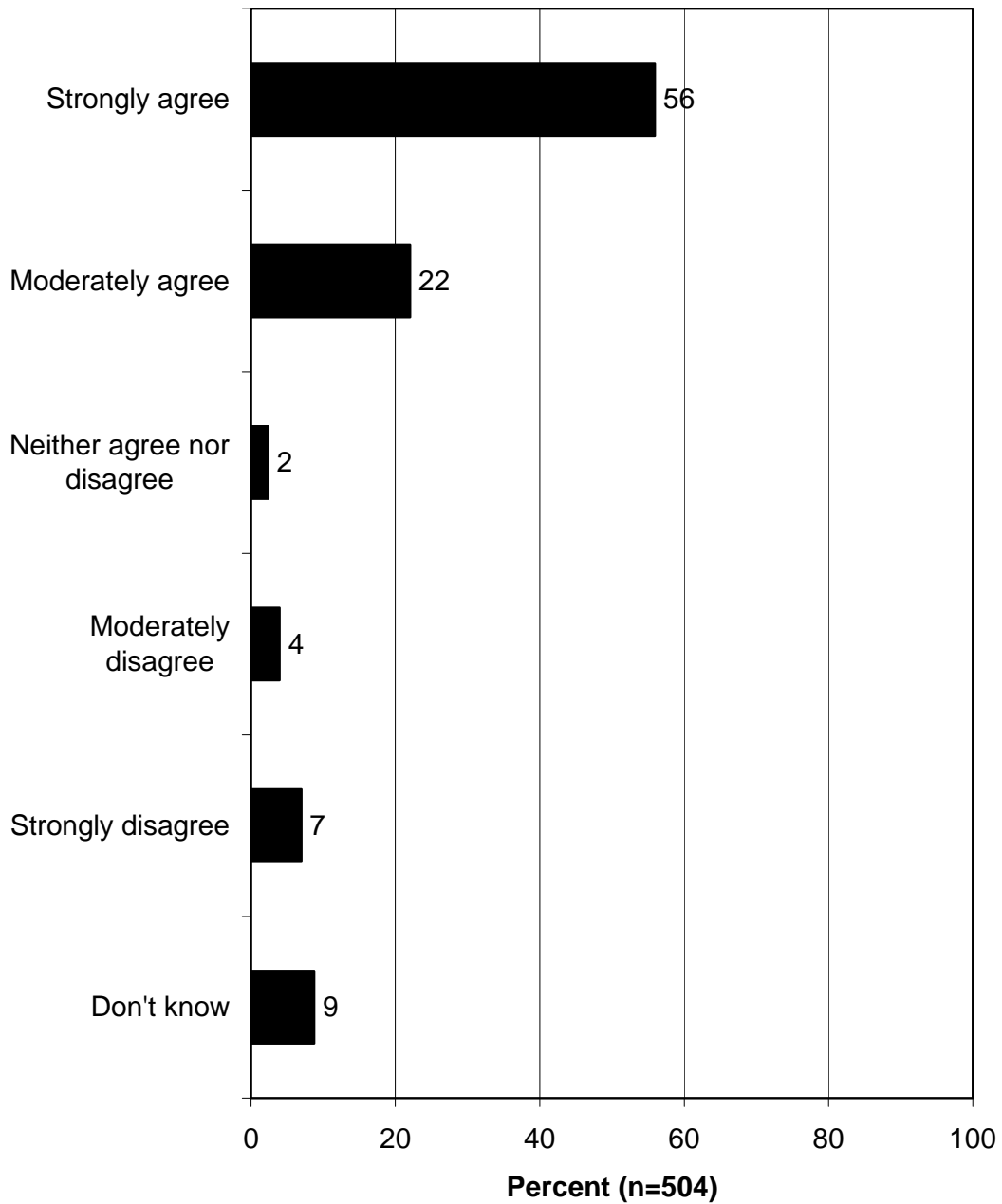
**Q19. Prescribed fires should not be allowed in South Carolina's woodlands. (Do you agree or disagree with this statement?)**



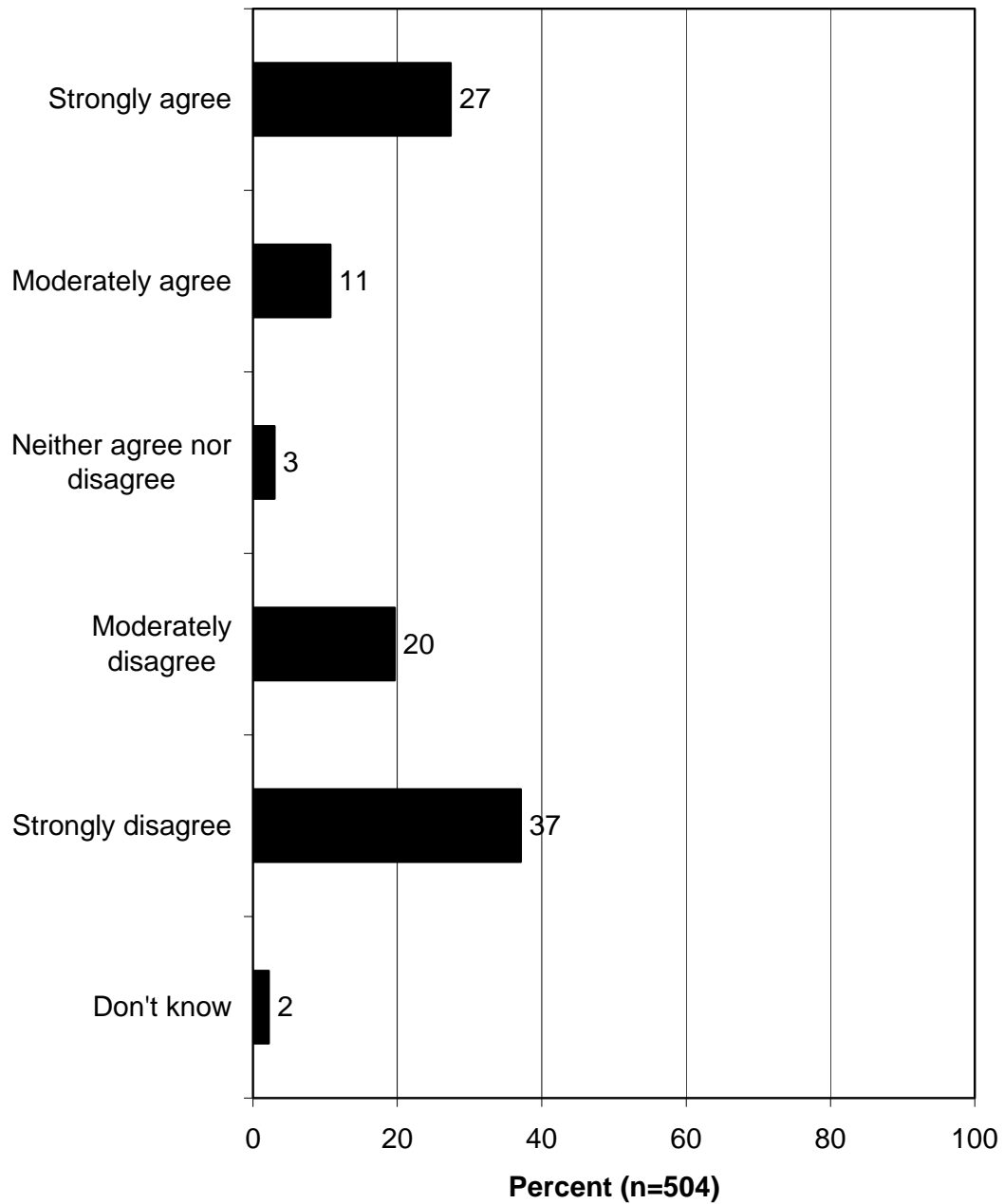
**Q20. Some plants and animals benefit from the use of prescribed fire. (Do you agree or disagree with this statement?)**



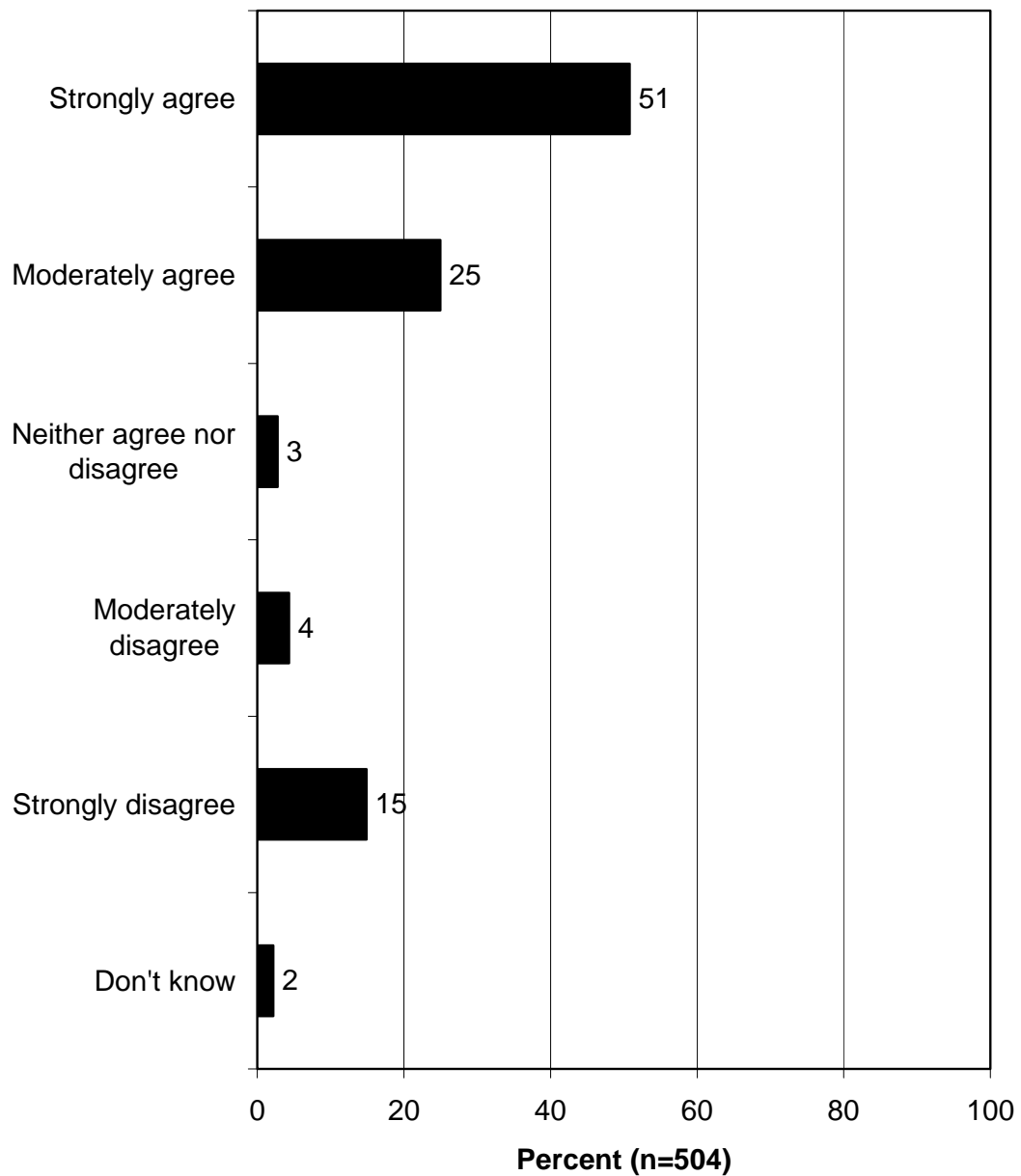
**Q21. Prescribed fire is an effective method used to prevent wildfires. (Do you agree or disagree with this statement?)**



