

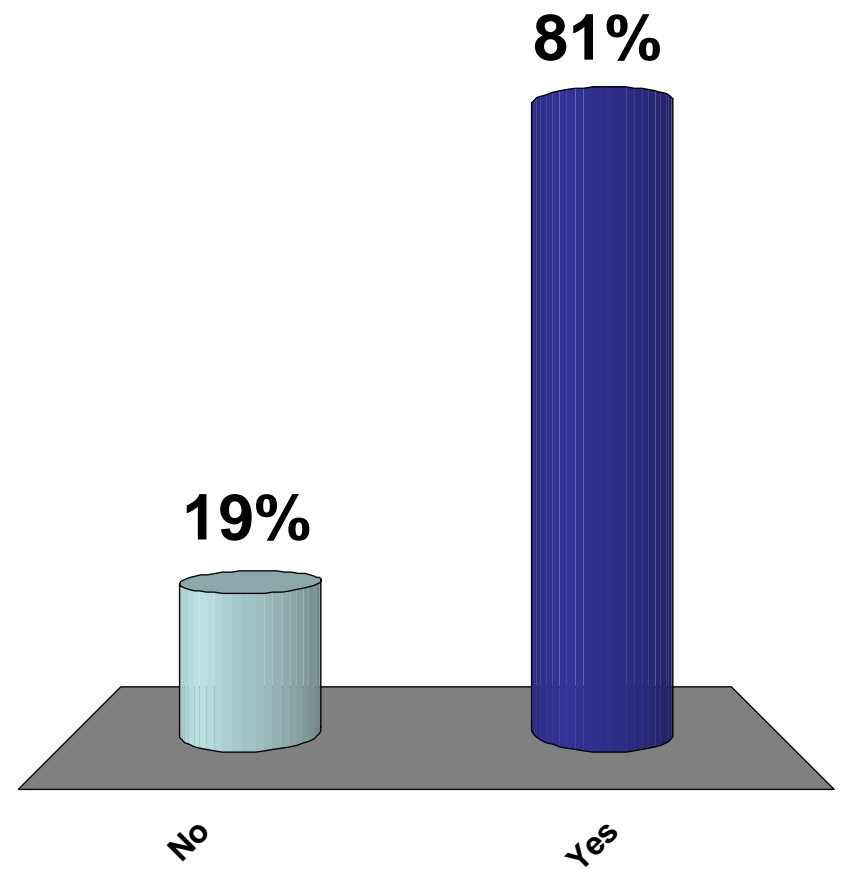


*What research do
we need for organic
orchards ?*

**Dain Craver, *CraveOrganics*
Nick Stephens, *Columiba IPM*
David Granatstein, *WSU CSANR***

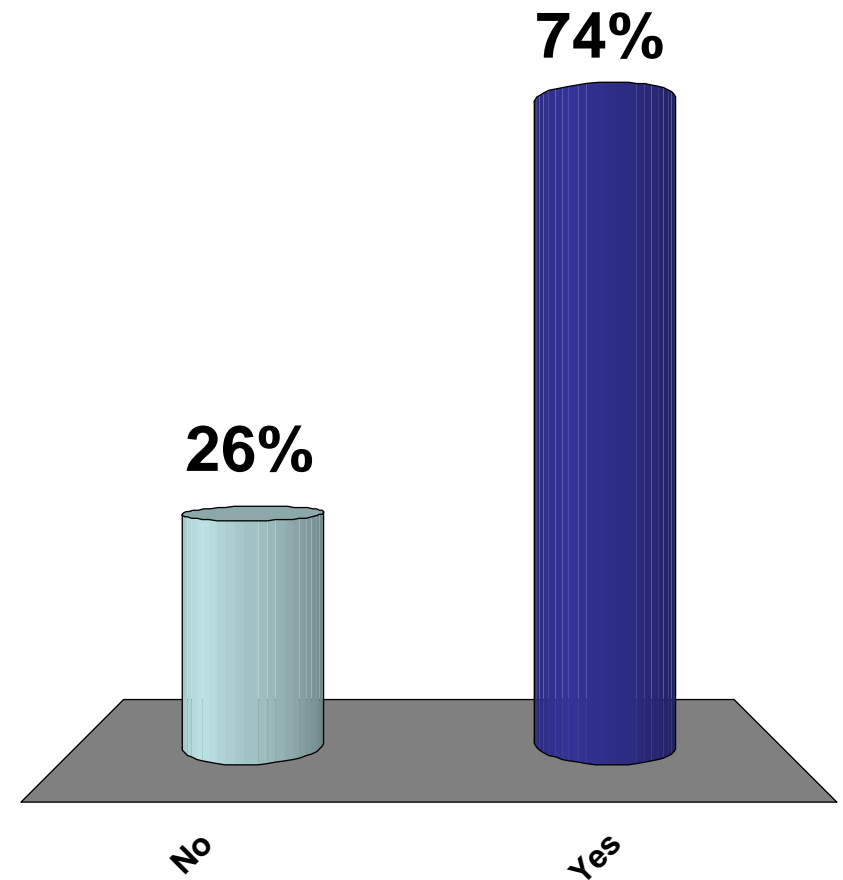
Are you in Yakima?

