# MSPB'S SOYBEAN MANAGEMENT PRACTICES SURVEY–2015 RESULTS

OsbornBarr, MSPB's communications contractor, commissioned a survey of Mississippi soybean producers to determine practices they use in producing a crop, and the sources they depend on for production information.

1,900 surveys were distributed by mail to Mississippi soybean producers, and 283 completed surveys were returned. This 14.9% participation rate is above normal for an external survey.

60.5% of respondents farm over 1000 acres. 43% of responding producers have over 1000 soybean acres; thus, 57% have under 1000 soybean acres. The highest percentage (23.8%) of respondents reported 501-1000 soybean acres. Nearly one-third (32.9%) of the respondents reported less than 500 acres of soybeans, while a little over one-quarter (26.7%) reported between 1000 and 2500 soybean acres.

## General Crop Production

69% of responding producers rotate soybeans with another crop on an annual basis, and nearly two-thirds (64%) of those growers rotate with corn. Milo (17%) and rice (13.5%) are the next most rotated crops with soybeans.

44% of the respondents plant in rows that are less than 30 in. wide, while 21% plant in twin rows that are on 30- to 40-in. centers.

62% of respondents plant 121 to 140 thousand soybean seeds per acre, while 26% plant 141 to 160 thousand seeds per acre.

On a scale of 1 to 9 with 9 being most important, yield is the trait rated most important (8.23) by respondents when selecting a variety, with range of maturity groups (6.60) and specific soil type of a field to be planted to a variety (6.12) ranking as second and third most important.

96.5% of respondents viewed variety selection as the most important factor for increasing soybean yields, while soil sampling (80.1%), crop rotation (73.8%), and fungicide application (69.5%) were also viewed as significant factors to consider for yield increase.

Weed resistance was the most-listed soybean production issue or problem (101 respondents); the next most-listed issue was yield (46 respondents).

75% of responding growers always apply fungicides, insecticides, and herbicides at the full labeled rate.

## Soil Factors

61% of the respondents always test soil for fertility at least every 3 years, and 59% collect soil fertility samples on most (76-100%) of their acres.

61% of the respondents know the amounts of nutrients removed from the soil by their soybean crop.

Over two-thirds (69%) of the respondents ensure adequate fertility on their soybean acres based on soil test results.

## Irrigation

48% of the respondents do not irrigate soybeans.

Of those that irrigate, 42% use PHAUCET/Pipe Planner. However, much smaller percentages use

surge valves (14%) and soil moisture sensors (31%).

A low percentage of irrigated producers know the amount of water they are using to irrigate most (81-100%) of their irrigated acreage as indicated by the low percentage (8%) who use water or flow meters. Conversely, 72% of the irrigators monitor their water use on less than 40% of their irrigated acres. However, irrigators consider amount of water used for irrigation as important (4.25 on a 1-5 scale, with 5 being very important).

**Insect and Disease Factors**

77% of the respondents check or scout fields for presence of major diseases on a weekly basis, and 83% check for insects on a weekly basis.

77% of the weekly scouting is always done by walking the fields.

50% of the respondents always use practices or make decisions that will manage diseases that are present.

51% of responding growers always apply a fungicide to their soybean crop.

59% of responding producers use a sweep net or drop cloth to make weekly checks for insect presence.

78% of producers always treat for insects when their numbers reach economic thresholds.

50% or more of the respondents use scouting results to plan (choose varieties, modify pest management plans) for next year's crop.

**Nematode Factors**

22% of the respondents indicated they have nematodes in their fields, but regrettably, 41% do not know. Surprisingly, only 13% of the nematodes present are indicated as soybean cyst nematode (SCN), while over half are indicated as reniform and/or rootknot nematodes.

**Weed Factors**

90% of respondents use 2 or more modes of action when applying herbicides for weed control.

71% of growers use pre-plant or pre-emergence herbicides on more than 50% of their acres, and 61% use them on more than 75% of their acres.

Over two-thirds (67%) of responding producers who apply harvest aids or desiccants do so to enhance early harvest. 24% do not apply harvest aids to any of their soybean acres.

**Production Recommendations**

54% of survey responders use a crop consultant or advisor all or most of the time.

86% of producers who responded are comfortable or very comfortable with recommendations made by agricultural retailers.

Ag Retailers (74%), MSU-Extension (66.4%), Crop Consultants (63.6%), and Field Trials (63.3%) are significant sources of information used in making soybean production decisions.

Over half of the responders stated that they need more information on soil fertility (60%) and weed management (56%). Roughly one-third of the survey respondents indicated a need for more information on disease management (32%) and irrigation efficiency (35%).

**General Conclusions**

Producers were not asked what they consider the optimum planting date for soybean in Mississippi because it is now assumed that planting in early to late April is or should be viewed as optimum, and that late April to early May is or should be viewed as the optimum end date for planting.

44% of responding producers rotate soybean and corn on an annual basis.

About two-thirds of responding producers plant in rows that can be categorized as less than wide.

No respondents indicated they plant fewer than 100 thousand seeds per acre. It is worth noting that this may be a factor worth a research investment to support those producers who do not irrigate; i.e., there is potential for seeding fewer than 100 thousand seeds per acre if precision planting is used to plant high-quality seeds that have been treated to ensure an acceptable stand.

The number of producers who are aware of the amount of nutrients removed from the soil by a soybean crop should be increased through extension and industry education efforts.

These survey results indicate that an increased education effort about sampling soil for nematodes is warranted. This is especially true since the latest disease surveys indicate that SCN is the soybean pest responsible for the greatest yield loss in Midsouth soybean production systems.

The survey results indicate that outreach and education efforts must be increased to ensure that information about all irrigation management tools that can increase irrigation efficiency and enhance knowledge of crop water use by irrigated soybeans is available to and adopted by every irrigator.

The majority of producers use timely and accurate scouting and timely treatment to manage disease and insect pests in soybean.

The vast majority of respondents use economic thresholds to determine if and when to treat for insect infestations. This indicates that continued research is needed to ensure that threshold numbers are adequate and accurate for the various soybean production systems (e.g. irrigated vs. dryland, early-planted vs. late-planted/doublecropped, monocropped vs. rotated) in Mississippi.

Producers have obviously taken heed about the importance of weeds developing resistance to herbicides as indicated by the large majority of respondents who use more than one herbicide mode of action, pre-plant and pre-emergence herbicides, and the full labeled rate of herbicides. All of these factors are recommendations to prevent or delay herbicide resistance in weeds.

It is perceived from these results that the use of multiple modes of action in pesticide applications likely pertains mostly to herbicides. Producers must continually be reminded of the importance of this factor in the application of insecticides and fungicides as well.

It is obvious that Mississippi soybean producers have a high regard for the information provided and recommendations made by agricultural retailers in the state. Crop consultants/advisers also provide a valuable service to a majority of surveyed producers.

As with all surveys, this survey provides only a sampling of production practices and information sources used by Mississippi soybean producers. However, these results do provide a glimpse into what is being done to produce soybeans in the state, and can provide agricultural practitioners

with a clue as to what needs more attention and increased education.

I personally thank each of you 283 respondents who took the time to complete and return the survey. Hopefully, through this blog and other summaries that will come from the survey results, you can see the value of the information you provided and how it can be used to provide insight into what Mississippi soybean producers are now doing or maybe should be doing to continue the trend of increasing soybean yields in the state.

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Avant
MARKETING GROUP


AMG0915

Best Practices Study

Soybean Growers

December 2015

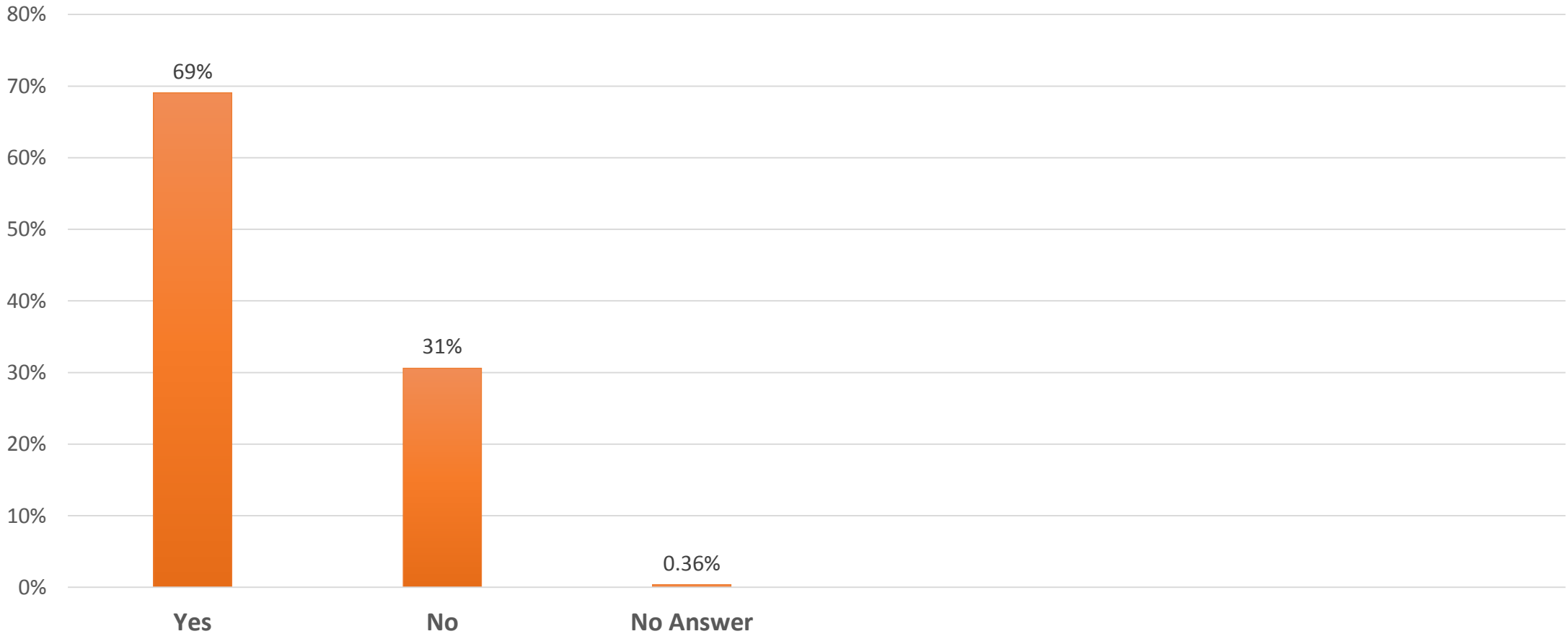
OSBORNBARR

# Study Summary

- A mail survey was distributed to Mississippi soybean farmers in October 2015.
- A total of 1,900 surveys were distributed.
- Those participants that mailed their completed survey by November 30,  2015 had the chance to win one of two equal prizes ($600 value) including an Apple® IPad® Air Tablet or a one-year subscription to a DIRECTV TV Select Package subscription.
- Each mailing included the survey, incentive coupon and postage-paid return envelope.
- A total of 283 completed surveys were processed.
- Survey participation equaled 15%.
- Survey responses represented 50 counties in the State of Mississippi.

# Crop Rotation

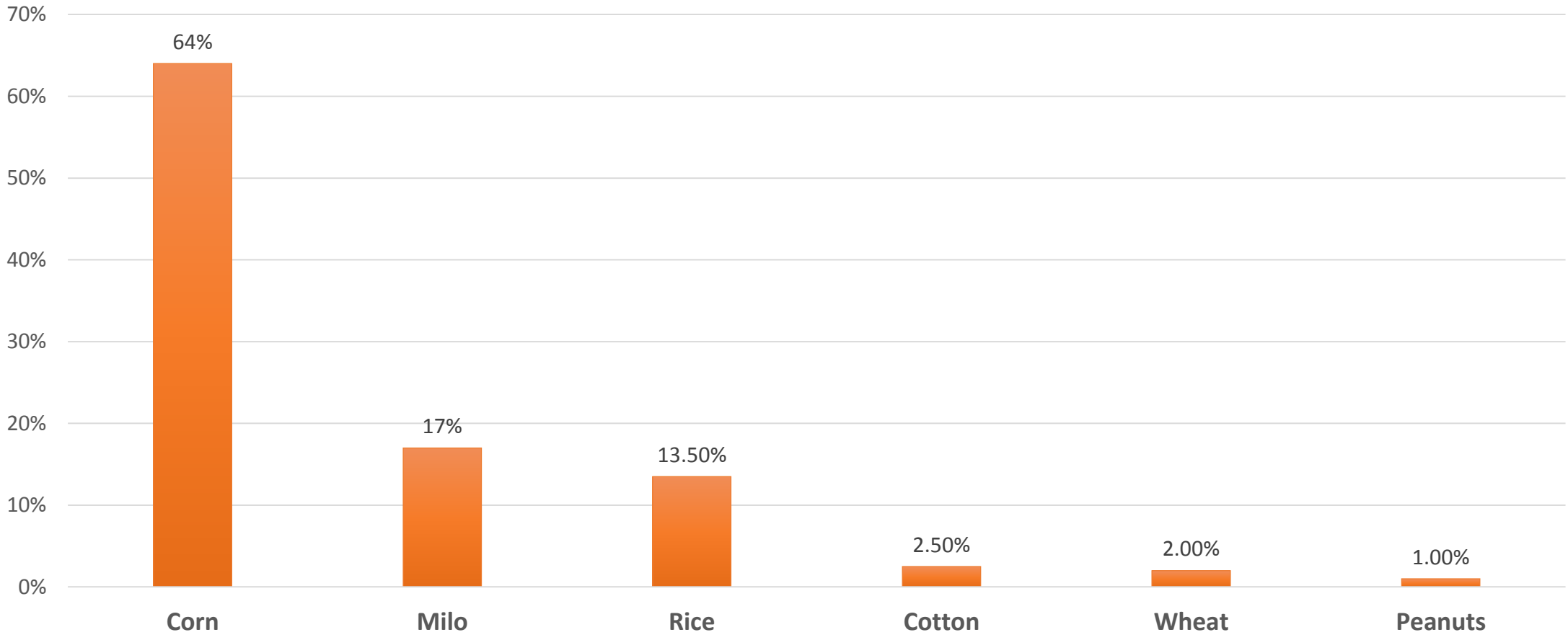
Nearly 70 percent of growers rotate crops annually.




Q2: Do you rotate crops annually?

# Crops Rotated with Soybeans (n=209)

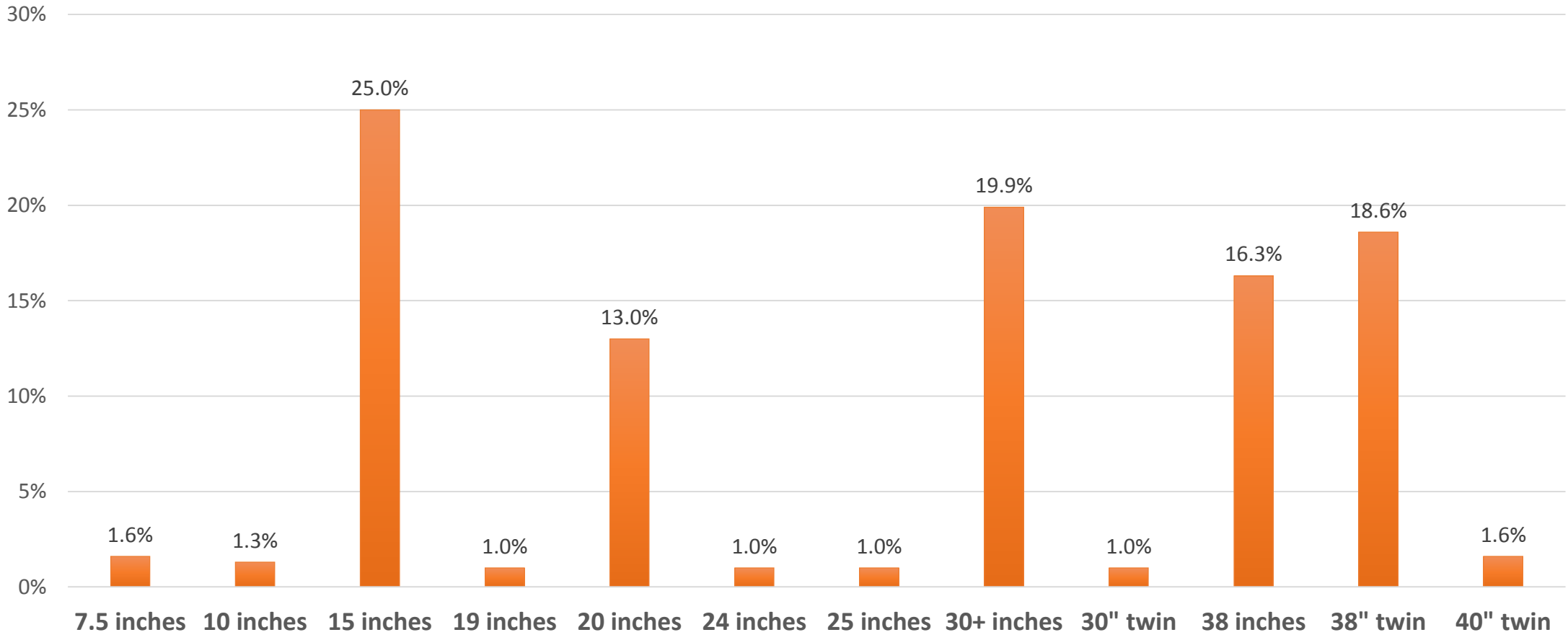
Nearly two-thirds of growers rotate corn with soybeans annually.