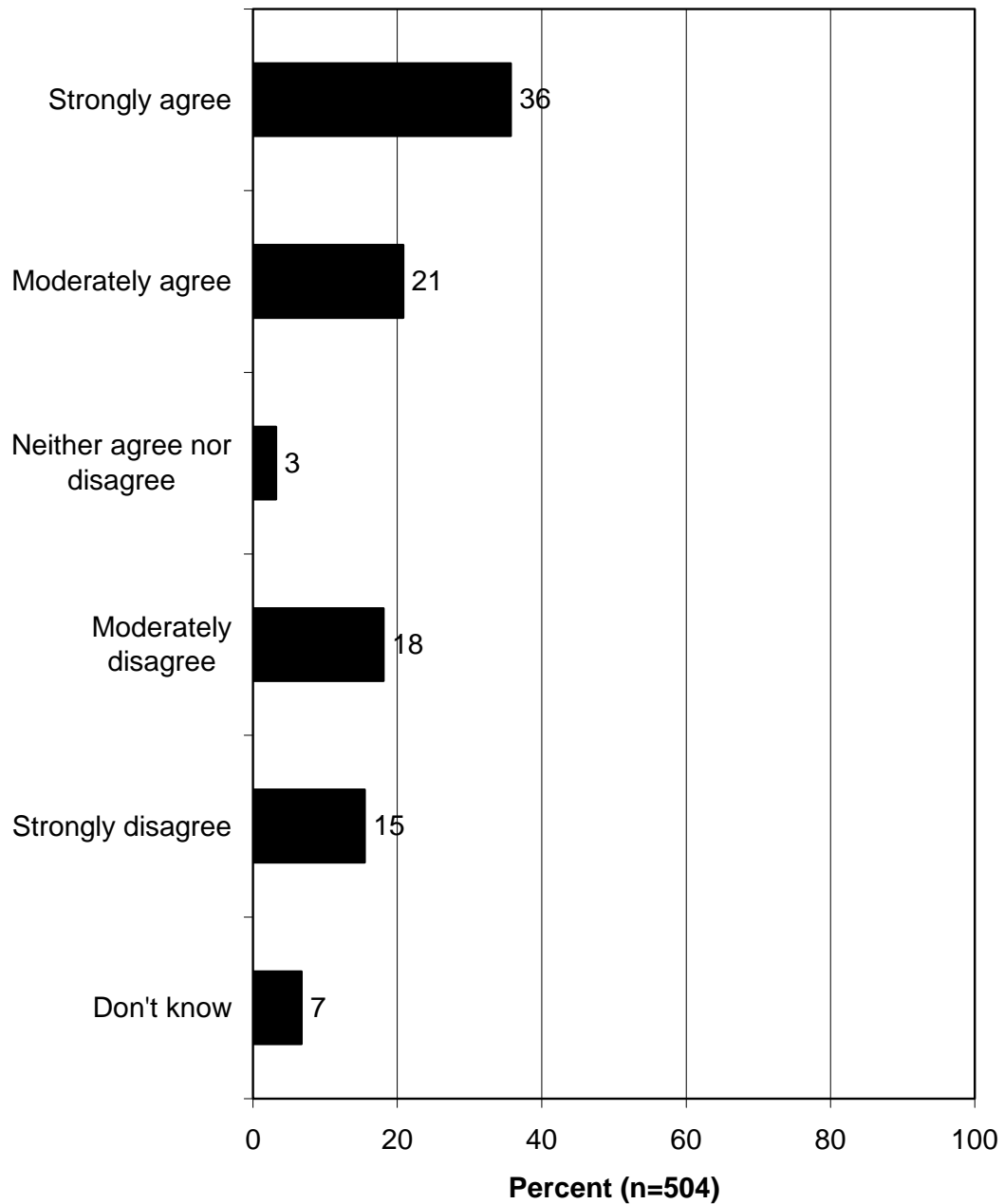
**Q23. Prescribed fires and wildfires are equally dangerous to the public's safety. (Do you agree or disagree with this statement?)**



**Q25. Given the benefits of prescribed fires, I am willing to accept occasional smoke as long as it doesn't affect my health and safety. (Do you agree or disagree with this statement?)**

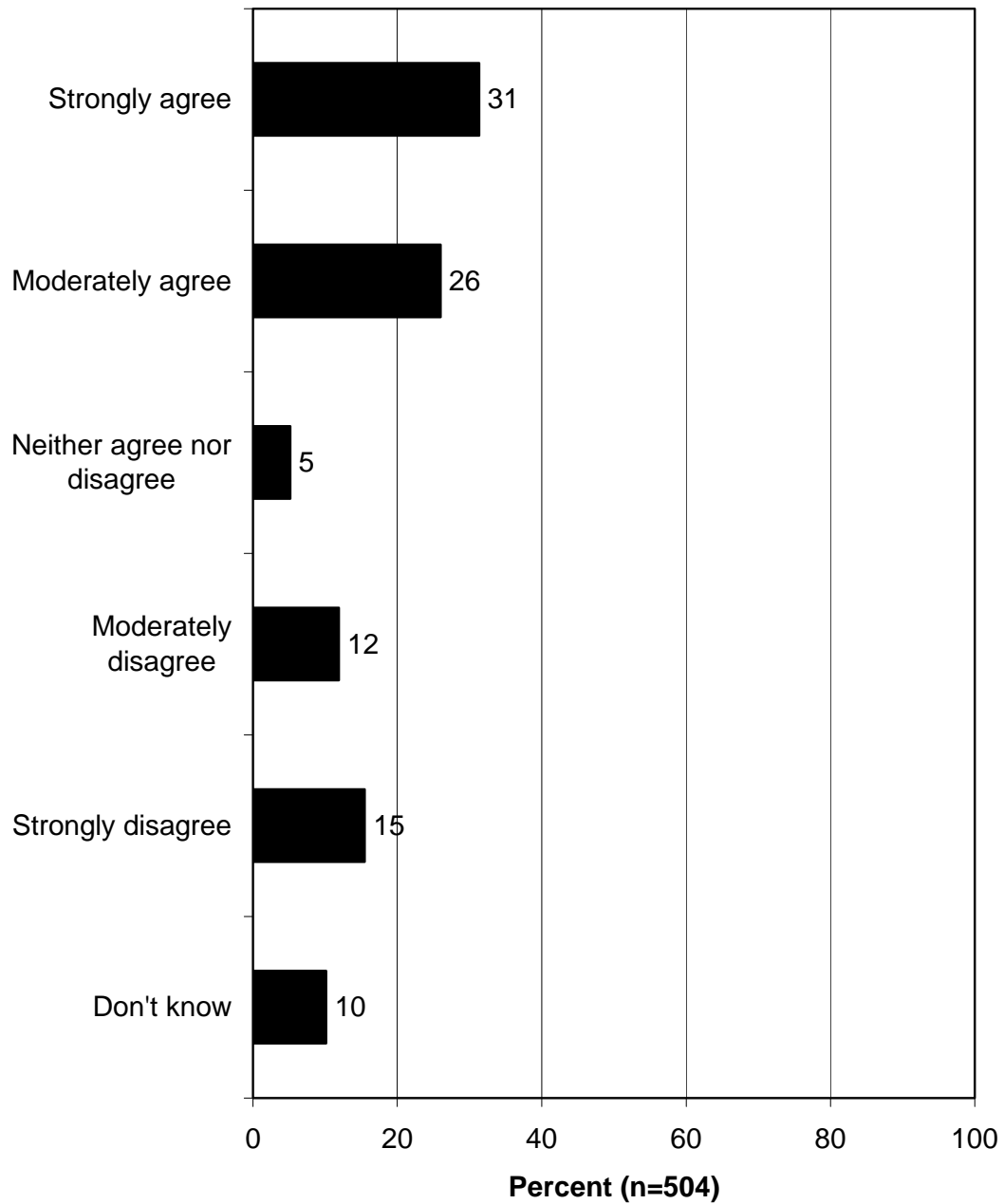


**Q22. The smoke from prescribed fires poses as much threat to public health as smoke from wildfires. (Do you agree or disagree with this statement?)**