1. No
2. Yes



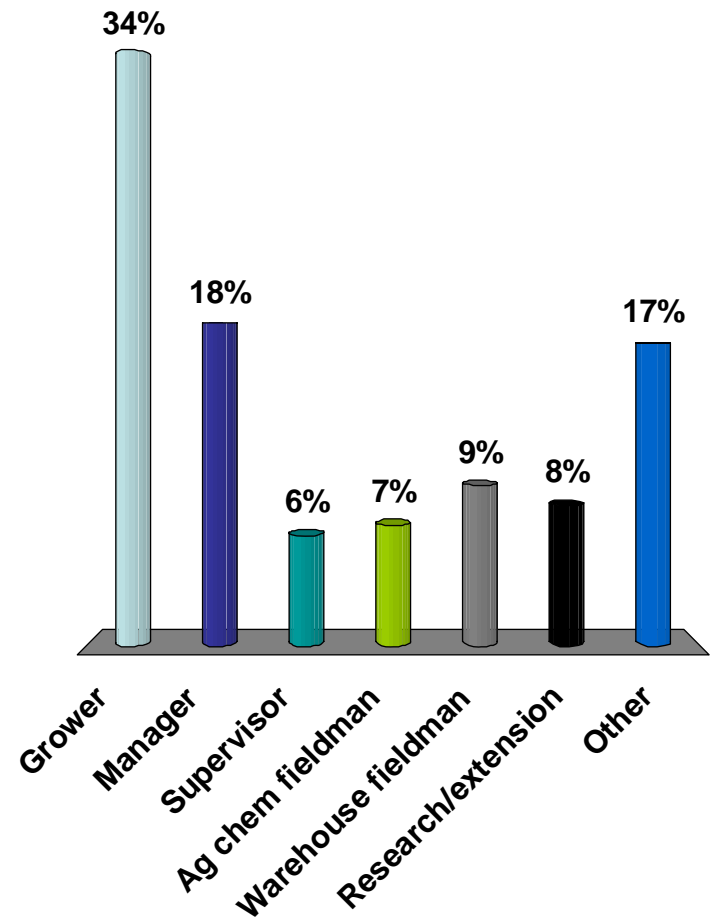
Do you work with organic orchards?