Q3: If you do rotate crops annually, what crop do you rotate with soybeans?

# Planted Row Widths

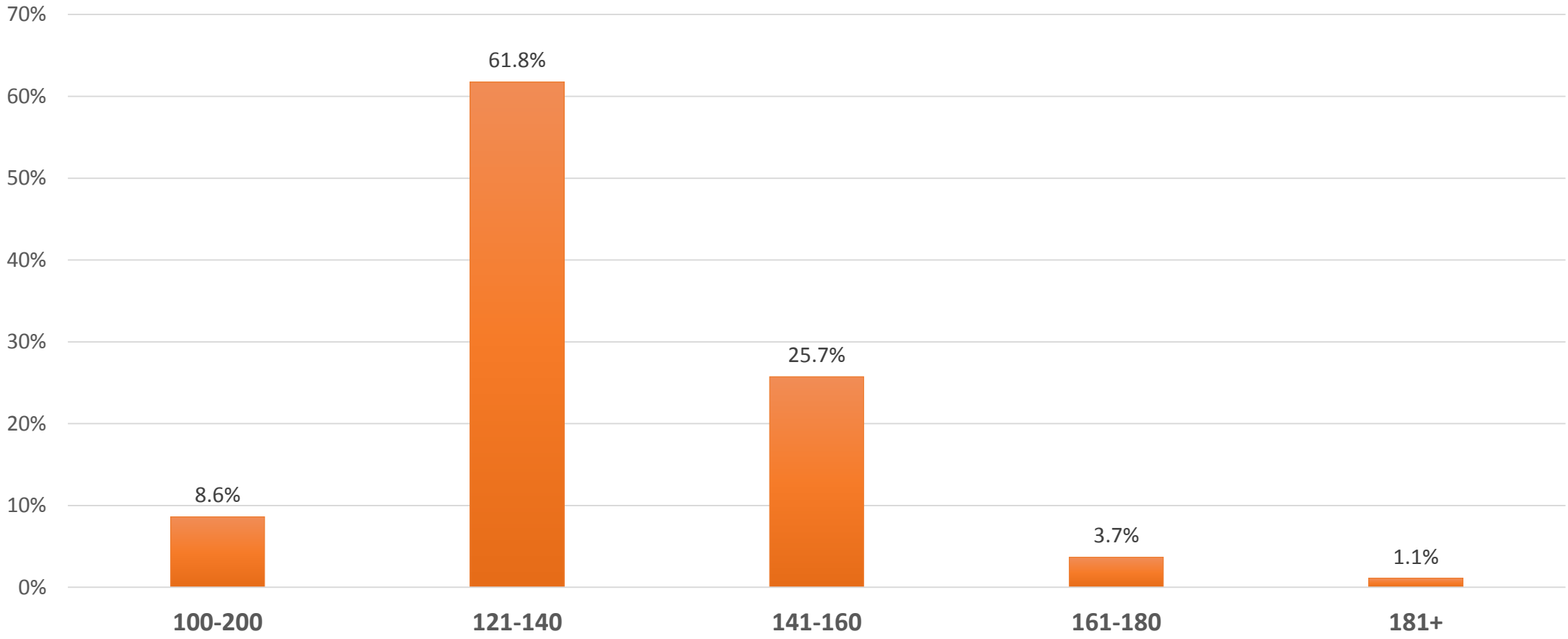
One fourth of growers plant 15-inch rows.




Q4: What row width do you typically use when planting soybeans?

# Seeding Rates (thousands of seeds)

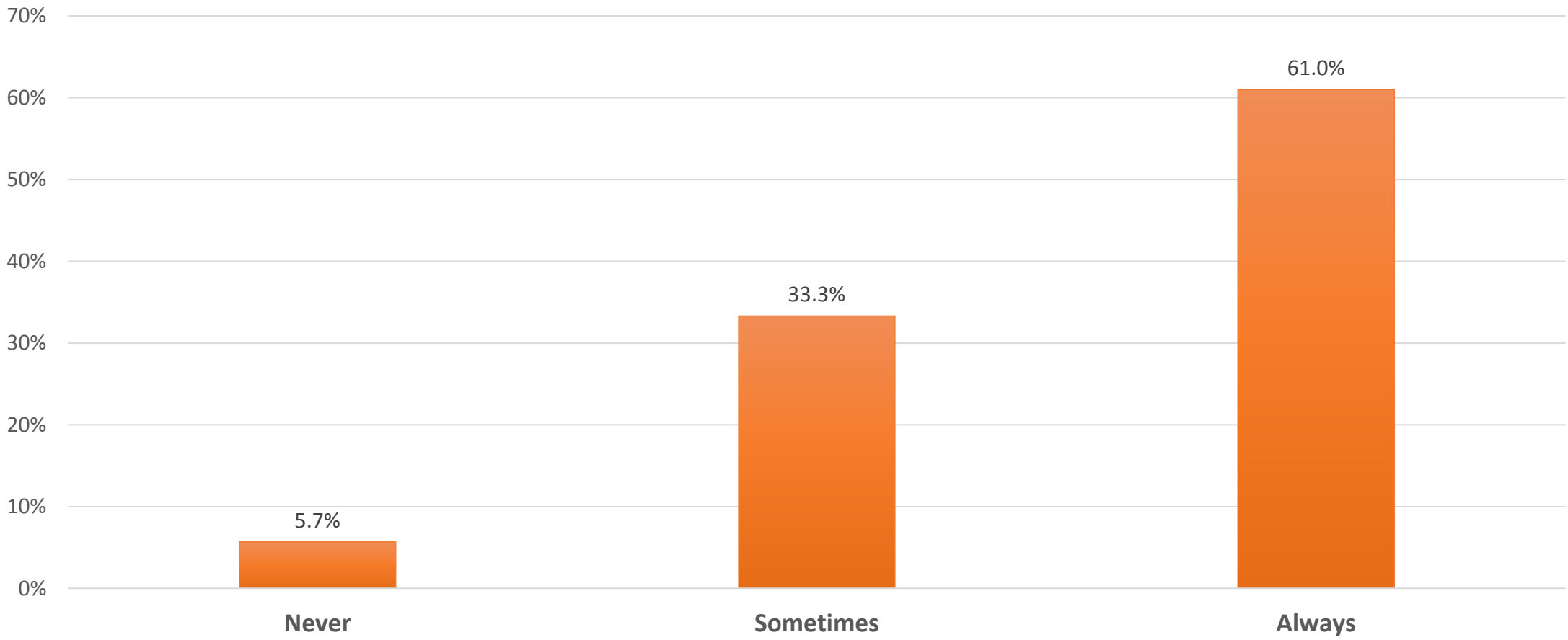
The most popular rate is 121,000 to 140,000 per acre.




Q5: What seeding rat (thousands of seeds) do you typically use when planting soybeans?

# Soil Testing – At Least Every 3 Years

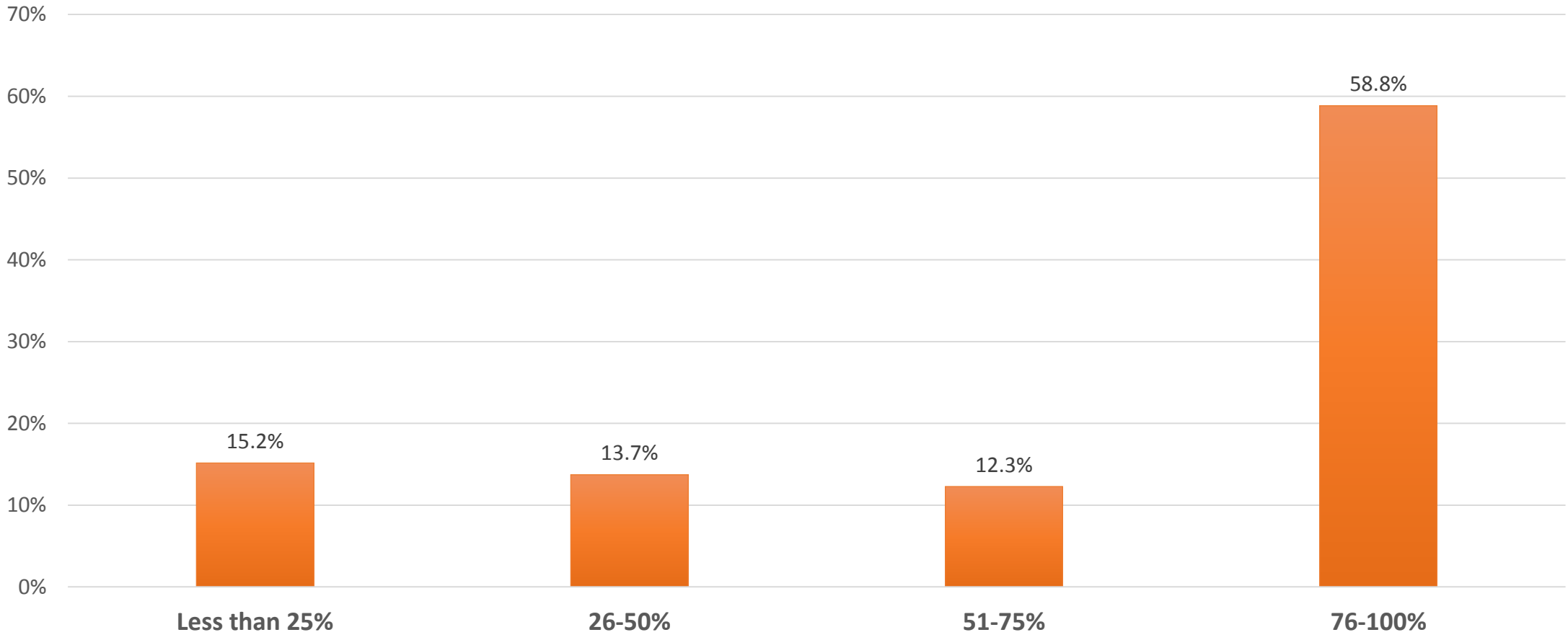
Nearly two-thirds of growers soil test their soybean fields at least every 3 years.




Q6: Do you soil test your soybean fields at least every 3 years?

# Percentage of Acres Soil Sampled

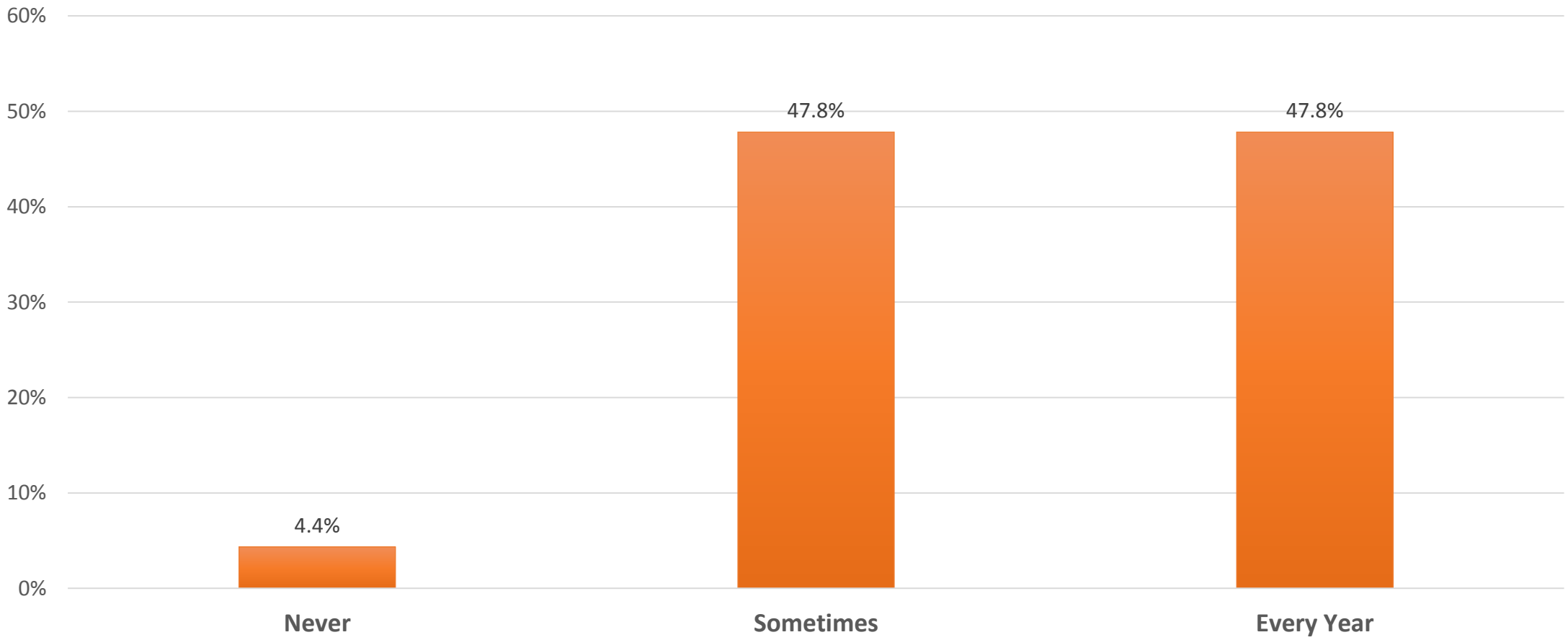
Well over half of growers soil sample between 76 and 100 percent of their soybean acres.




Q7: On what percentage of your soybean acres do you take soil samples?

# Awareness of Soil pH

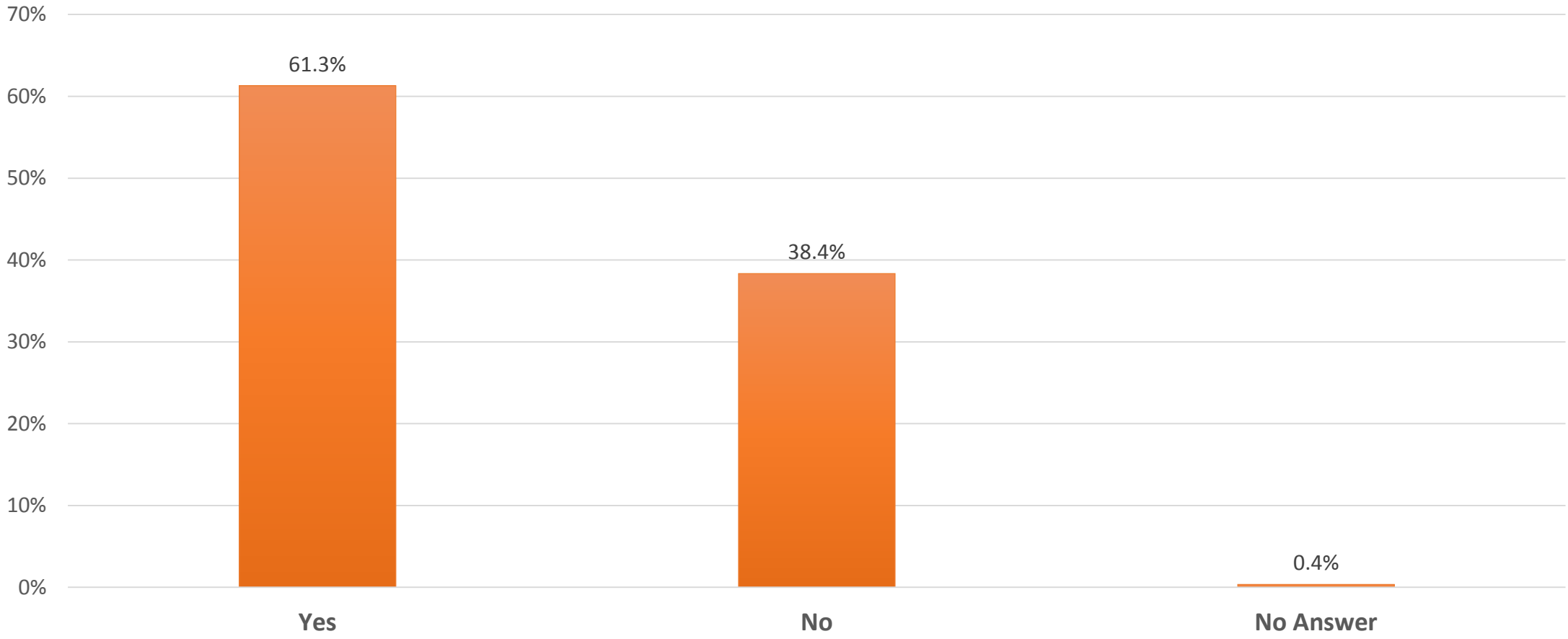
Less than half of growers know their soil pH every year.




Q8: Do you know your soil pH?