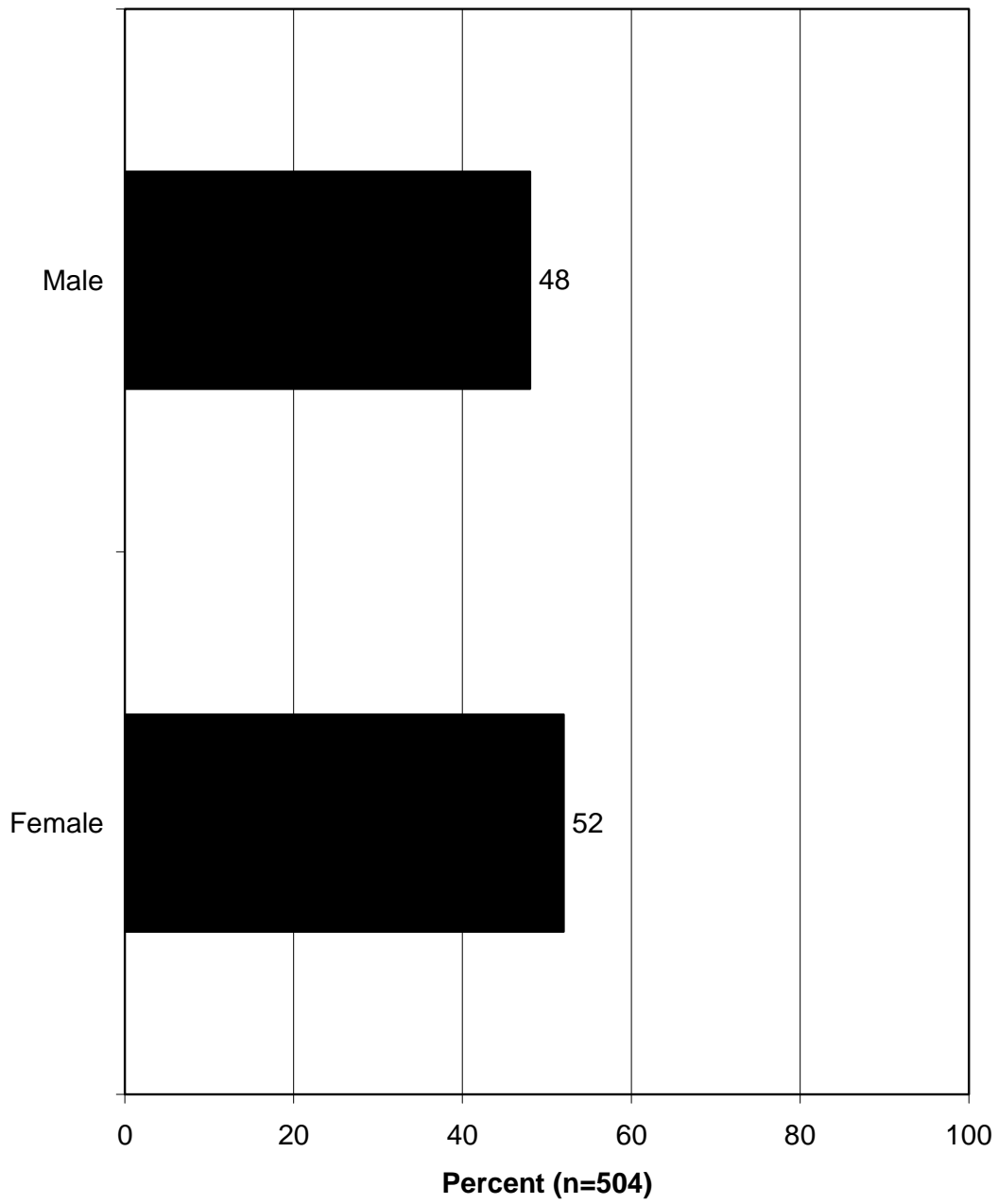
**Q24. Animals are usually able to find safety during prescribed fires. (Do you agree or disagree with this statement?)**