# Awareness of Nutrient Removal

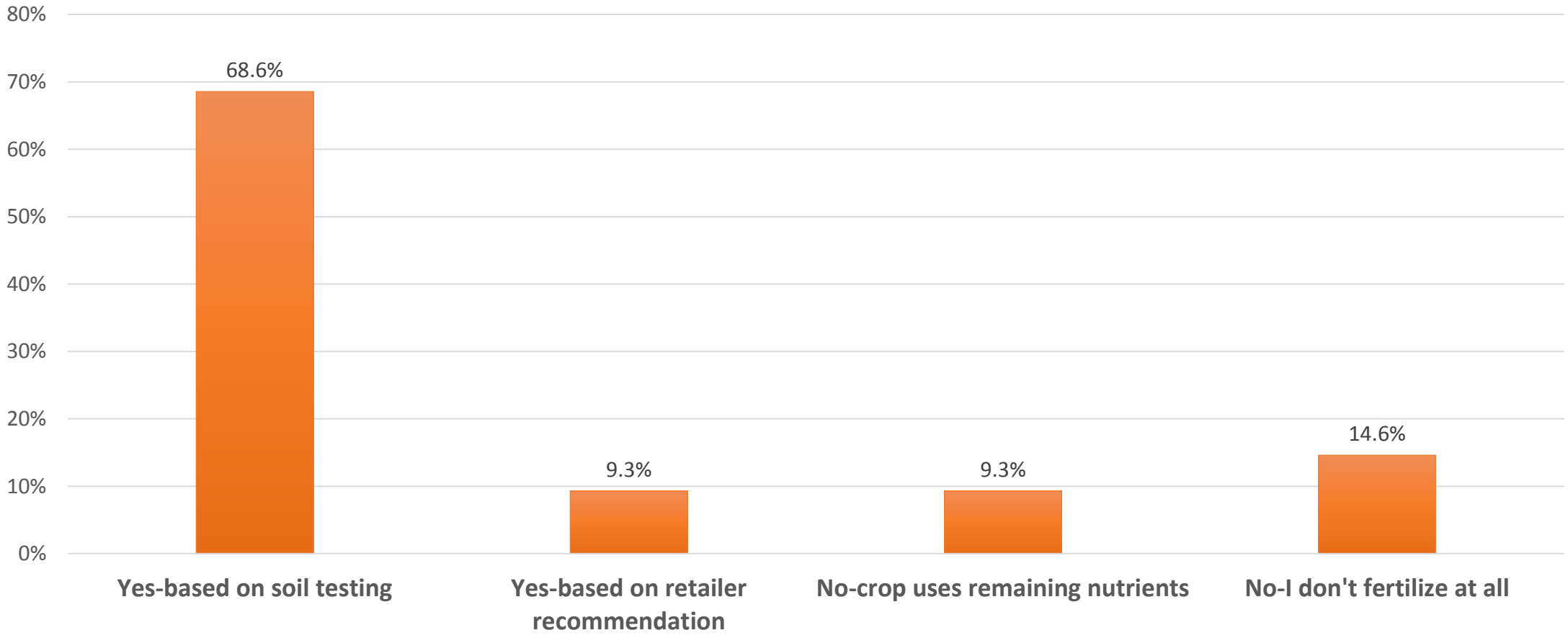
Sixty-one percent of growers know the amount of nutrients removed in each bushel of harvested soybean grain.




Q9: Are you aware of the amount of nutrients removed in each bushel of harvested soybean grain?

# Soybean Fertilization Before Planting

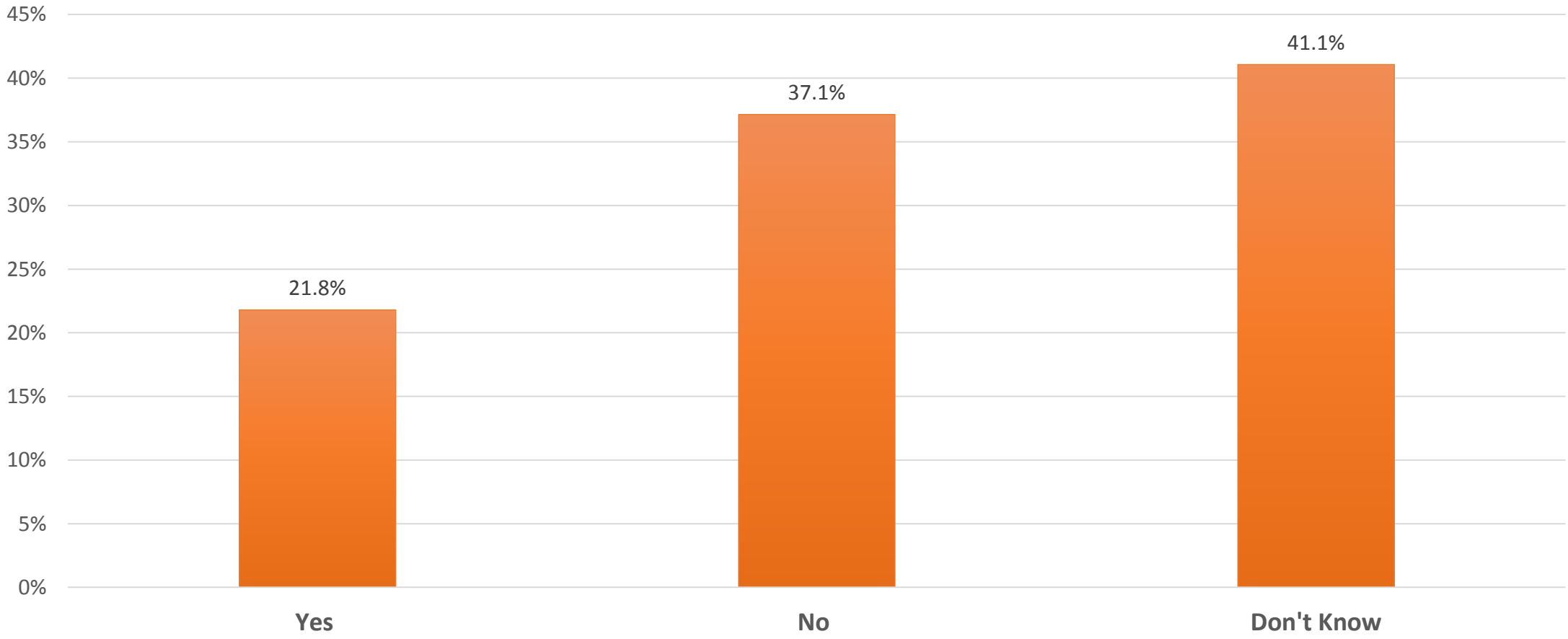
Over two-thirds of growers fertilize based on soil test results.




Q10: Do you fertilize your soybean fields before planting?

# Nematodes in Fields

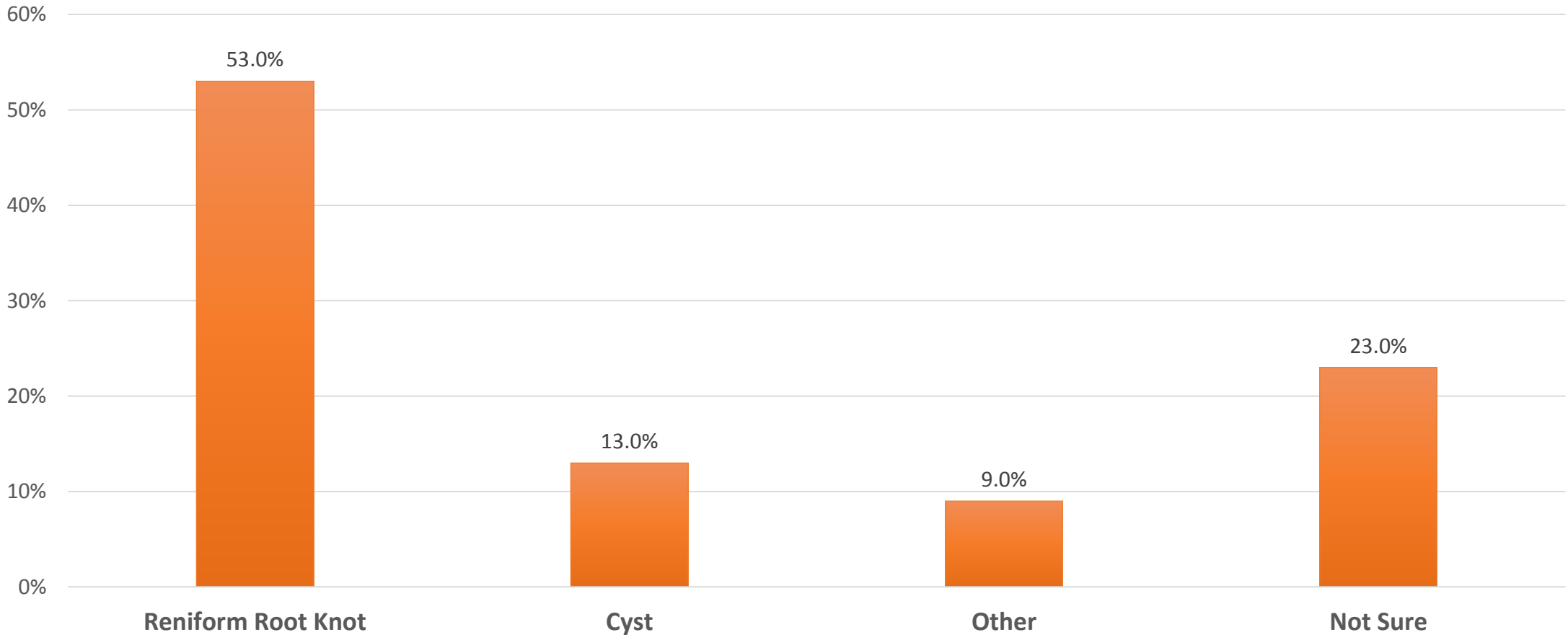
One-fifth of growers have nematodes in their fields while another 40 percent do not know.




Q11: Do you have nematodes in your fields??

# Nematodes Identification (N=60)

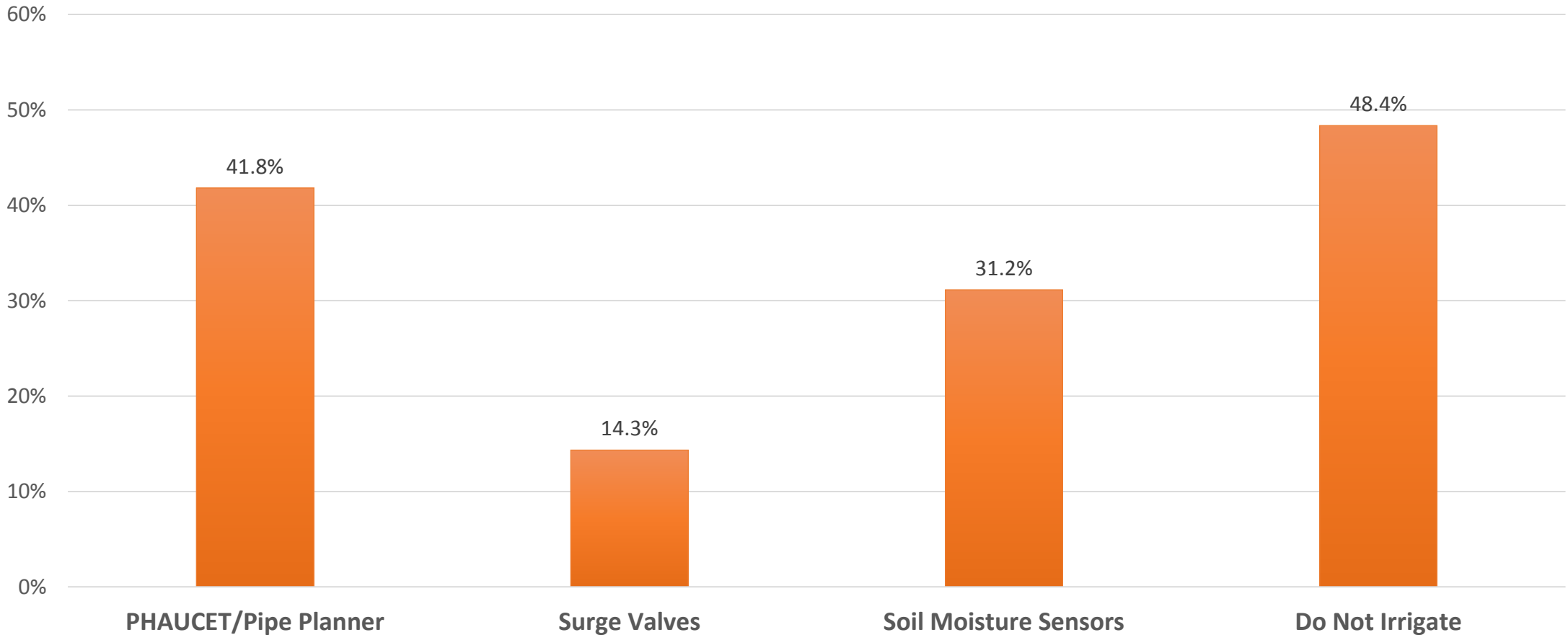
Reniform Root Knot is most present for those growers with nematodes.




Q12: What nematodes are present in your fields?

# Irrigation Usage

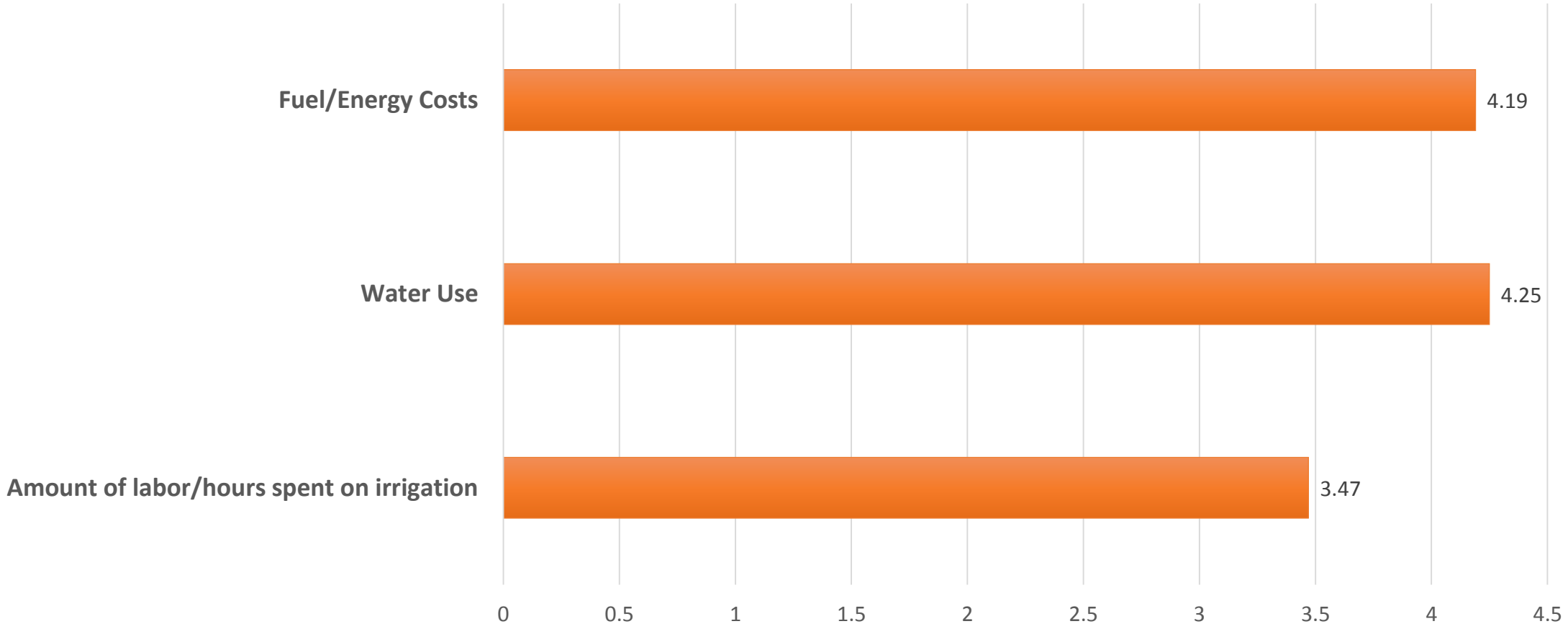
Nearly half of growers do not irrigate.




Q13: Do you use any of the following on your farm?

# Irrigation Factor Importance (N=155) – 1-5 Scale

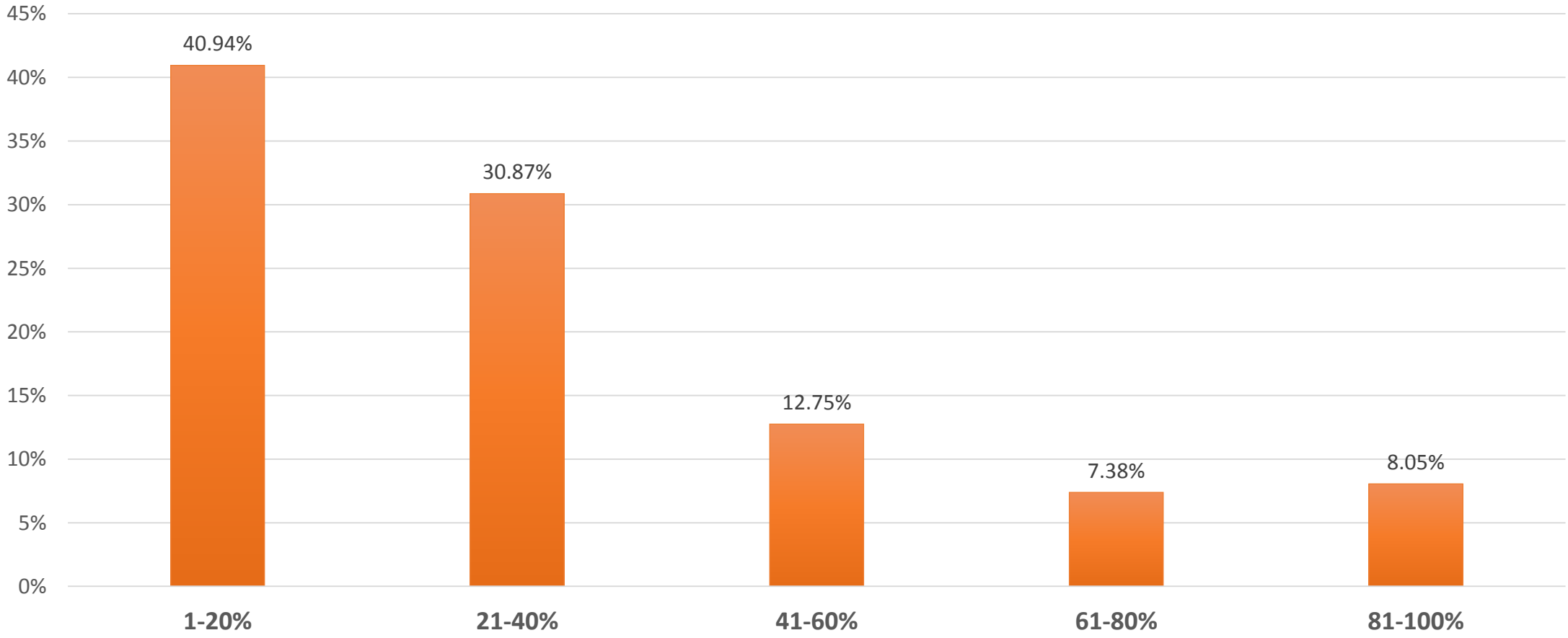
Water Usage and Fuel/Energy Costs are Most Important Factors When Considering Irrigating.




Q14: If you irrigate, using a scale of 1-5, with "1" representing "Not at all Important" and "5" representing "Very Important", how important are the following factors when considering irrigation?

# Irrigation Monitoring – Percentage of Acres (N=149)

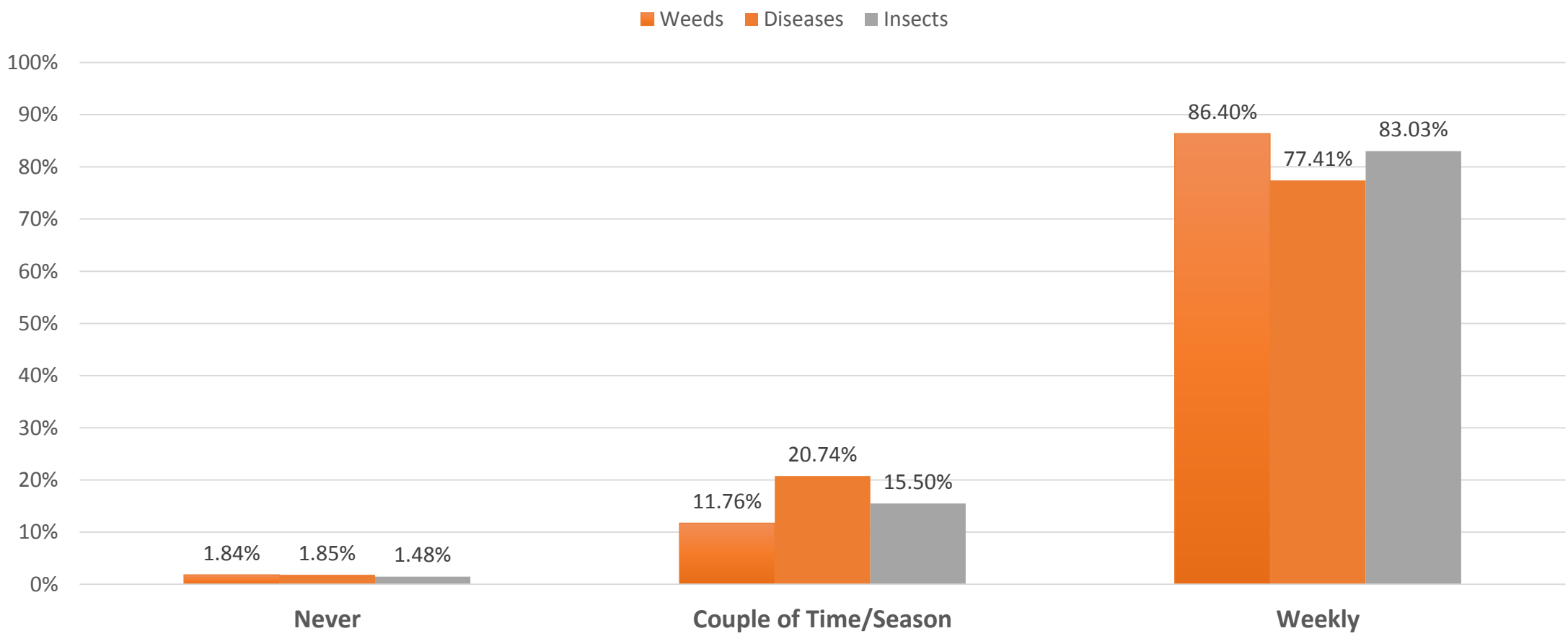
Over 70 percent of growers monitor water usage on 40 percent of acres or less.




Q15: If you irrigate, on what percentage of acres do you monitor your water use with well or flow meters?

# Field Scouting

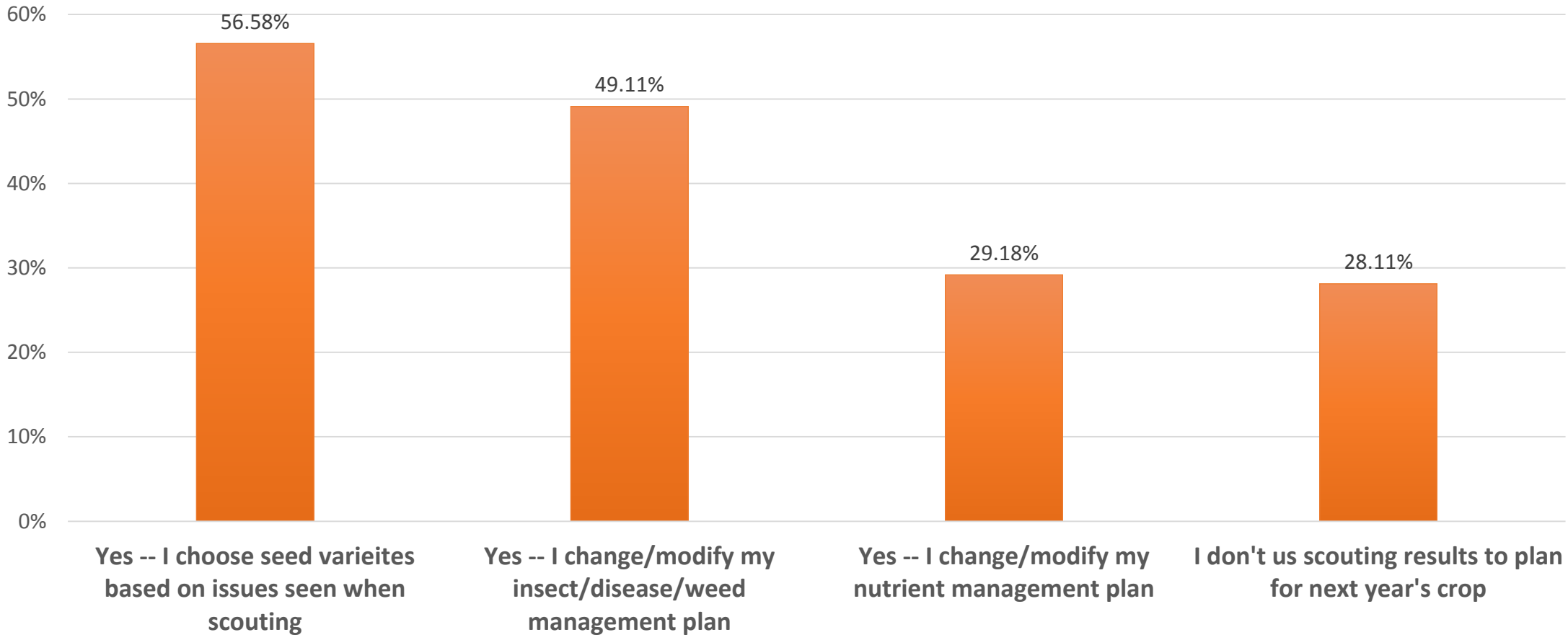
Largest percentage of growers scout their fields on a weekly basis during the growing season.




Q16: How often do you, or someone on behalf of your farm, scout your fields to check for the presence of insects, weeds and diseases during the growing season?

# Use of Scouting Results to Plan Next Year's Crop

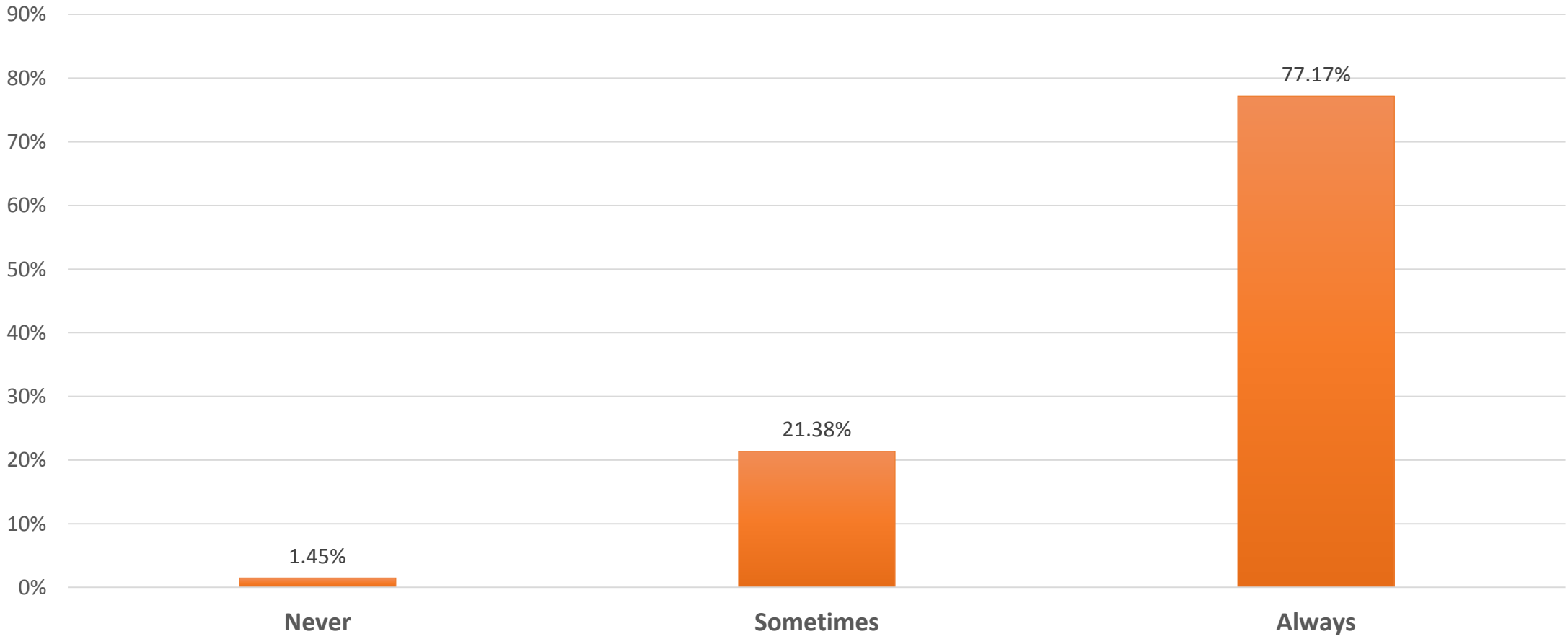
Half of growers use scouting results to choose seed and modify their management plans.




Q17: Do you use scouting results to plan for next year's crop?

# Field Scouting Via Walking the Fields

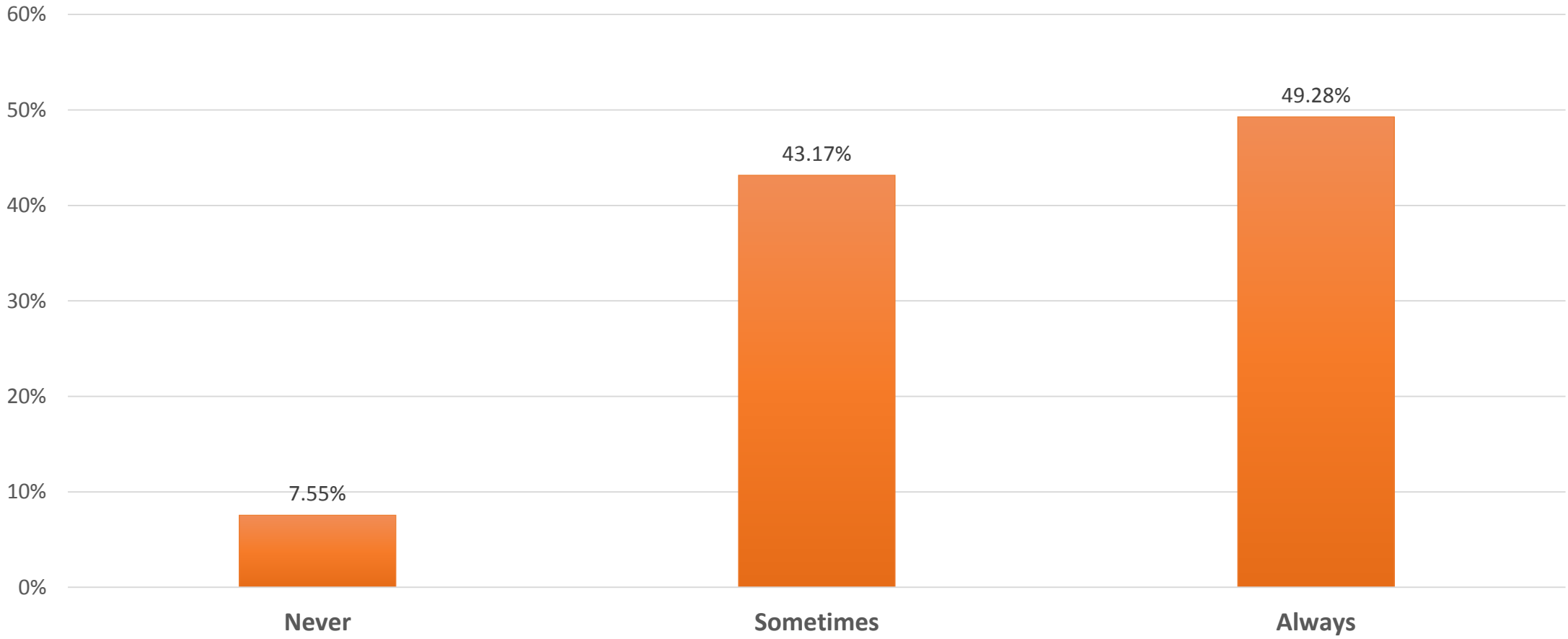
Three-fourths of growers actually walk the fields for scouting.




Q18: When scouting, do you, or someone on behalf of your farm, actually walk the fields?

# Practice Implementation to Fight/Mitigate Known Present Disease

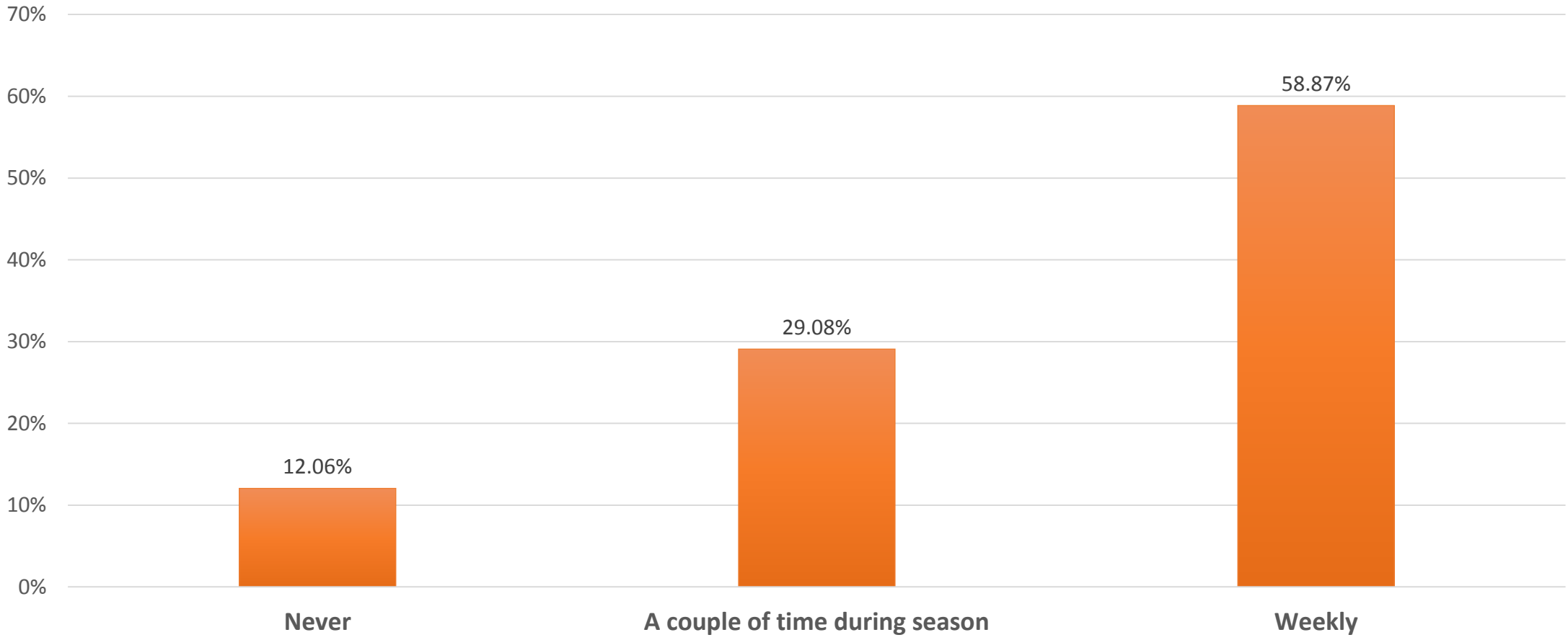
Half of growers are always implementing practices to fight/mitigate known present disease.