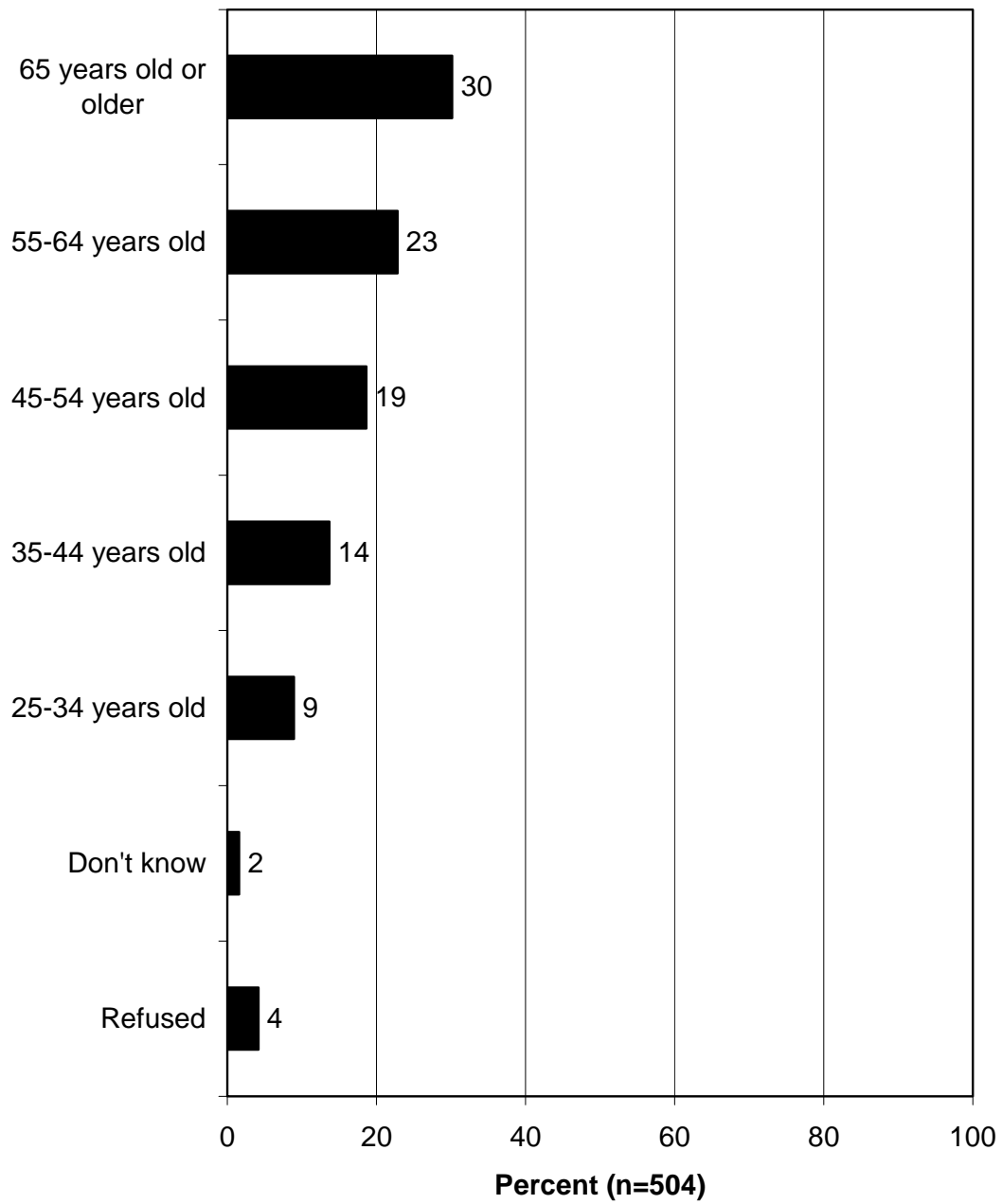


## DEMOGRAPHIC CHARACTERISTICS

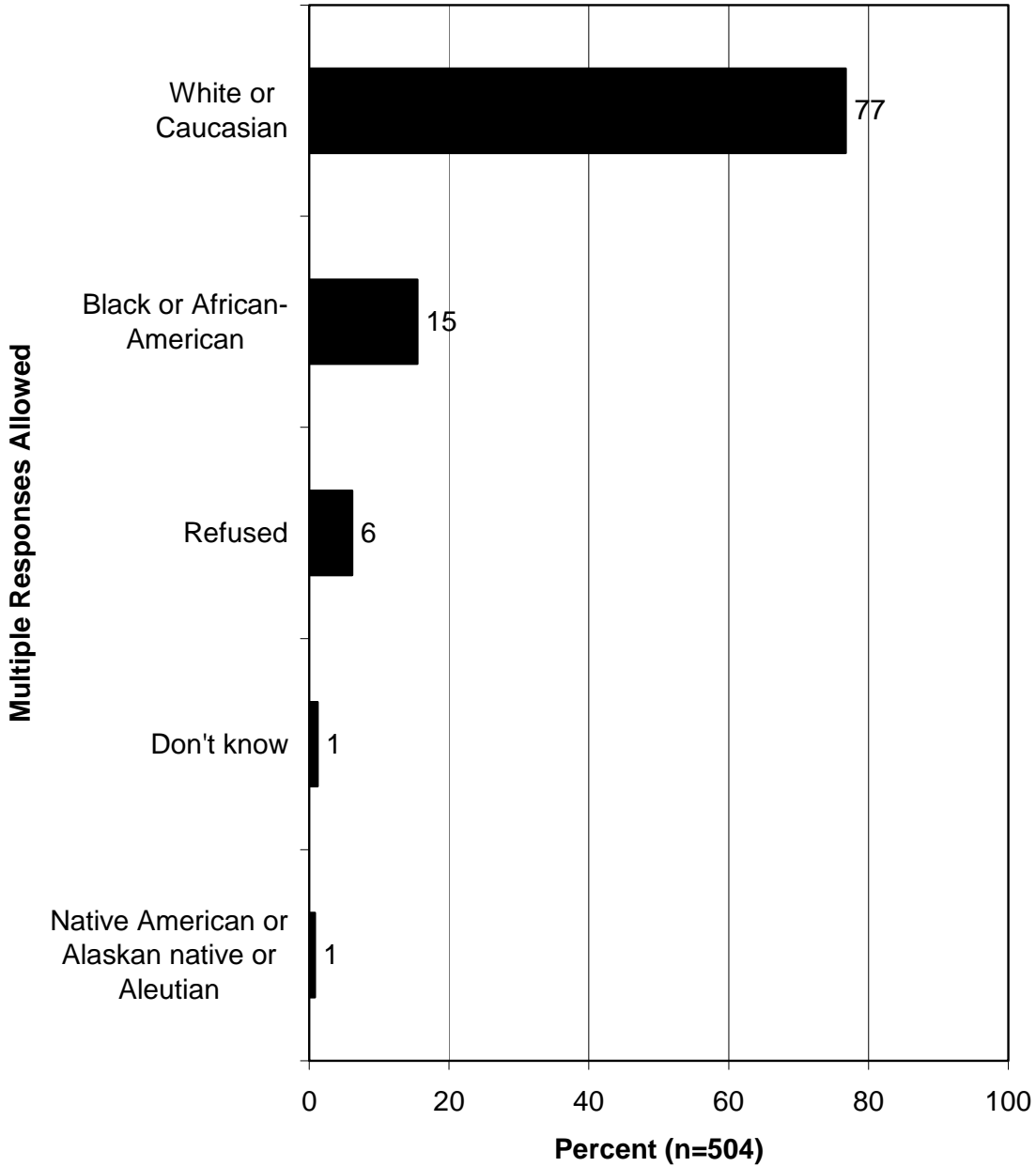
- The survey sample was about evenly divided regarding gender, with just slightly more females (52%).
- Ages of respondents are shown. (Note that the survey did not include those under 25 years of age, which would slightly skew the results upward relative to the general population.)
- Approximately three-fourths of South Carolina voters (77%) are white/Caucasian; 15% are black or African-American.
- Educational levels of South Carolina voters are shown: 60% have taken some college courses, and 31% have a Bachelor's degree (with or without a higher degree).
- South Carolina voters are, for the most part, stable regarding their state residency, as only 14% have lived in South Carolina for less than 10 years; 83% have lived in the state for 10 years or more. The mean number of years of residency is 39.7 years; the median is 40. (Note that the survey did not include those under 25 years of age, which would slightly skew the results upward relative to the general population.)
- Counties of residency are shown. Richland, Horry, Lexington, Greenville, and Spartanburg Counties have the most respondents to the survey.
- South Carolina voters are distributed in thirds: 33% reside in a large city/urban area or suburban area; 29% live in a small city or town; and 34% live in a rural area, on or off a farm.
- A large majority of South Carolina voters (83%) own land in South Carolina, and 80% own the land on which they reside.
  - Those who own land were asked how many acres they own. While the median number of acres is 1 acre and the majority of landowners (68%) own less than 5 acres, a substantial percentage of landowners (10%) own 50 acres or more. The large majority of landowners in the study (76%) own only a single tract; 21% own multiple tracts.

**Q56. Respondent's gender (not asked, but observed by interviewer).**

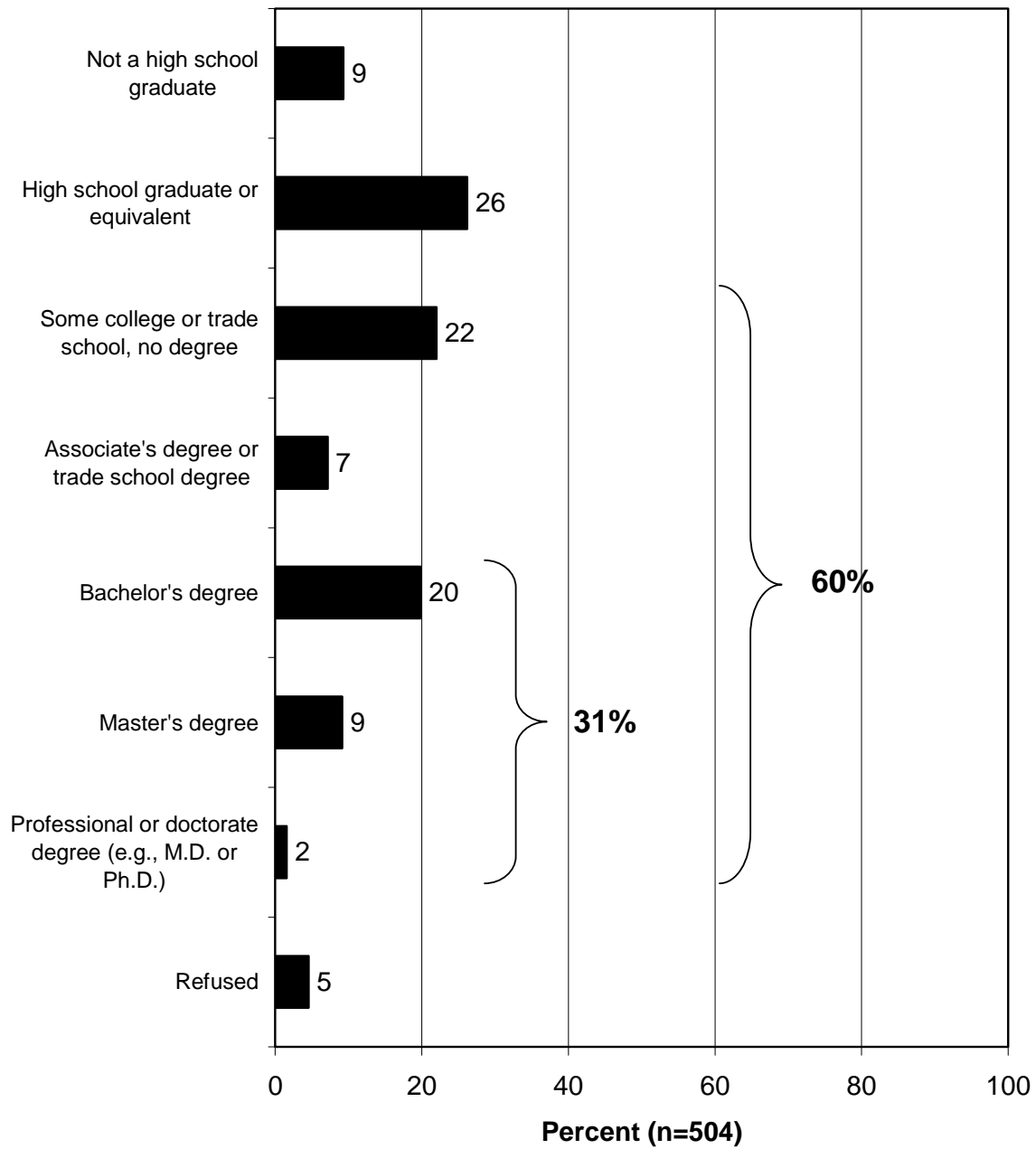


**Q50. May I ask your age?**

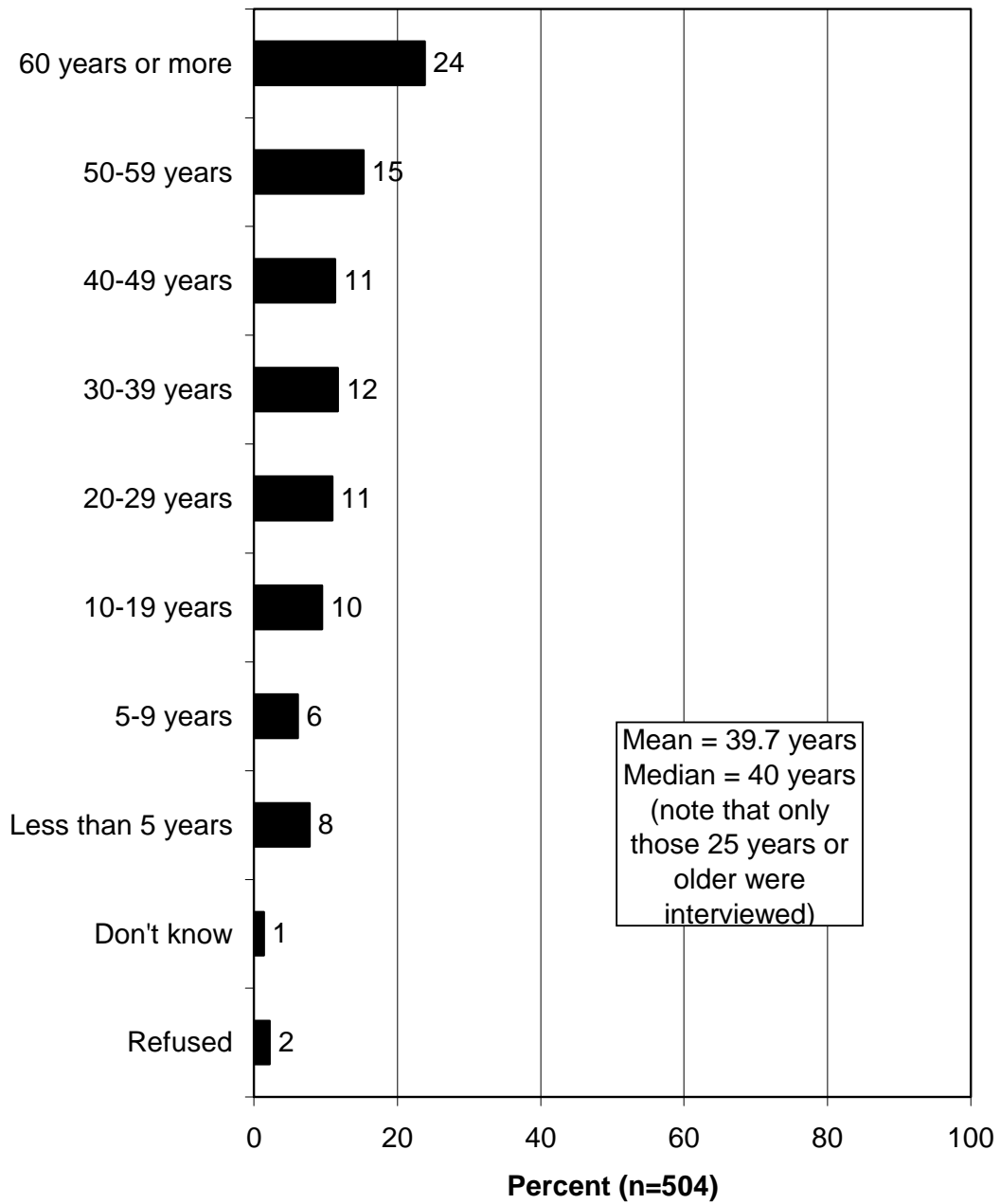
**Q48. What races or ethnic backgrounds do you consider yourself? Please name all that you think apply.**