Q19: Are you implementing practices or making decisions to fight/mitigate know present disease(s)?

# Sweep Net/Drop Cloth Insect Measurement

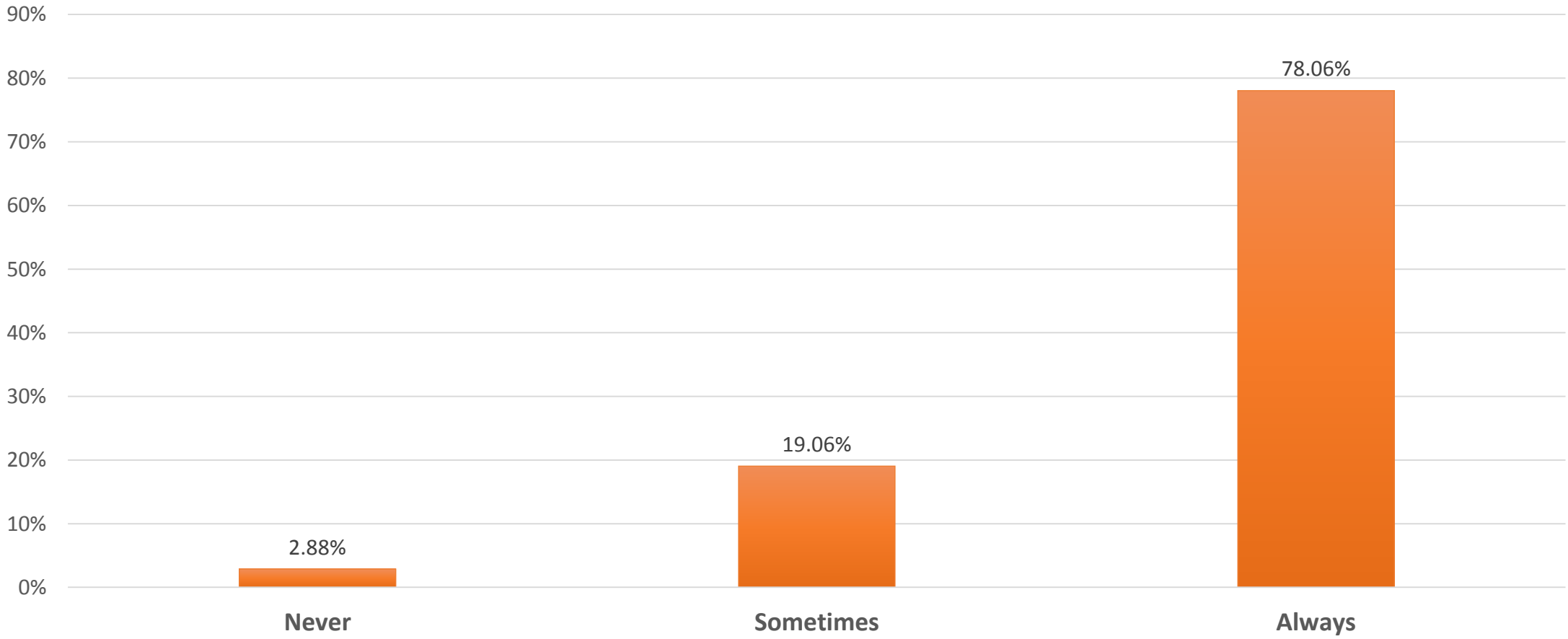
Nearly 60 percent of growers use a sweep net or drop cloth on a weekly basis to measure amount of insects.




Q20: Throughout the growing season, how often do you, or someone on behalf of your farm, use a sweep net or drop cloth to measure the amount of insects in a field?

# Insect Treatment

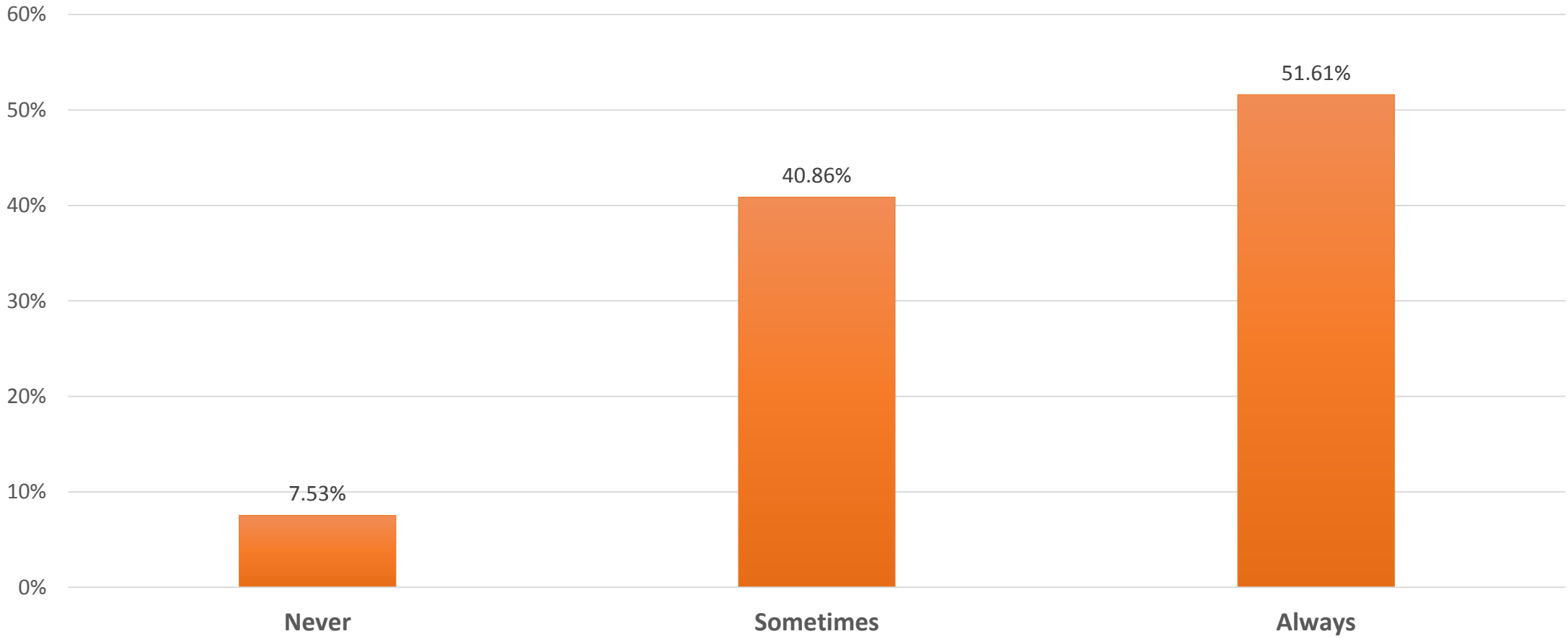
Nearly 80 percent of growers treat insects once they reach economic thresholds.




Q21: Are you treating insects immediately once they reach economic thresholds?

# Fungicide Application

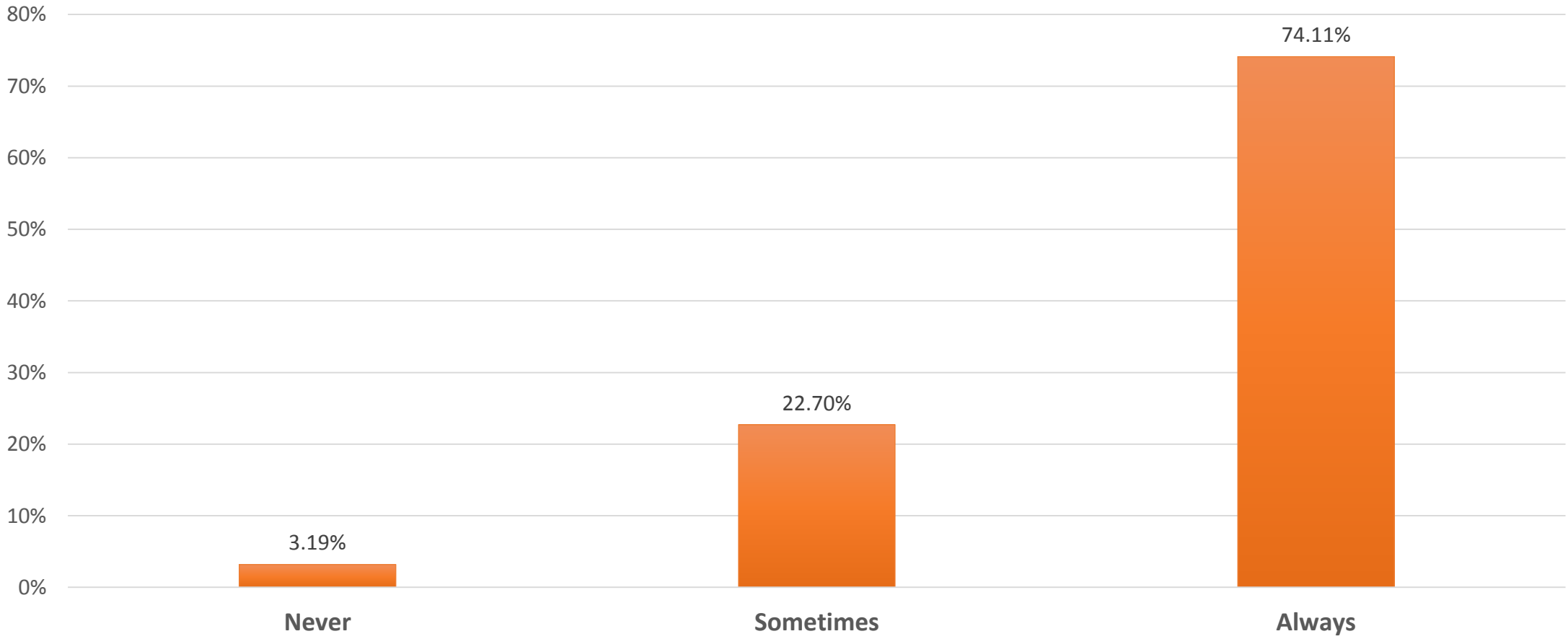
Half of growers are always applying fungicides.




Q22: Are you applying fungicides automatically, or only when diseases are present?

# Full-Labeled Rate Applications

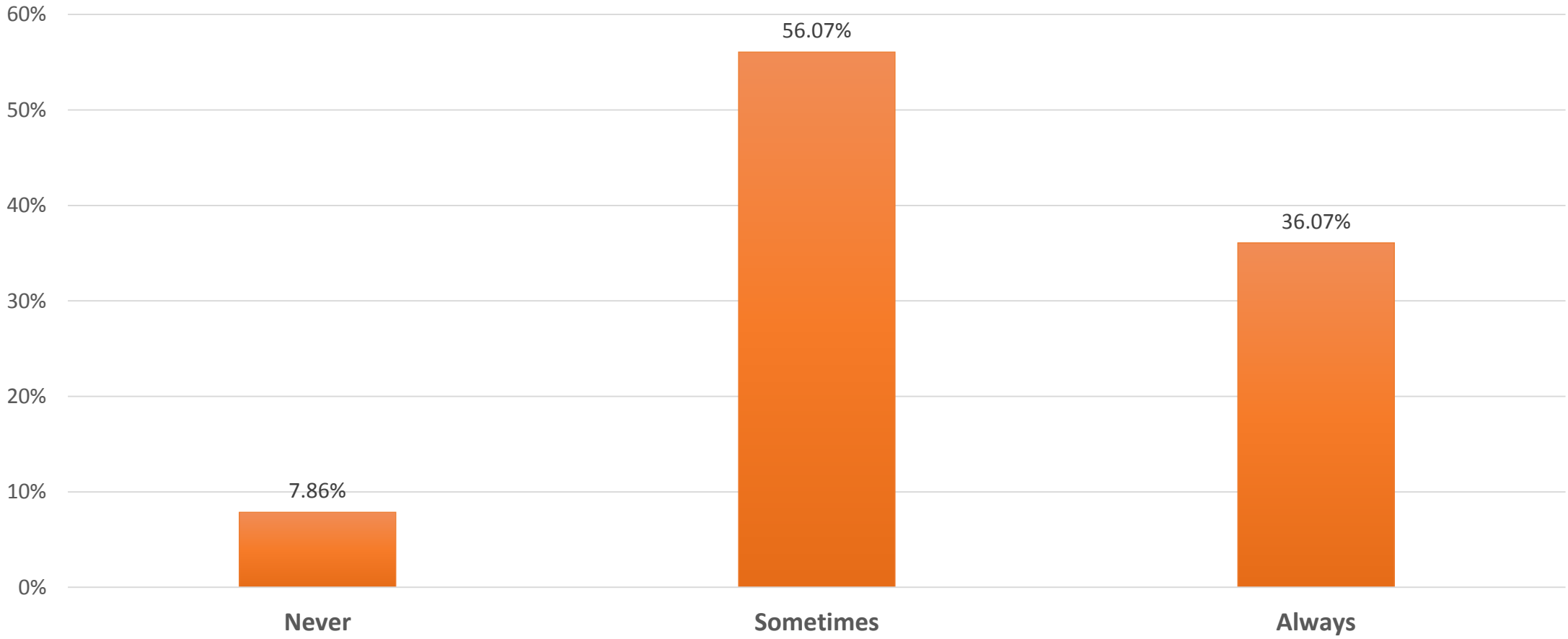
75 percent of growers apply fungicides, insecticides or herbicides at the full labeled rate.




Q23: When applying fungicides, insecticides or herbicides, do you use the full labeled rate?

# Multiple Modes of Action Applications

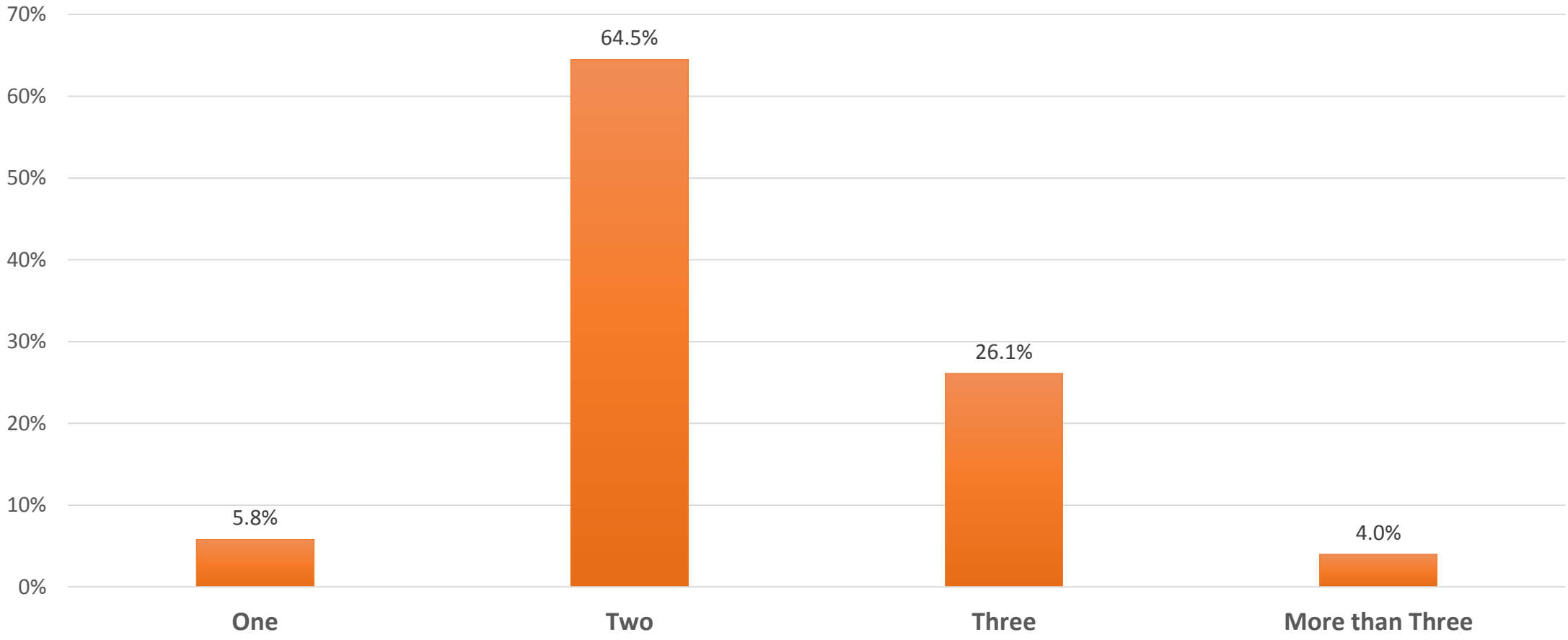
One-third of growers use multiple modes of action fungicides, insecticides or herbicides.




Q24: When applying fungicides, insecticides or herbicides, do you use multiple modes of action?