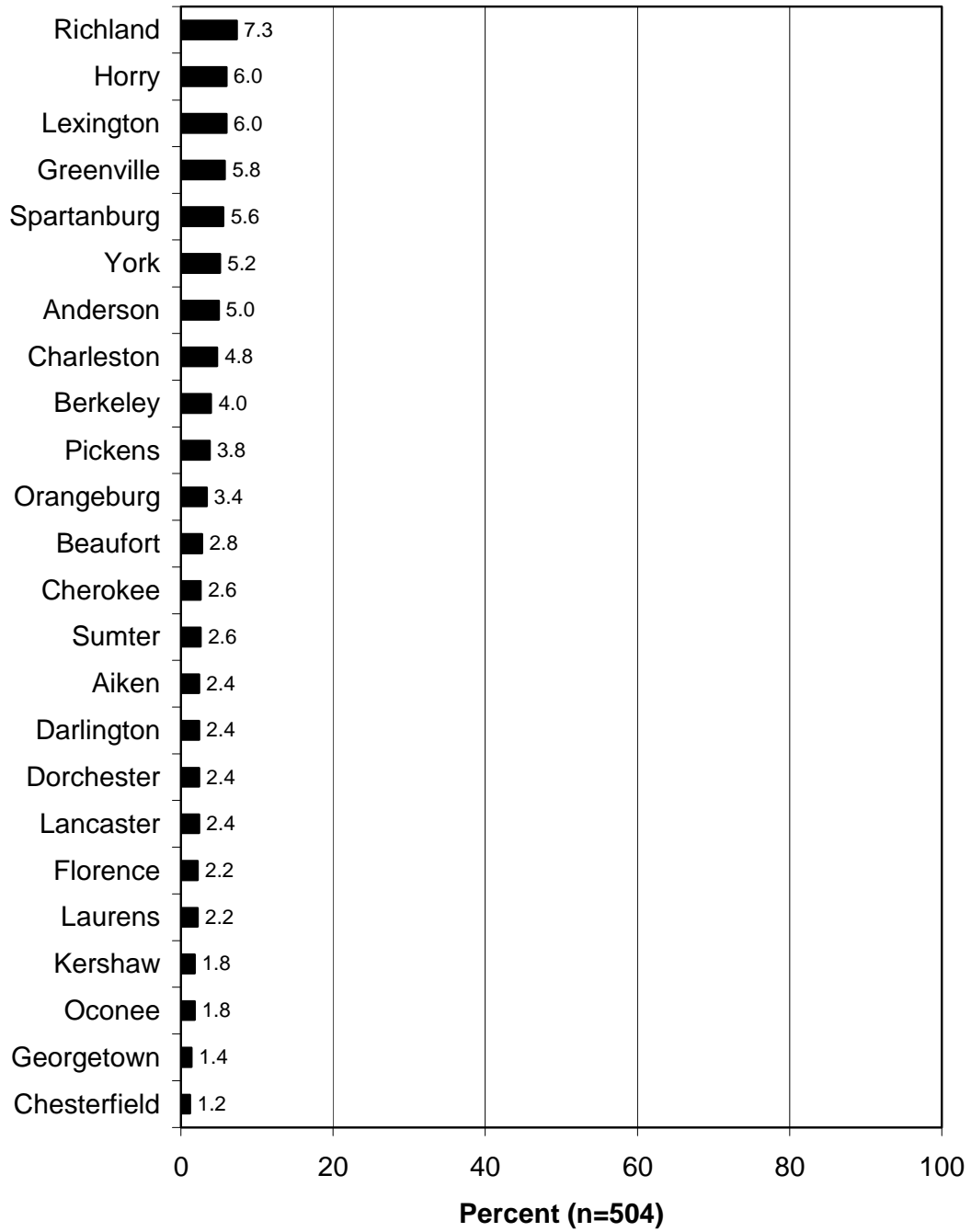


### Q45. What is the highest level of education you have completed?



### Q32. How many years have you lived in South Carolina?

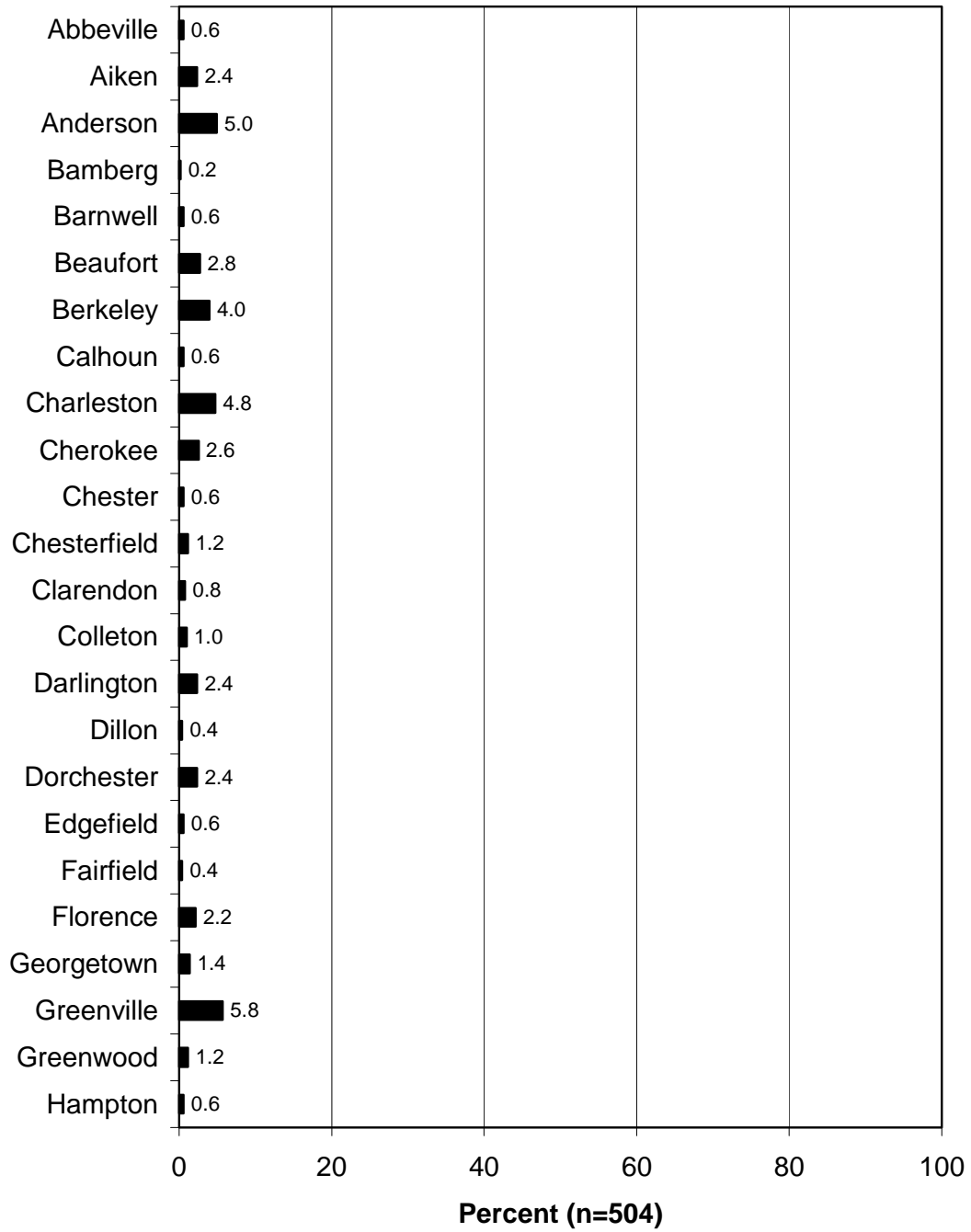


**Q36. In what county do you live? (Part 1.)**

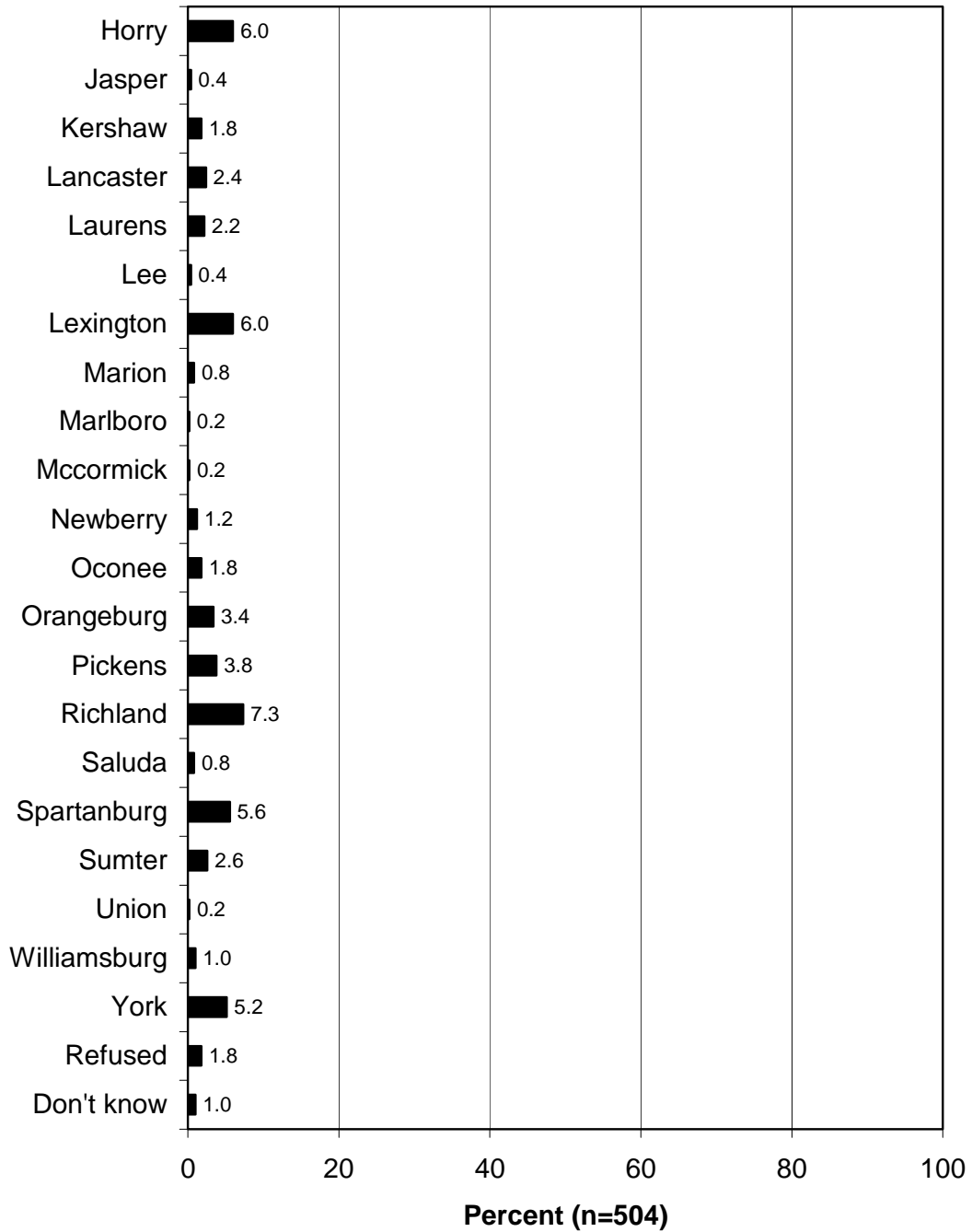