# Number of Herbicide Modes and Sites of Action Used

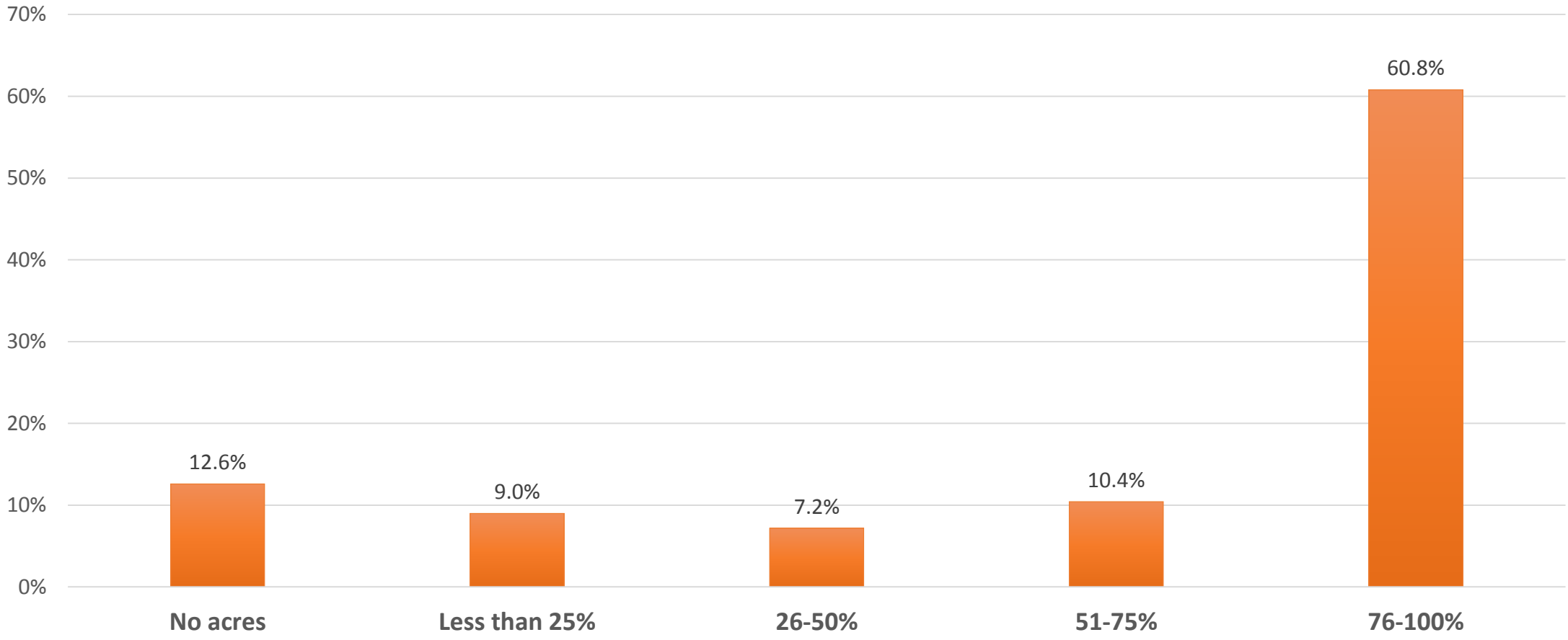
Two Modes or Sites of Action are Used Most by Growers.




Q25: How many herbicide modes and sites of action do you typically use when managing weeds?

# Pre-Plant/Pre-Emergent Herbicide Usage – Percentage of Acres

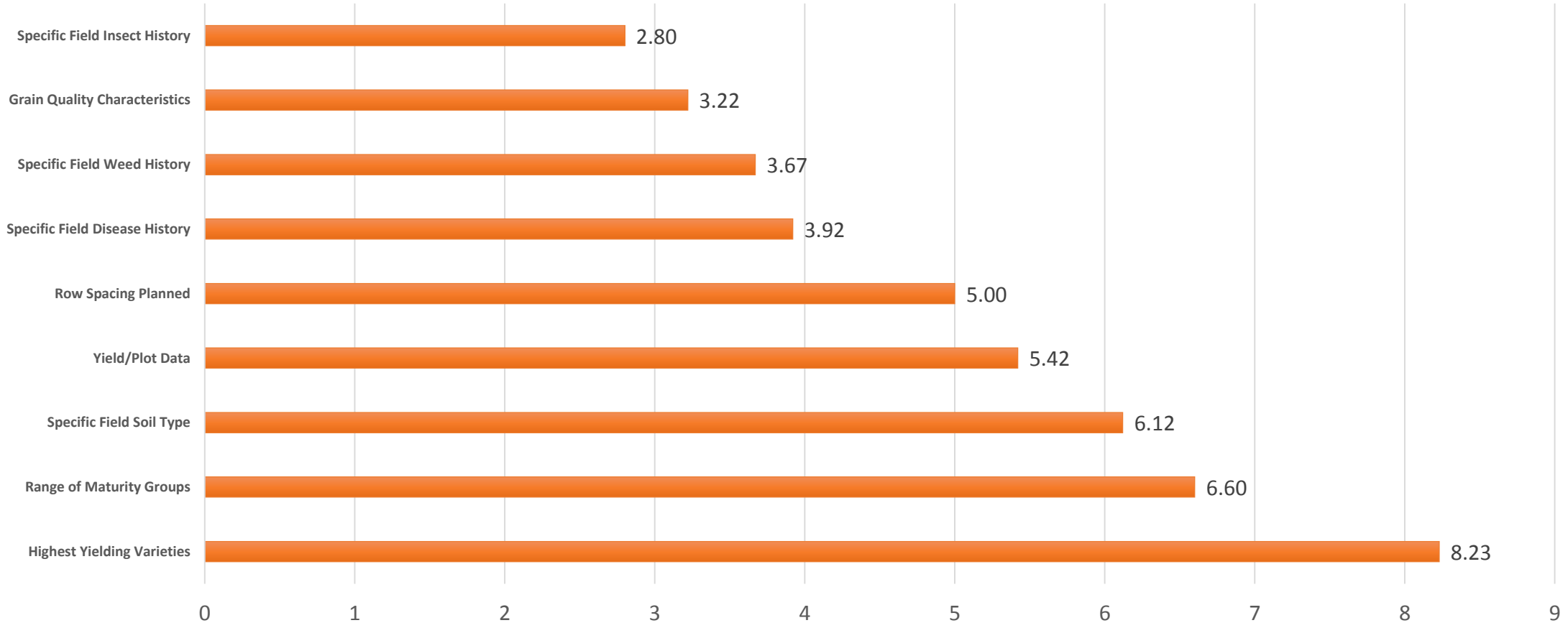
Sixty percent of growers us a Pre-Plant or Pre-Emergent Herbicide.




Q26: On what percentage of your acres do you use a pre-plant or pre-emergent herbicide?

# Soybean Variety Attribute Ratings – 1-10 Scale

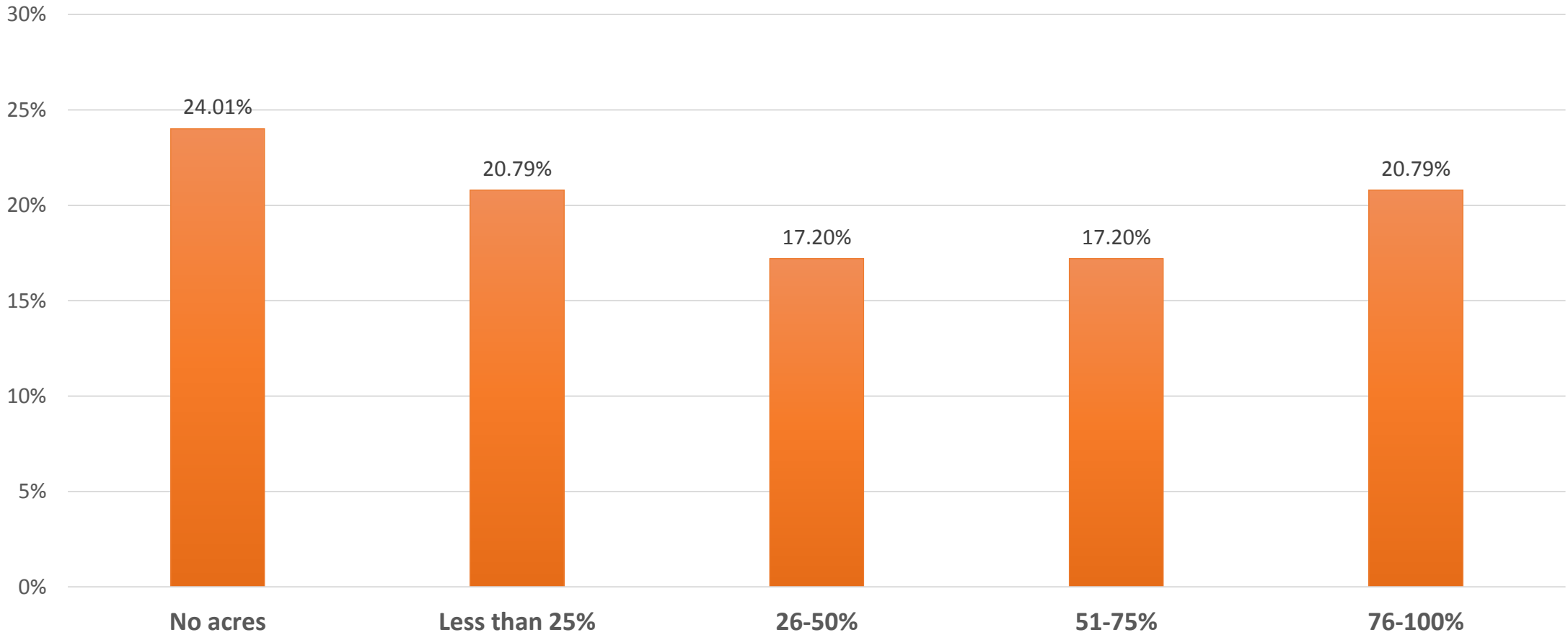
Yield is the most important attribute when selecting soybean varieties.




Q27: Using the numbers from 1 to 9, please rank the following in importance when choosing soybean varieties.

# Use of Harvest Aids or Harvest Desiccants – Percentage of Acres

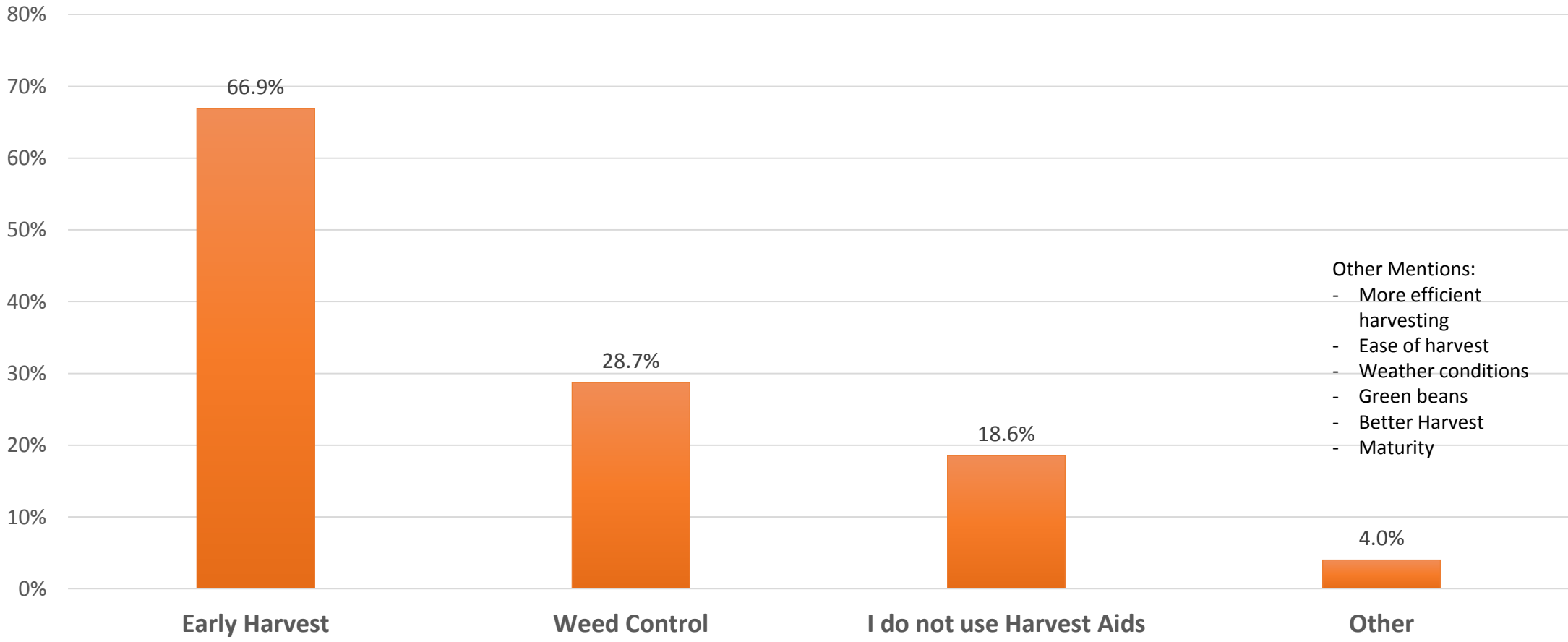
One-fourth of growers do not use harvest aids on any acres.




Q28: On what percentage of your acres do you use harvest aids or harvest desiccants?

# Factors Considered for Harvest Aid Application

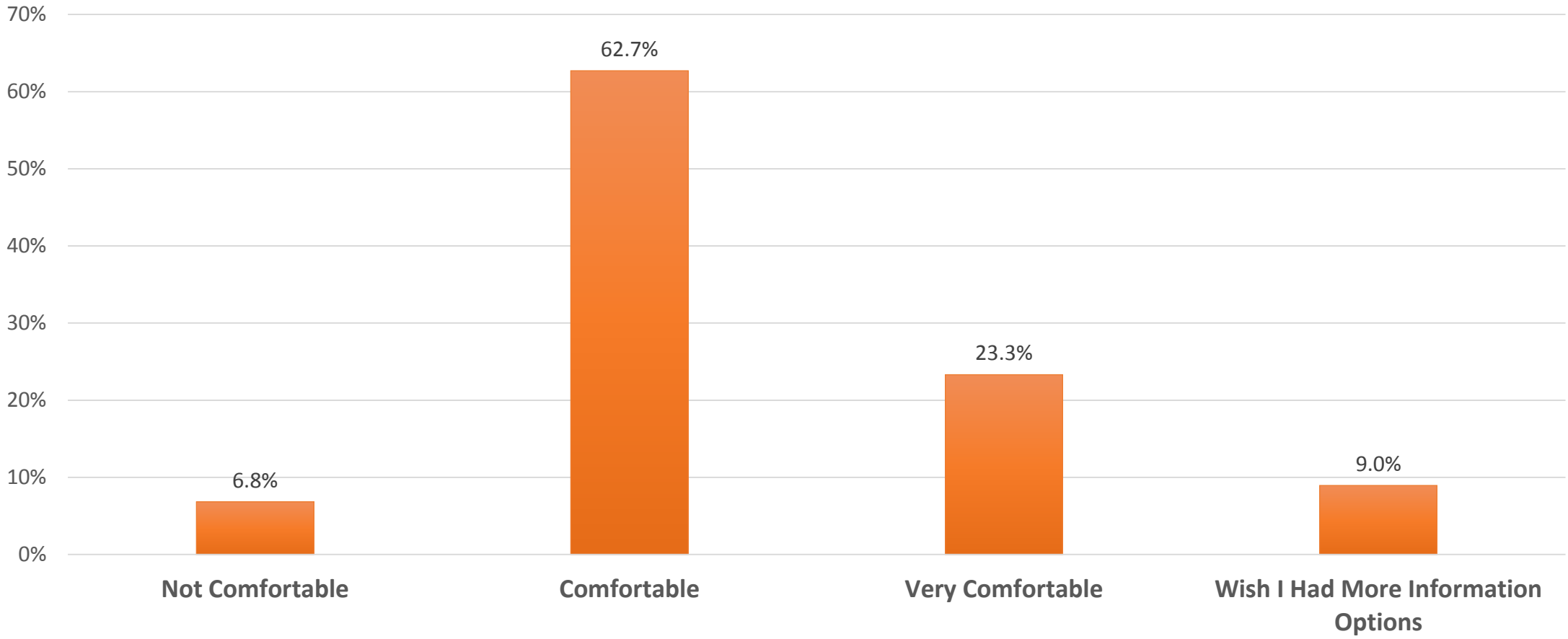
Two-thirds of growers use harvest aids for early harvest.




Q29: What factors do you consider when applying harvest aids or harvest desiccants?

# Comfort Level With Retailer Recommendations

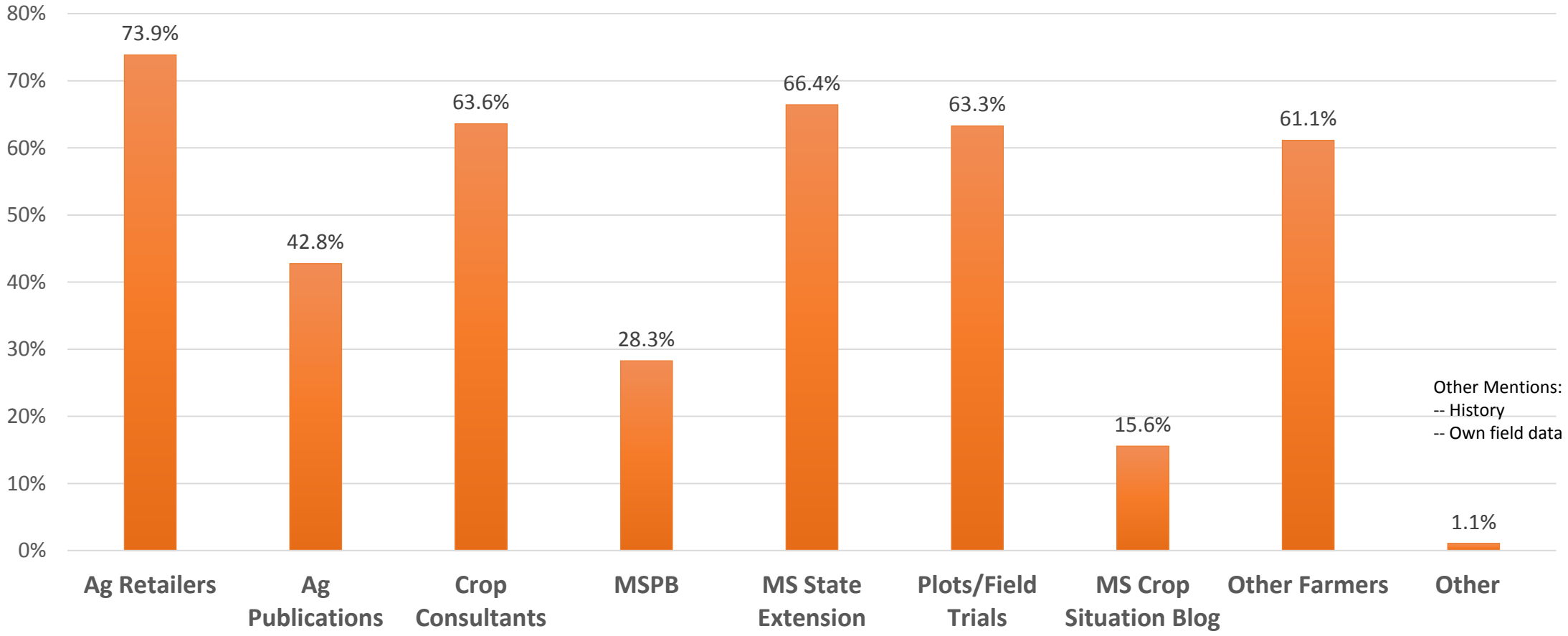
85 percent of growers are either comfortable or very comfortable with retailer recommendations.




Q30: How comfortable are you with the recommendations you receive from ag retailers to help you produce soybeans?

# Sources to Assist Soybean Production Decisions

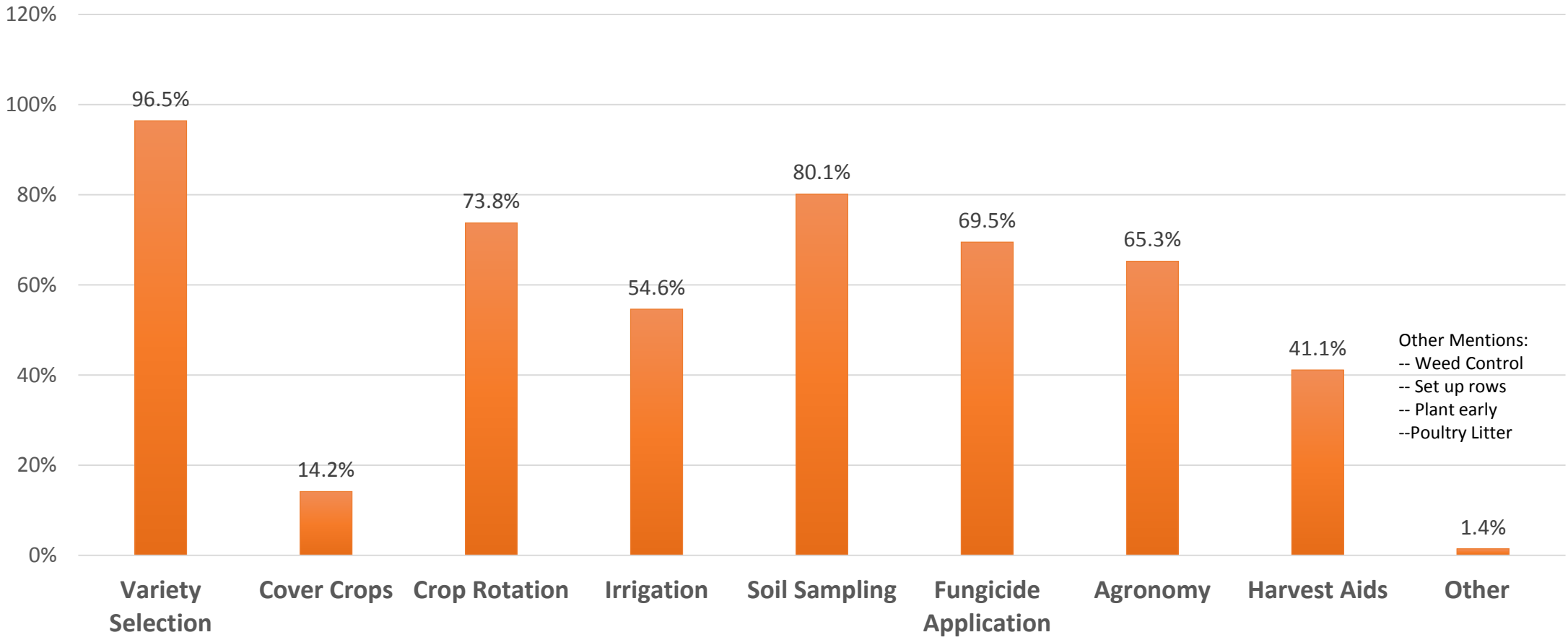
Ag Retailers, Crop Consultants, MS State, Field Trials and Other Farmers are used as key sources.




Q31: What sources do you use to assist you in making soybean production decisions?

# Methods to Increase Soybean Yields

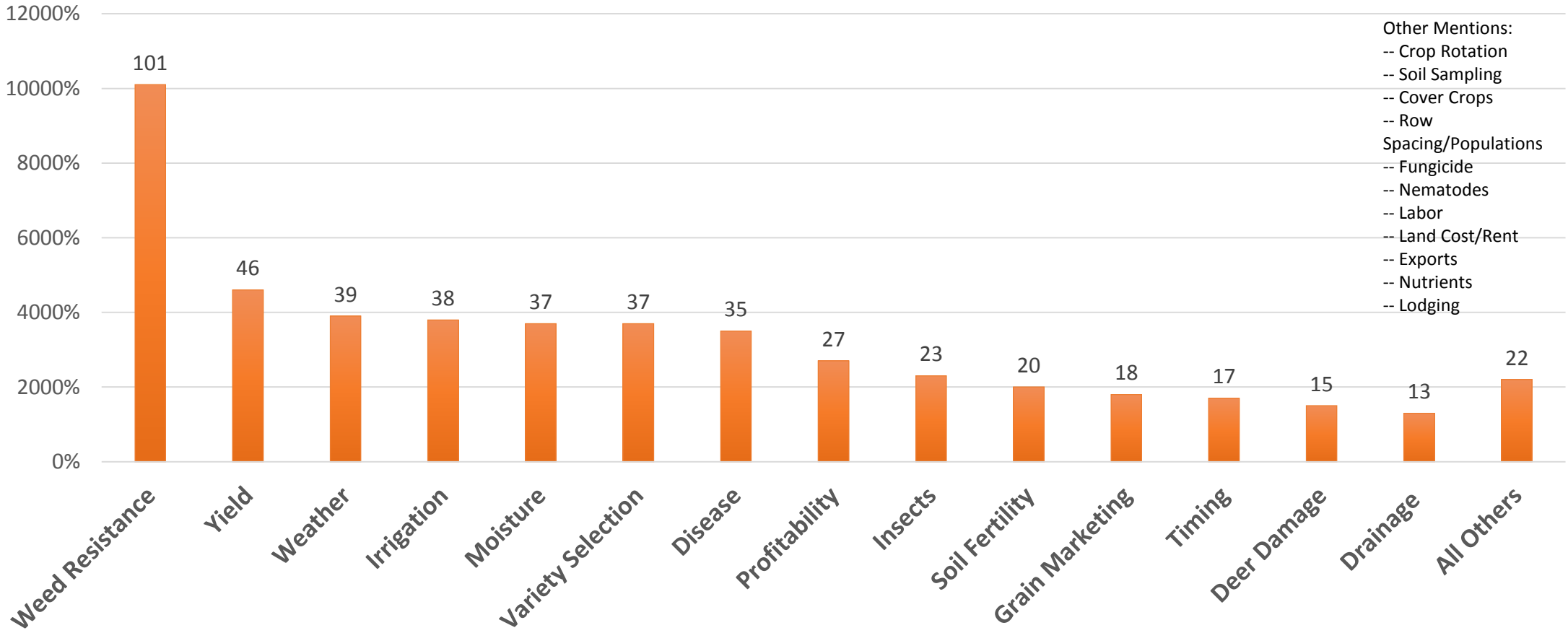
The selection of varieties is viewed as the most benefit to increasing soybean yields.




Q32: What things are you doing on your farm to increase soybean yields?

# Top Soybean Production Issues (Open-ended) – Number of Mentions

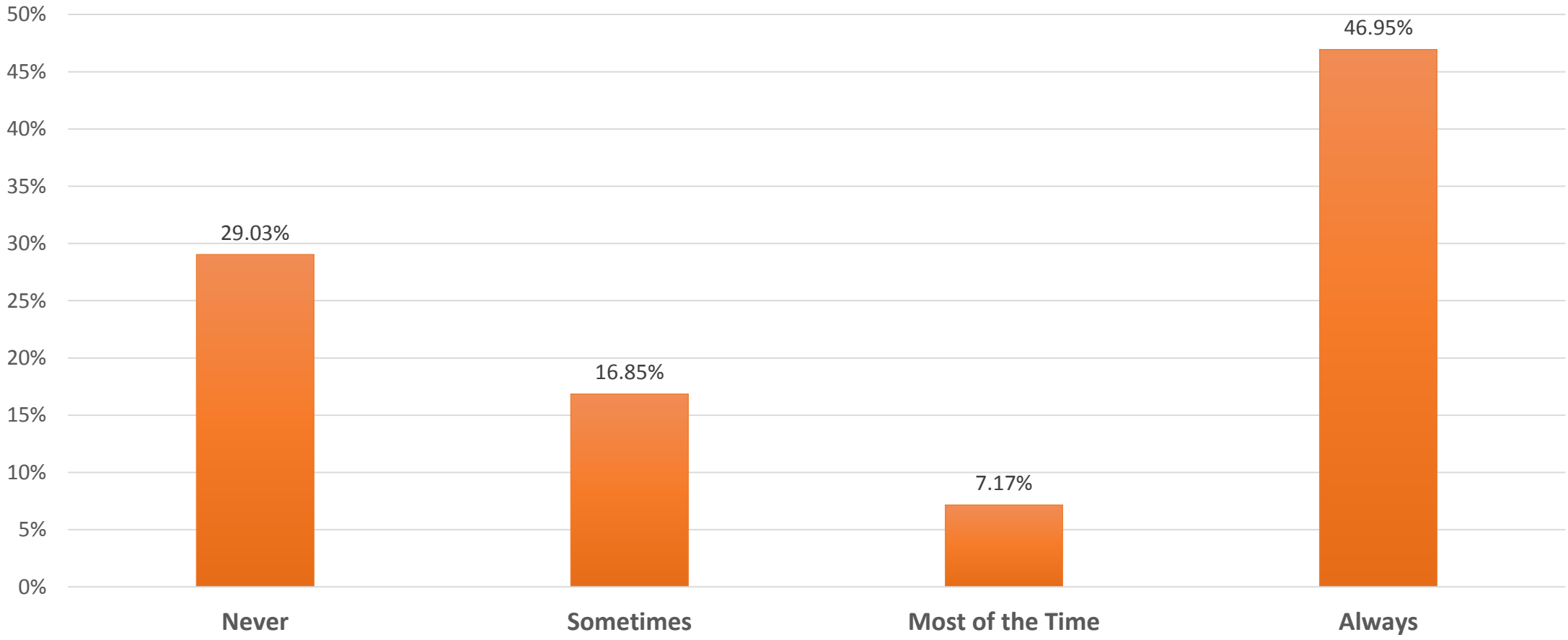
Weed Resistance is the most listed production problem by growers.




Q33: What are your top three soybean production issues?

# Use of Crop Consultants

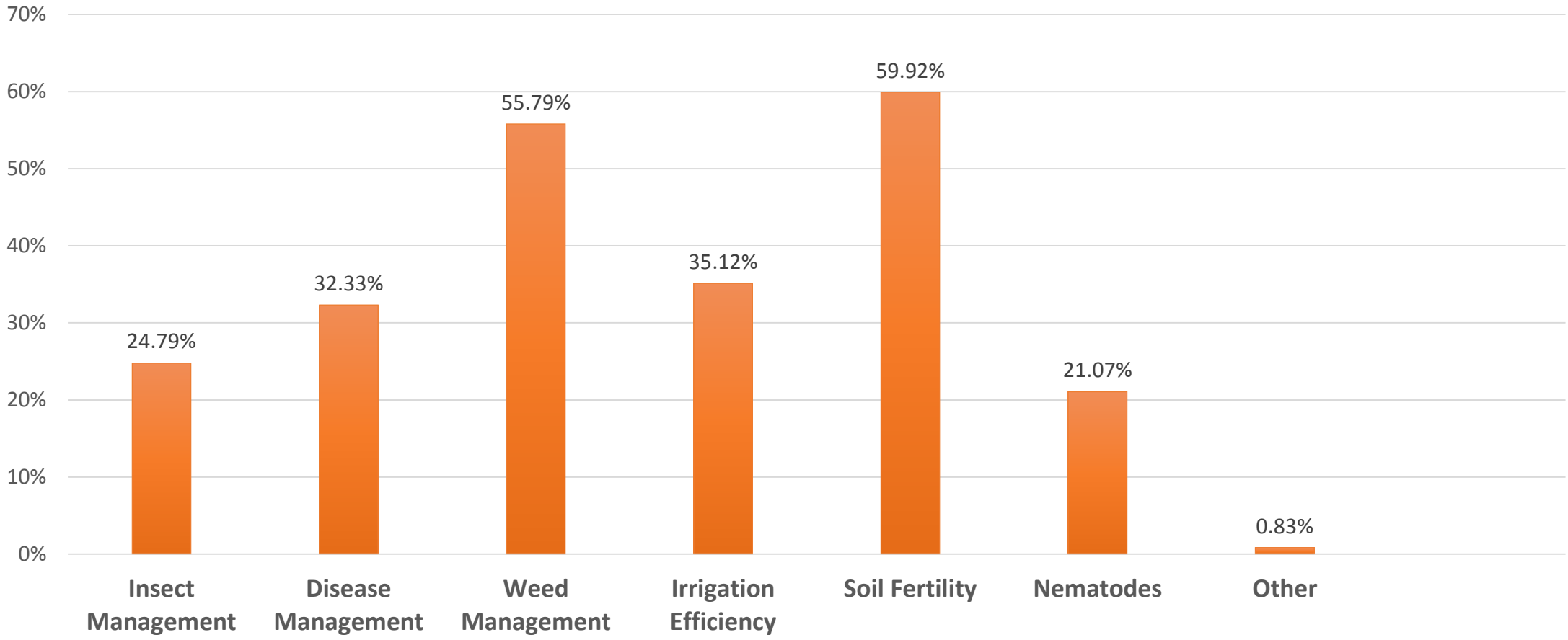
47 percent of growers always use a crop consultant.




Q34: Do you hire a crop consultant or advisor?

# Topical Information Needed

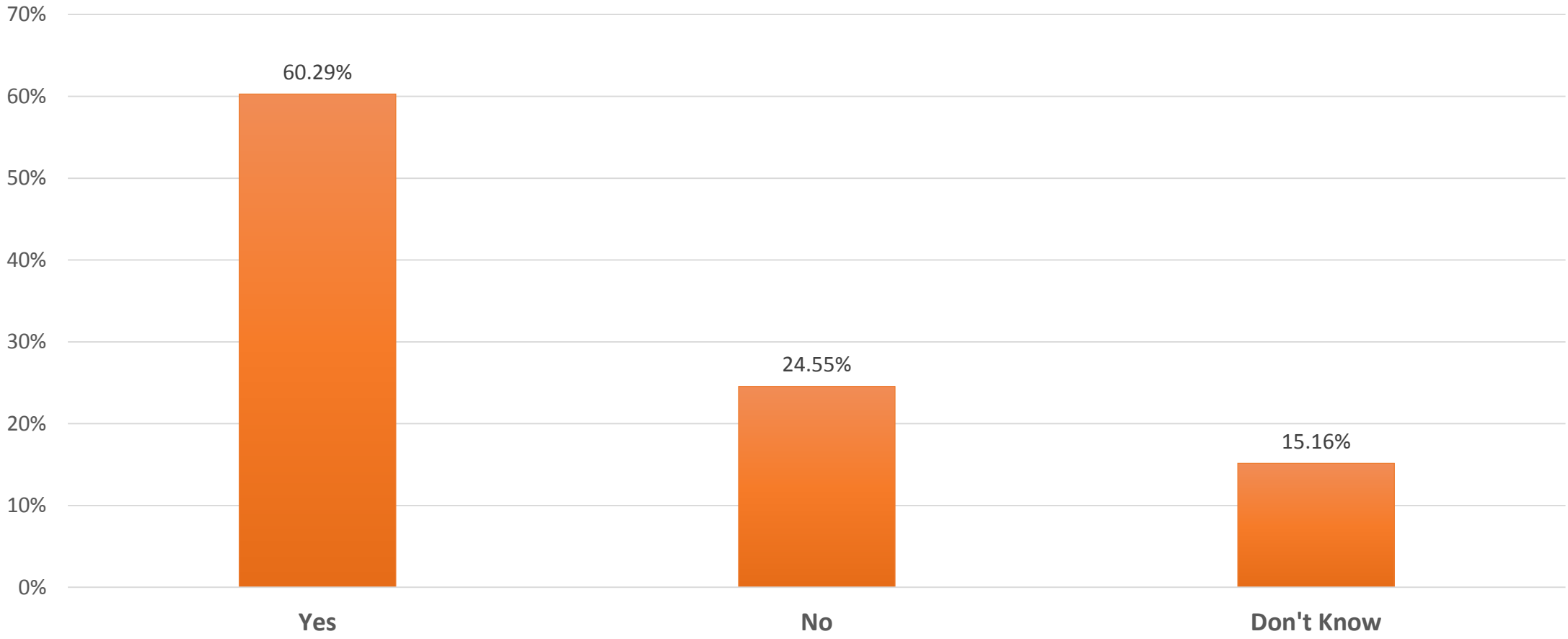
Growers need information most for Soil Fertility for Soybeans and Weed Management .