### Q36. In what county do you live? (Part 2.)

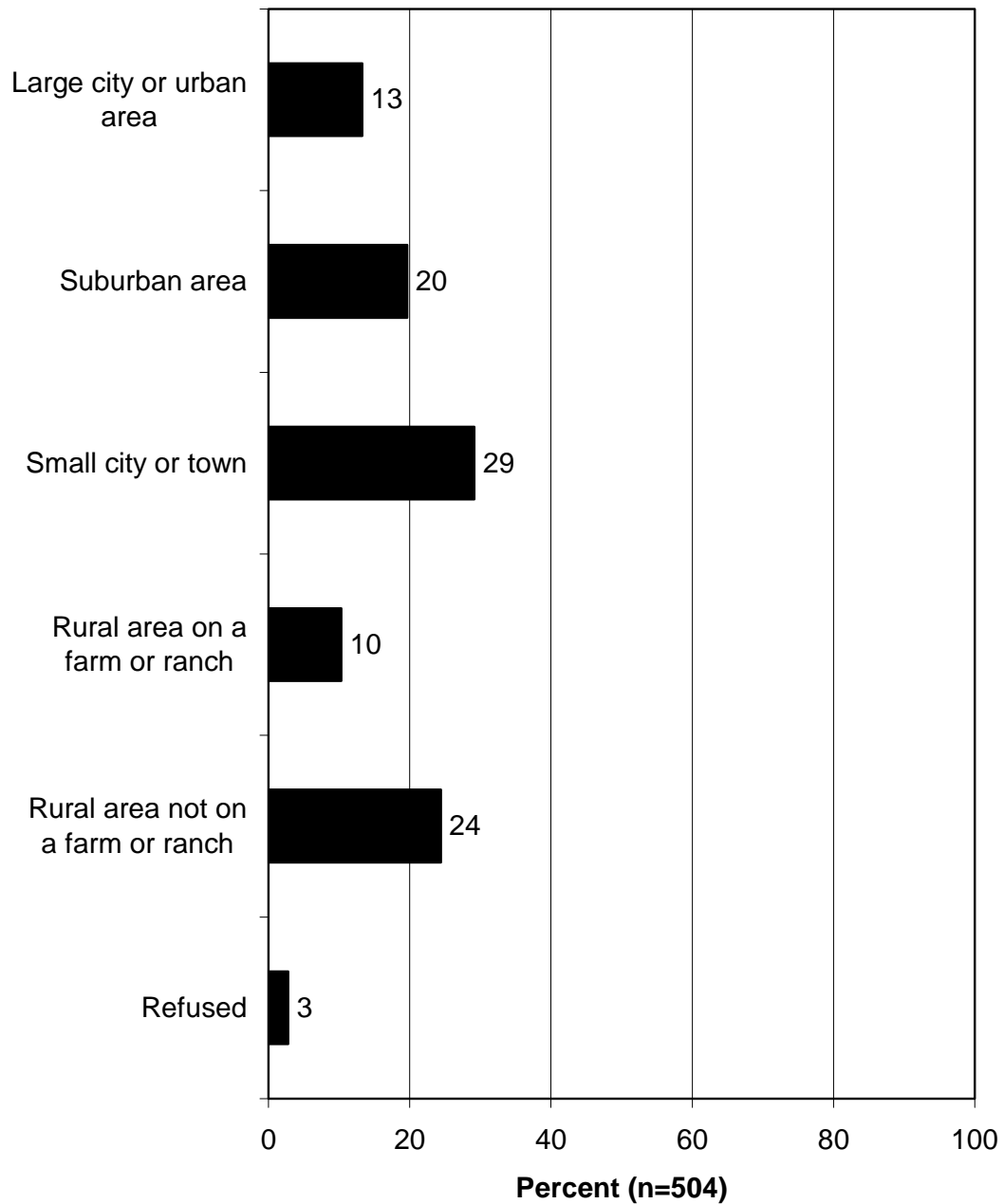


**Q36. In what county do you live? (Part 1.)**

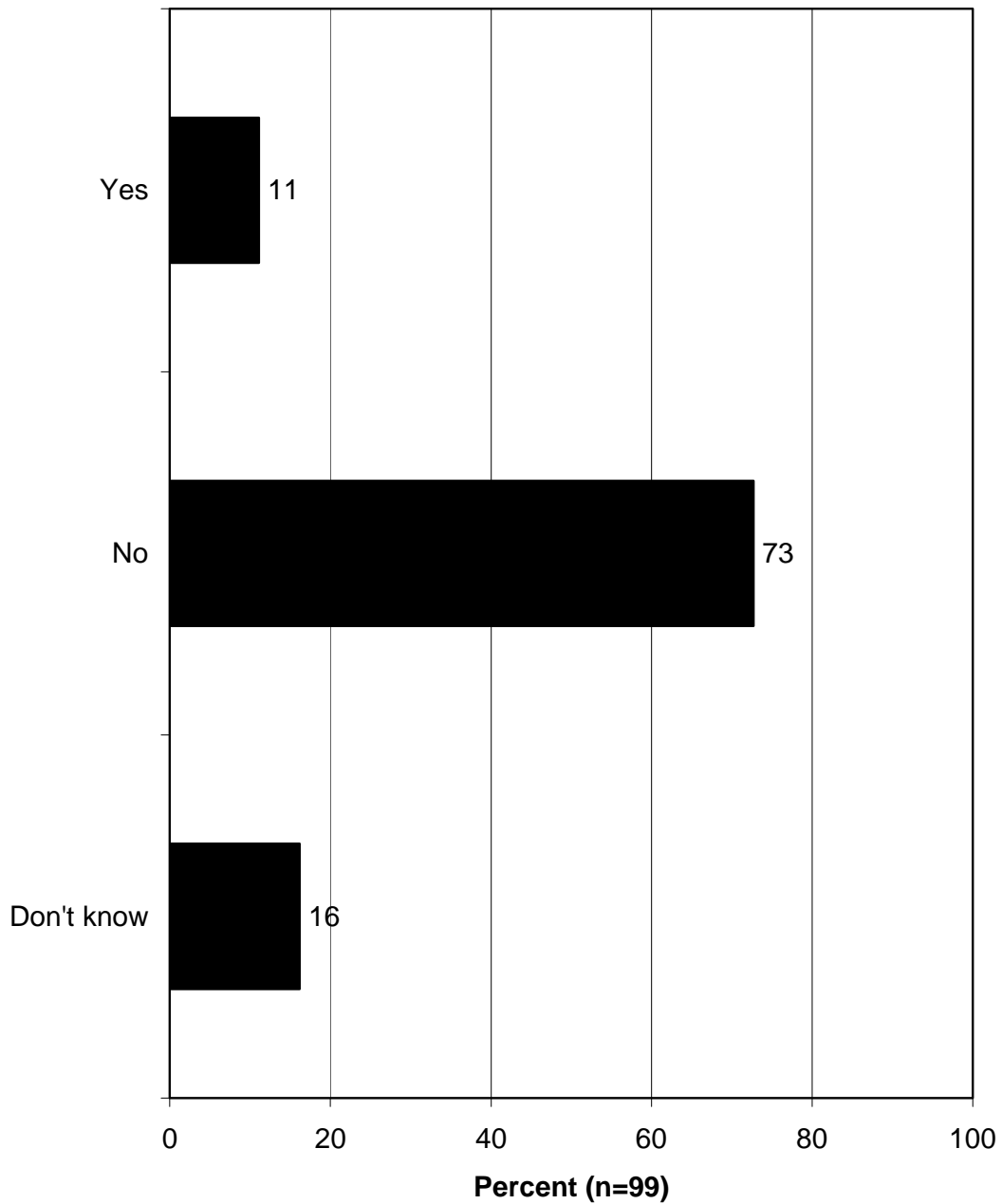
### Q36. In what county do you live? (Part 2.)



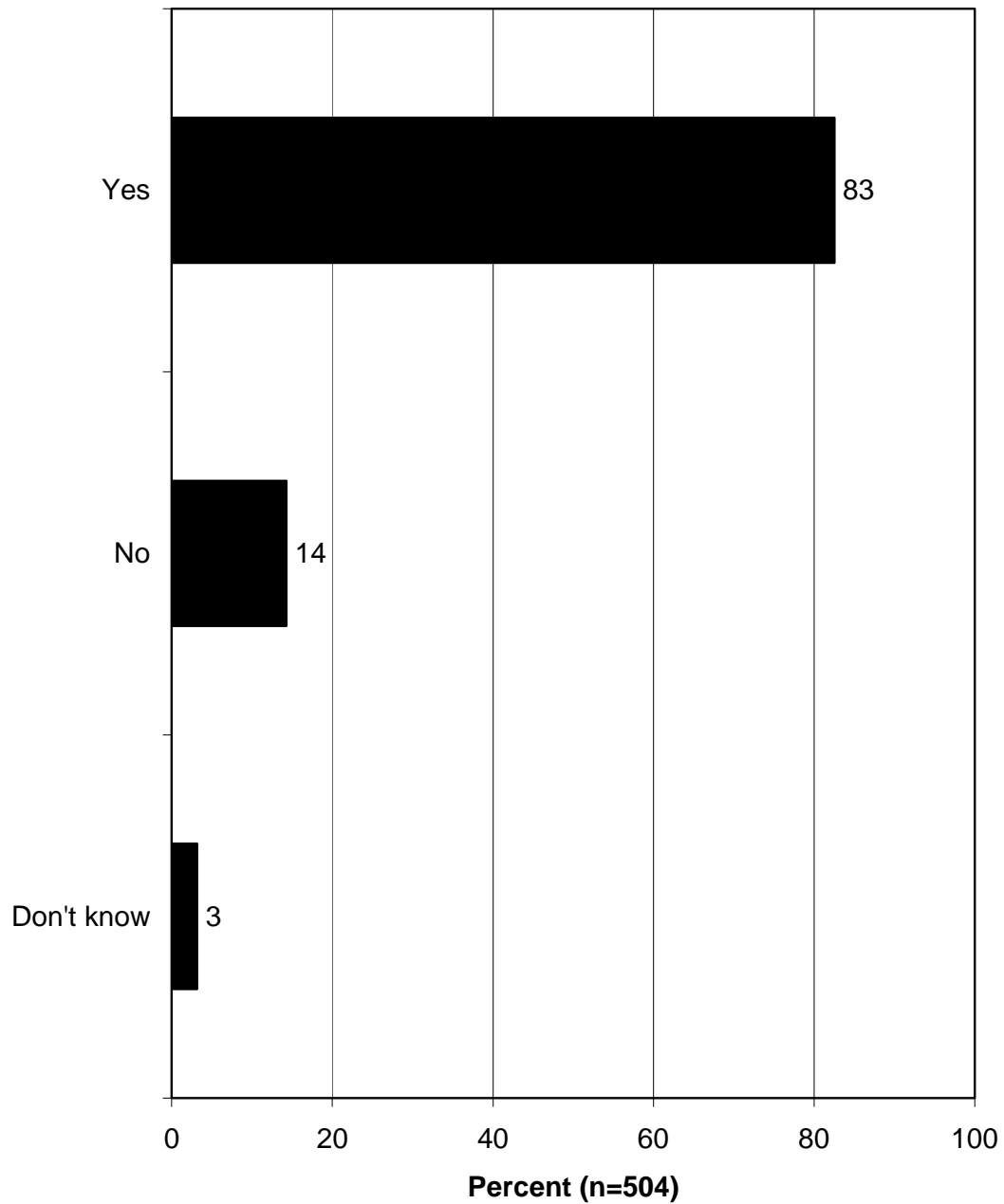
**Q38. Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, a rural area on a farm or ranch, or a rural area not on a farm or ranch?**



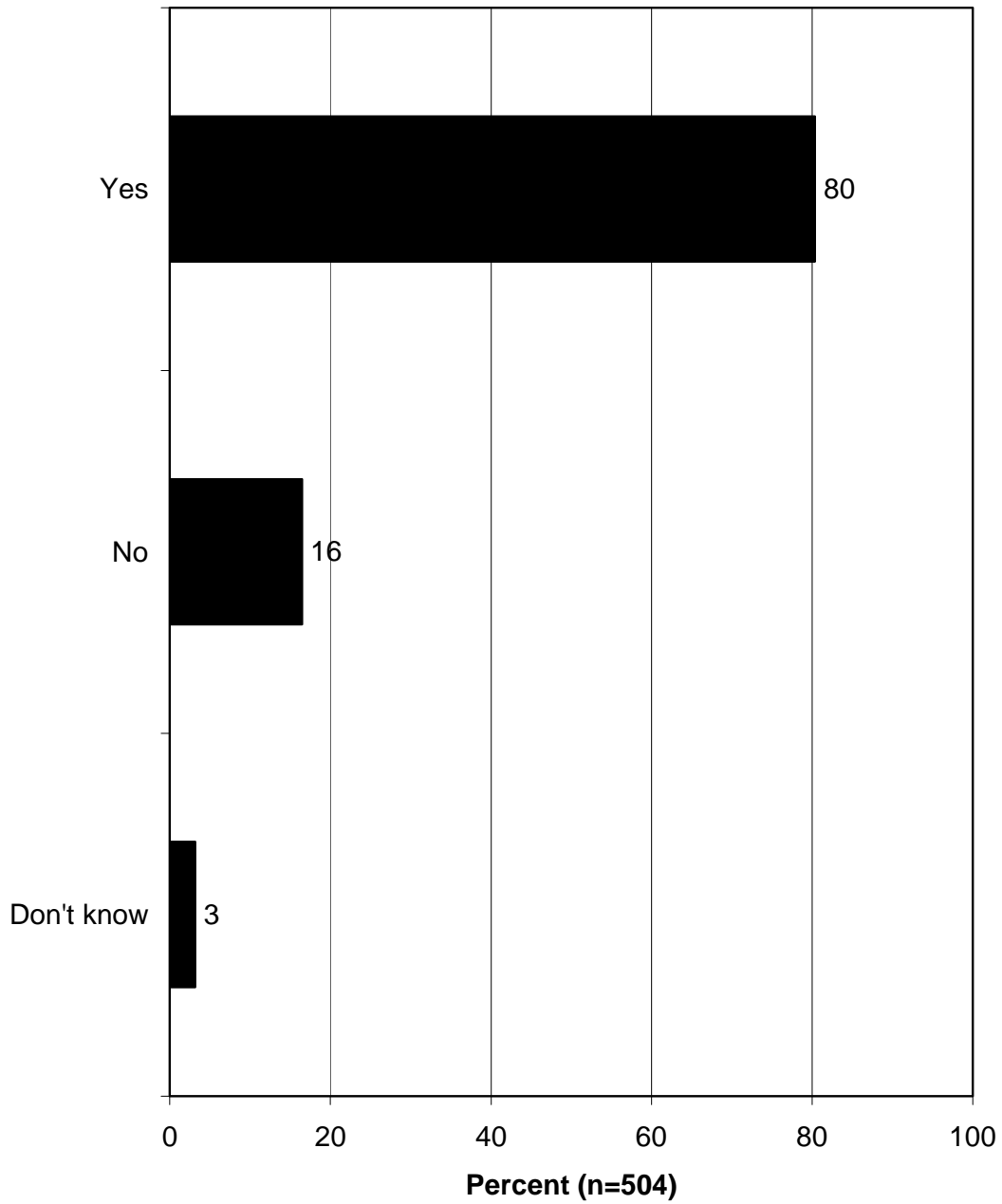
**Q40. Do you own any land in South Carolina?  
(Asked of those who do not own the land on which  
they reside.)**



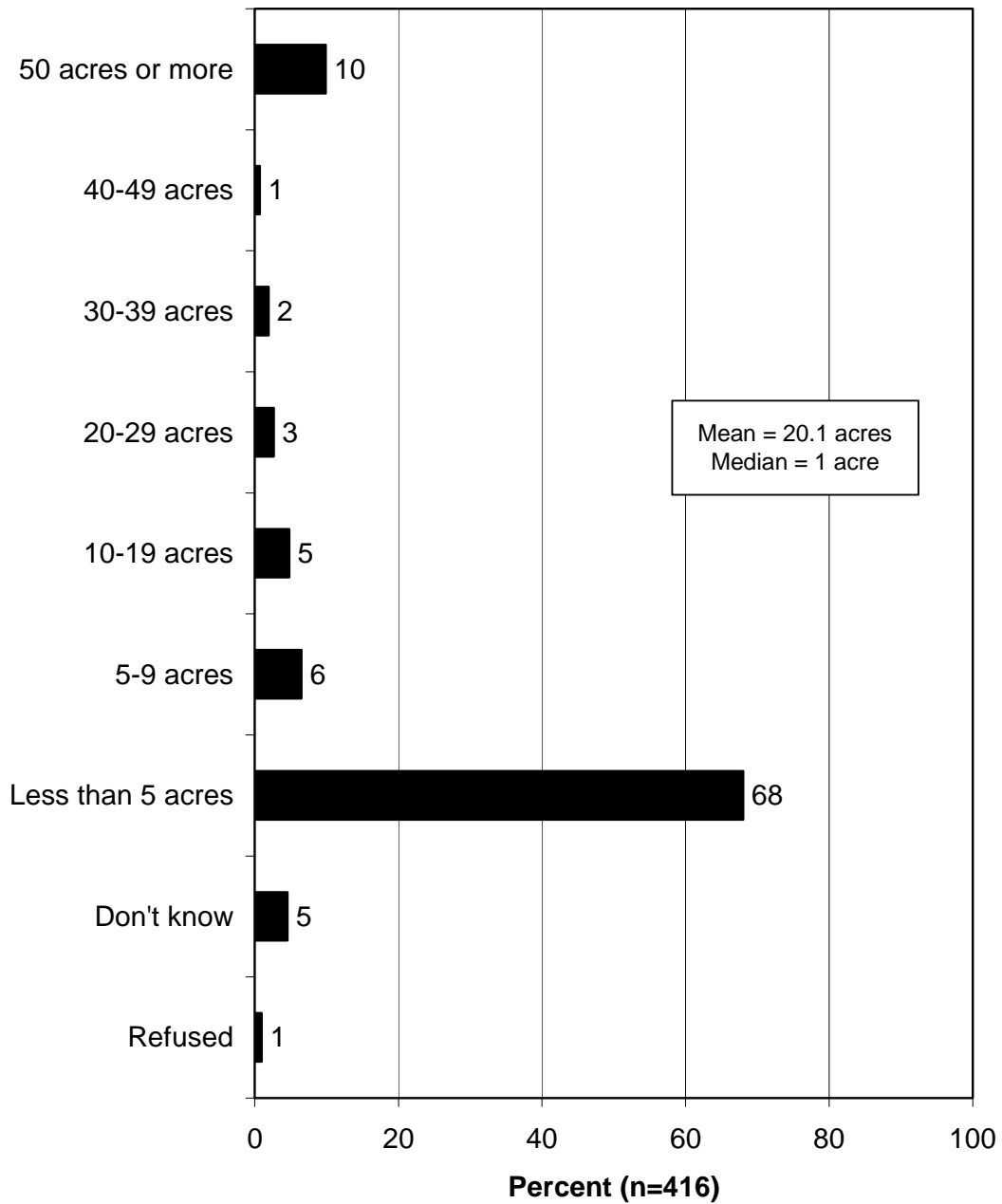
**Q40. Do you own any land in South Carolina?  
(Among all respondents; this includes those who  
said that they own the land on which they reside.)**