Q35: Is there a topic which you wish you had more information on?

# MSPB Information Recall

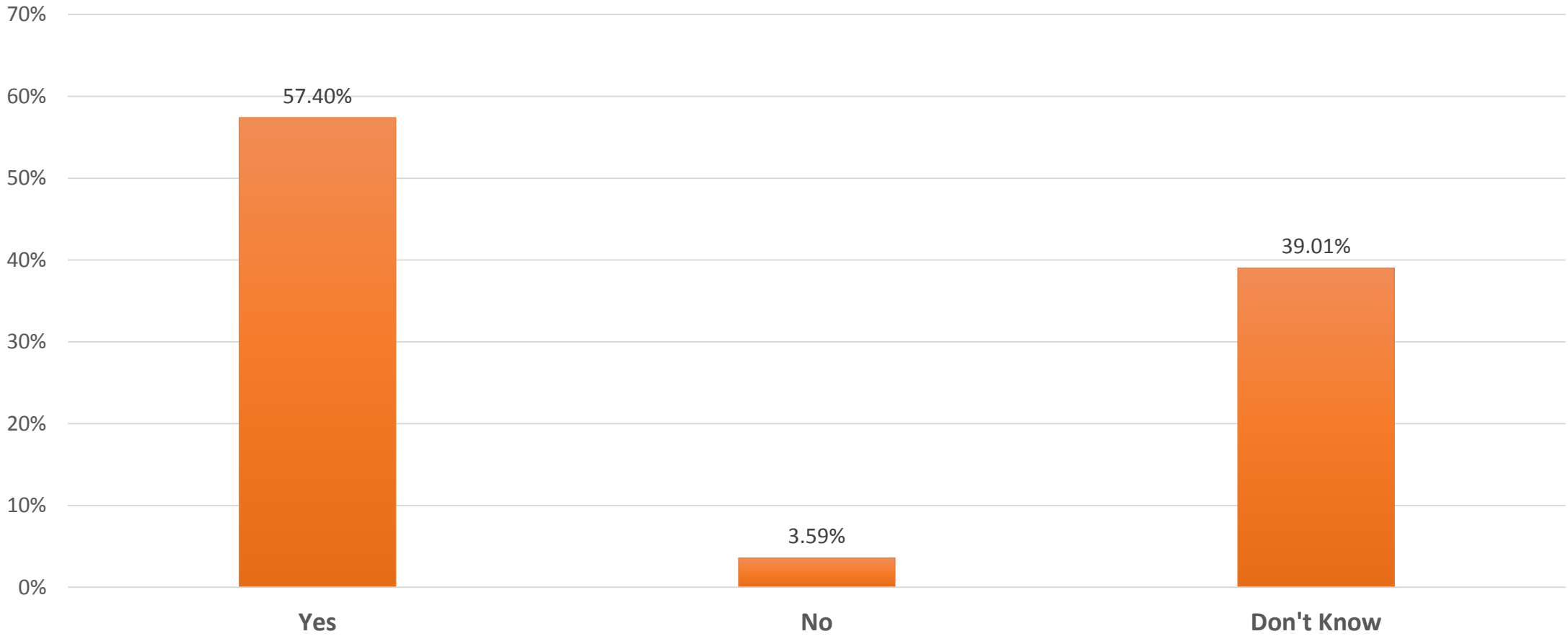
Sixty percent of growers recall receiving information from MSPB .




Q36: Do you recall receiving information from MSPB?

# Value of MSPB Information

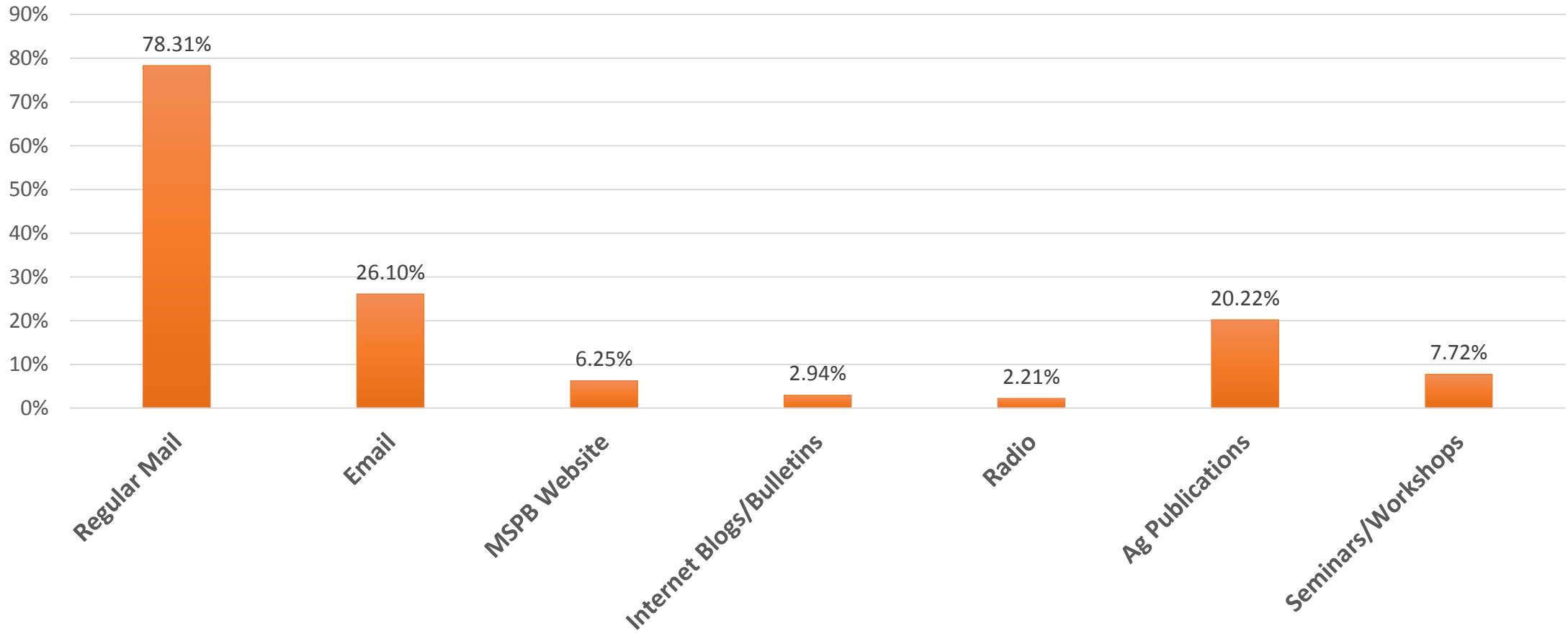
Over half of growers who received the information found it helpful.




Q37: If you recall receiving information, did you find it helpful for your operation?

# Distribution of MSPB Information

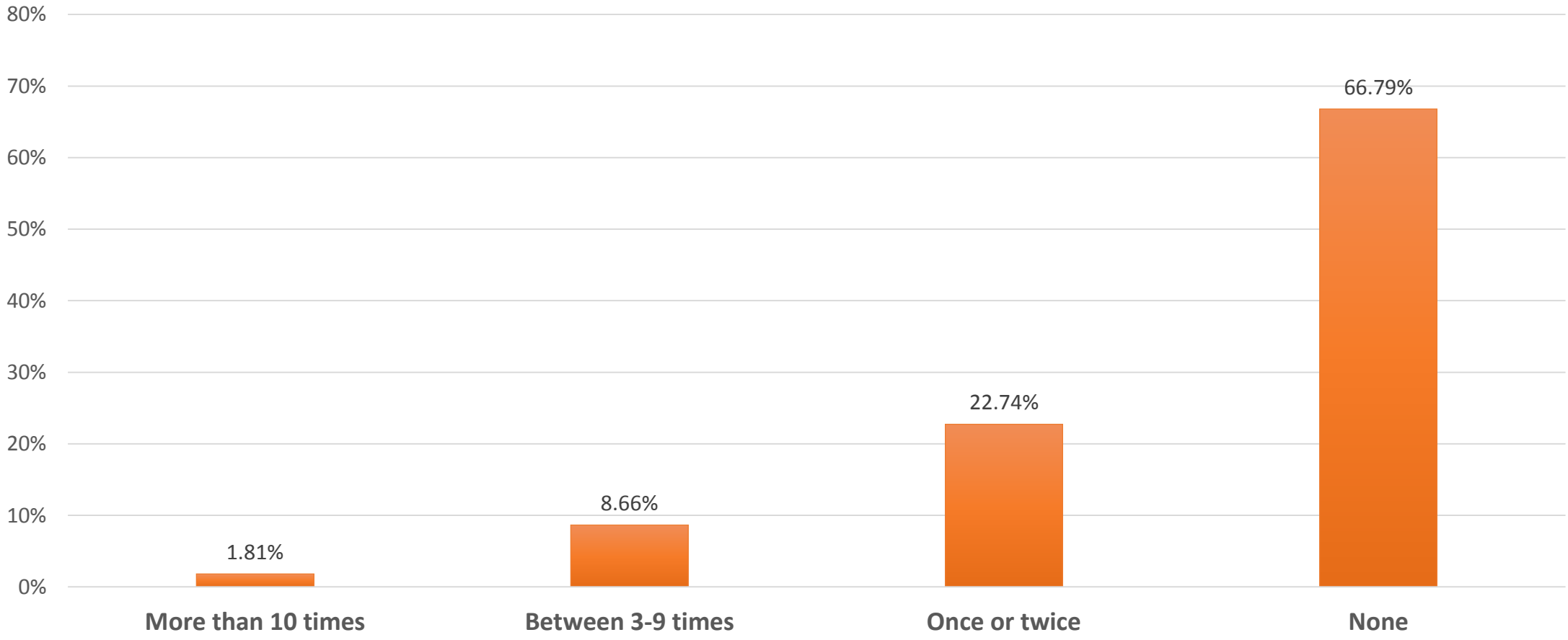
Nearly 80 percent of growers want to receive MSPB Soybean Production Information by Mail.




Q38: How do you like to receive soybean production information from the MSPB?

# MSPB Website Frequency

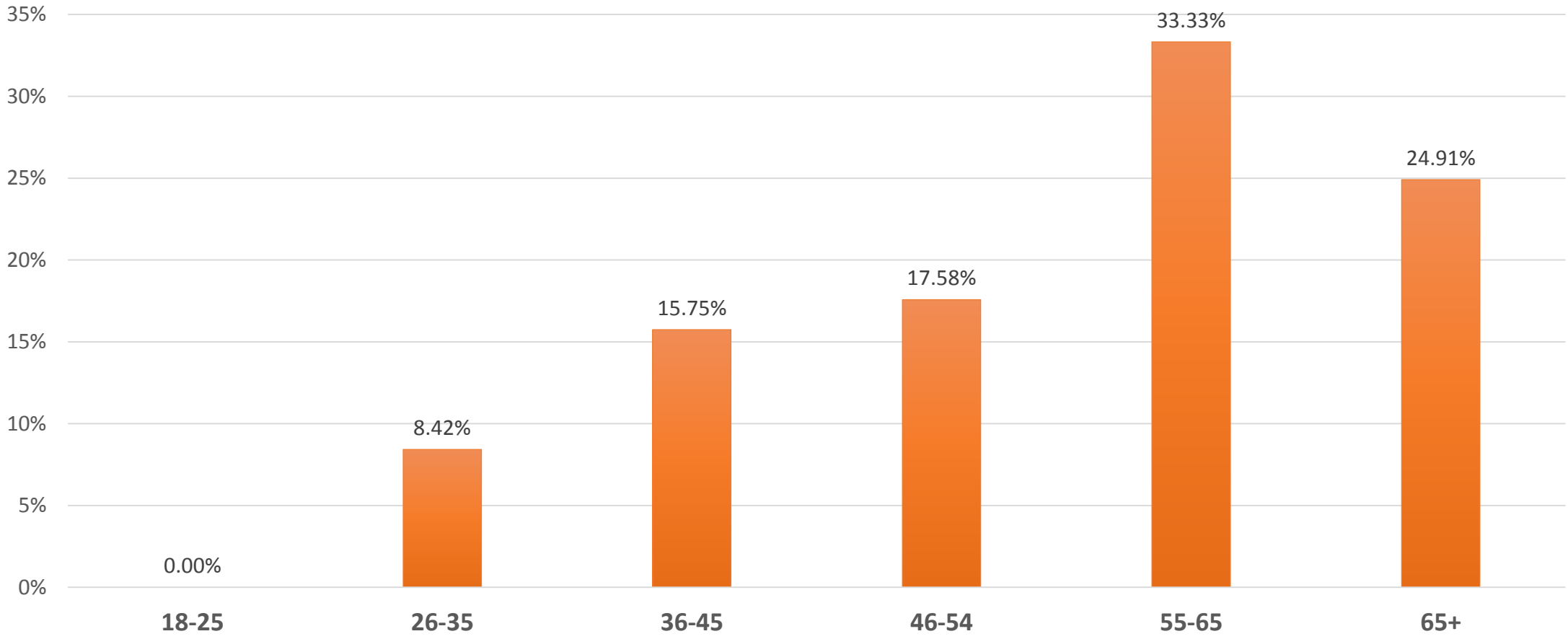
Two-thirds of growers have not visited the MSPB website in the past year.




Q39: How many times have you been to the MSPB website, www.mssoy.org in the past year?

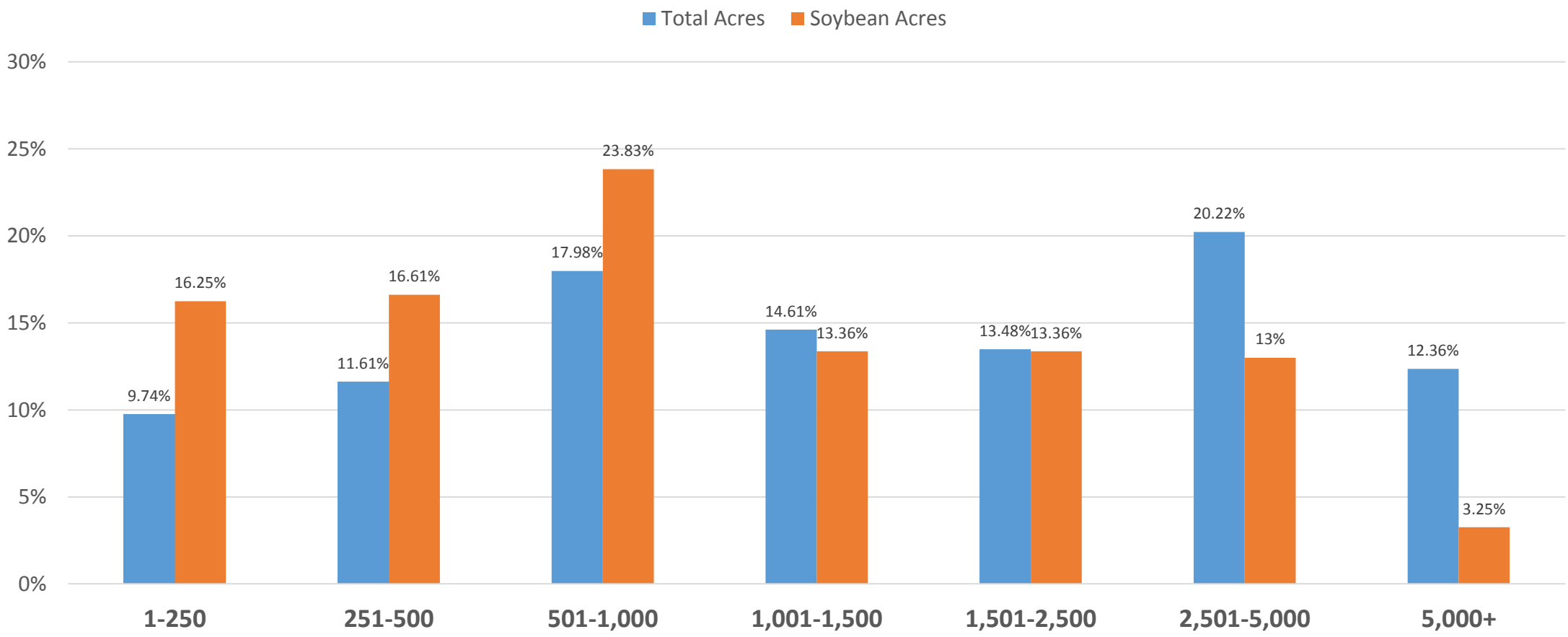
# Grower Age

Average age of grower participants is 50-55 – slightly younger than the national average.




Q40: What is your age?

# Grower Acreage




Q41: Total Tillable Acres
Q42: Total Soybean Acres