**Q39. Do you own the land on which you reside?**

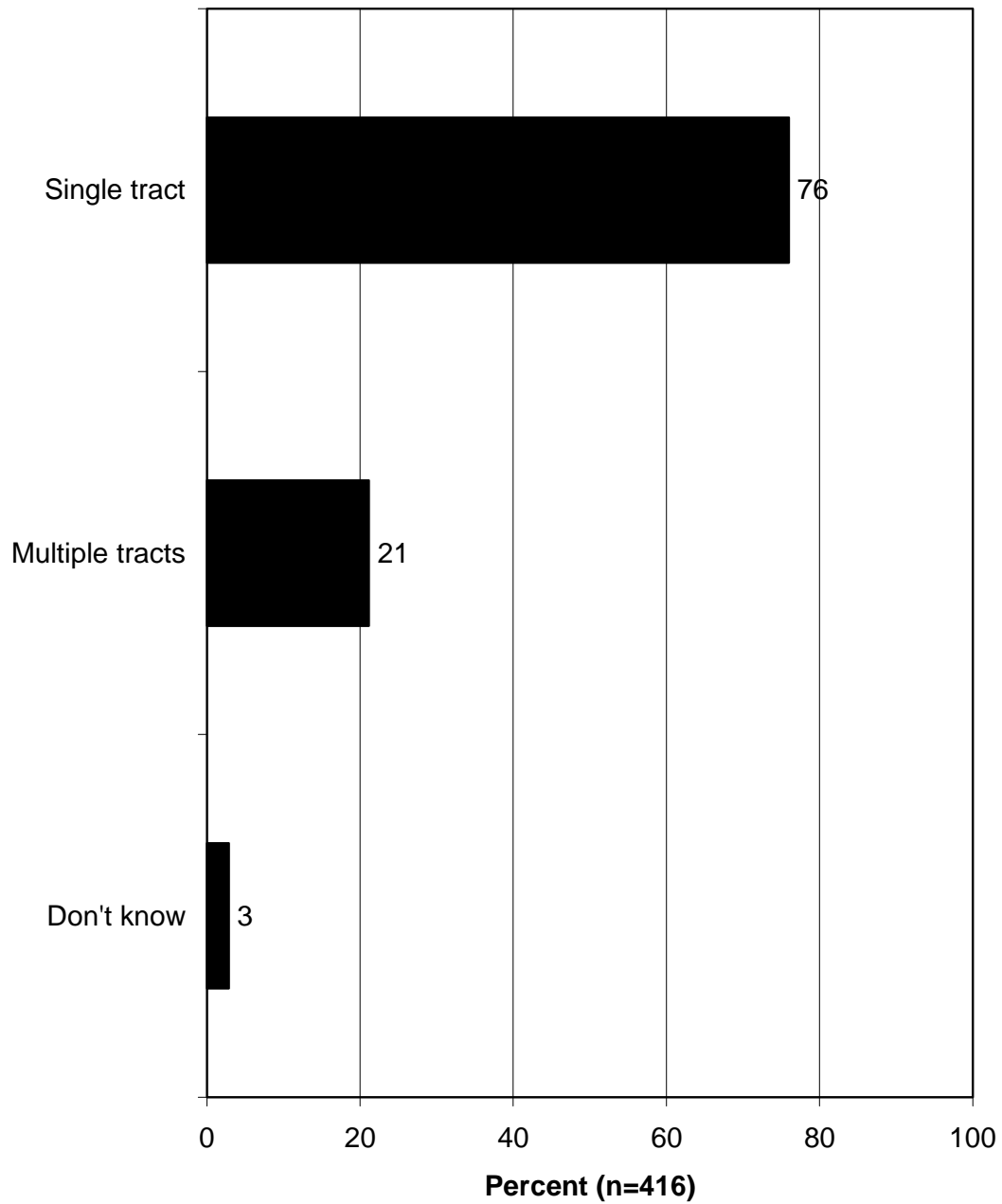


**Q41. About how many acres of land do you own in South Carolina? (Asked of those who own land in South Carolina.)**





**Q44. Are the acres you own in one single tract of land or do you own multiple tracts of land? (Asked of those who own land in South Carolina.)**



## ADDITIONAL COMMENTS

Q54. That's the end of the survey. Thanks for your time and cooperation. If you have any additional comments, I can record them here.

I think fires are needed to keep forests healthy and should be done when necessary.
I strongly oppose backyard trash burning by homeowners, even if they have a permit. It's unnecessary pollution.
I used to see forest fires. Controlled burning is necessary.
If I do any burning, I'll get my permit from the forestry department.
Prescribed/controlled burning needs to have higher regulations and better management.
I appreciate your doing this and am very strongly supportive.
I hope this survey helps, because people are stupid about controlled burning.
Controlled burning is good; too much brush is bad.
There needs to be more awareness for wildfires.
Controlled burning is completely necessary.
Controlled burns are good for habitat; a good thing.
Keep doing controlled burning; keep keeping it under control.
They do a good job; I'm a member of the South Carolina Forestry Commission.
Coordinate with the fire and emergency services to educate the public about what is able to be burned in a controlled burning.
I think the South Carolina Forestry Commission is doing a good job; they need more money.
Seems to me the South Carolina Forestry Commission is wasting my money. I pay my taxes, but I sure wouldn't pay for this kind of stuff.
Neighbors burn leaves and I do not like it, but I know that it is necessary, and I am able to live with it.
I think it is necessary to conduct prescribed burning.
I think there might be better ways to clear stuff out than by burning. The smoke really bothers a lot of people.
Controlled burning is important in the state of SC. It can be beneficial!
Prescribed burning costs \$2,000 acre, and I want it cheaper.
Burn permits should be more strictly enforced, and people need to be aware that they need one for burning.
I don't know too much about forest fires.
I think controlled burning is good. I have a place behind my house they need to burn!

## **ABOUT RESPONSIVE MANAGEMENT**

Responsive Management is a nationally recognized public opinion and attitude survey research firm specializing in natural resource and outdoor recreation issues. Its mission is to help natural resource and outdoor recreation agencies and organizations better understand and work with their constituents, customers, and the public.

Utilizing its in-house, full-service, computer-assisted telephone and mail survey center with 45 professional interviewers, Responsive Management has conducted more than 1,000 telephone surveys, mail surveys, personal interviews, and focus groups, as well as numerous marketing and communications plans, need assessments, and program evaluations on natural resource and outdoor recreation issues.

Clients include most of the federal and state natural resource, outdoor recreation, and environmental agencies, and most of the top conservation organizations. Responsive Management also collects attitude and opinion data for many of the nation's top universities, including the University of Southern California, Virginia Tech, Colorado State University, Auburn, Texas Tech, the University of California—Davis, Michigan State University, the University of Florida, North Carolina State University, Penn State, West Virginia University, and others.

Among the wide range of work Responsive Management has completed during the past 20 years are studies on how the general population values natural resources and outdoor recreation, and their opinions on and attitudes toward an array of natural resource-related issues. Responsive Management has conducted dozens of studies of selected groups of outdoor recreationists, including anglers, boaters, hunters, wildlife watchers, birdwatchers, park visitors, historic site visitors, hikers, and campers, as well as selected groups within the general population, such as landowners, farmers, urban and rural residents, women, senior citizens, children, Hispanics, Asians, and African-Americans. Responsive Management has conducted studies on environmental education, endangered species, waterfowl, wetlands, water quality, and the reintroduction of numerous species such as wolves, grizzly bears, the California condor, and the Florida panther.

Responsive Management has conducted research on numerous natural resource ballot initiatives and referenda and helped agencies and organizations find alternative funding and increase their memberships and donations. Responsive Management has conducted major agency and organizational program needs assessments and helped develop more effective programs based upon a solid foundation of fact. Responsive Management has developed Web sites for natural resource organizations, conducted training workshops on the human dimensions of natural resources, and presented numerous studies each year in presentations and as keynote speakers at major natural resource, outdoor recreation, conservation, and environmental conferences and meetings.

Responsive Management has conducted research on public attitudes toward natural resources and outdoor recreation in almost every state in the United States, as well as in Canada, Australia, the United Kingdom, France, Germany, and Japan. Responsive Management routinely conducts surveys in Spanish and has also conducted surveys and focus groups in Chinese, Korean, Japanese, and Vietnamese.

Responsive Management's research has been featured in most of the nation's major media, including CNN's *Crossfire*, ESPN, *The Washington Post*, *The Washington Times*, *The New York Times*, *Newsweek*, *The Wall Street Journal*, and on the front page of *USA Today*.

Visit the Responsive Management Website at:

**[www.responsivemanagement.com](http://www.responsivemanagement.com)**