1. No
2. Yes



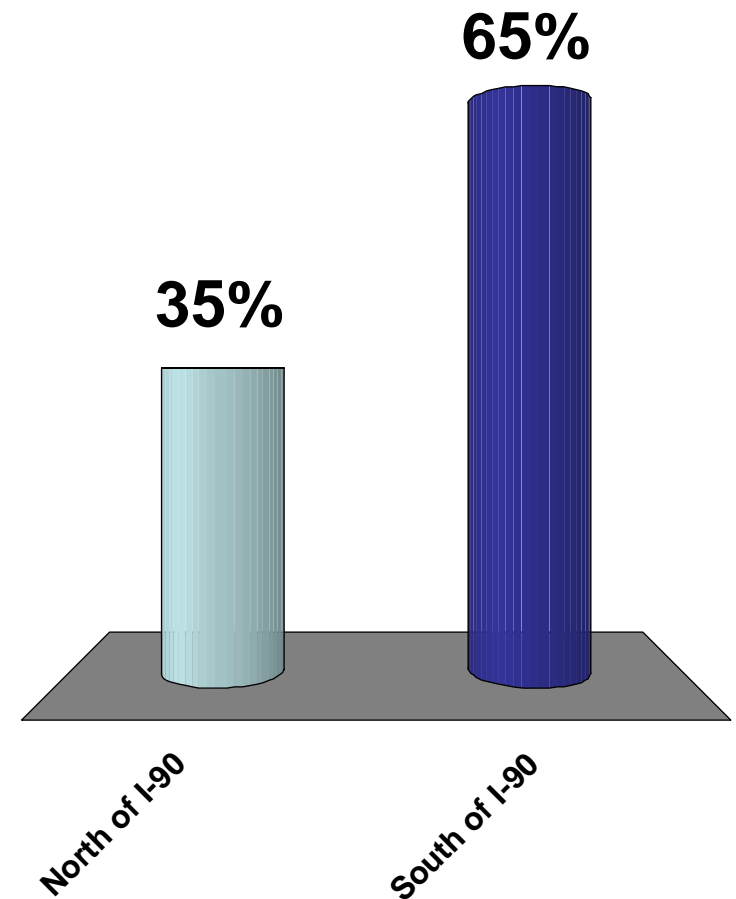
What is your role?

1. **Grower**
2. **Manager**
3. **Supervisor**
4. **Ag chem fieldman**
5. **Warehouse fieldman**
6. **Research/extension**
7. **Other**



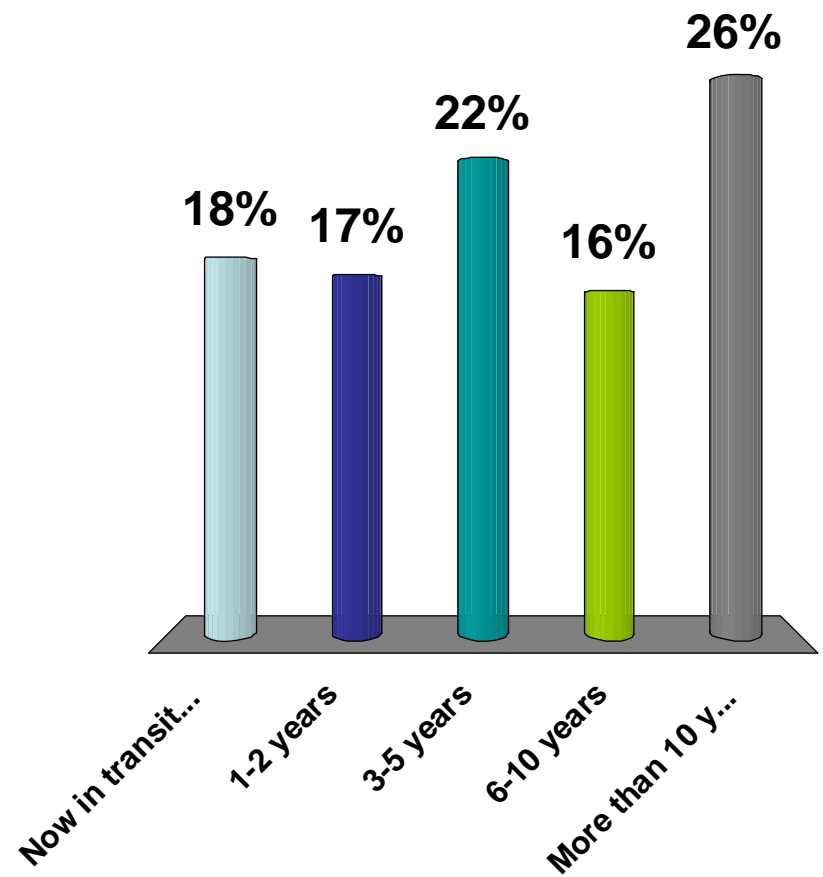
Where is most of your organic orcharding?

1. North of I-90
2. South of I-90



How long have you been in organic orcharding?

1. Now in transition
2. 1-2 years
3. 3-5 years
4. 6-10 years
5. More than 10 years

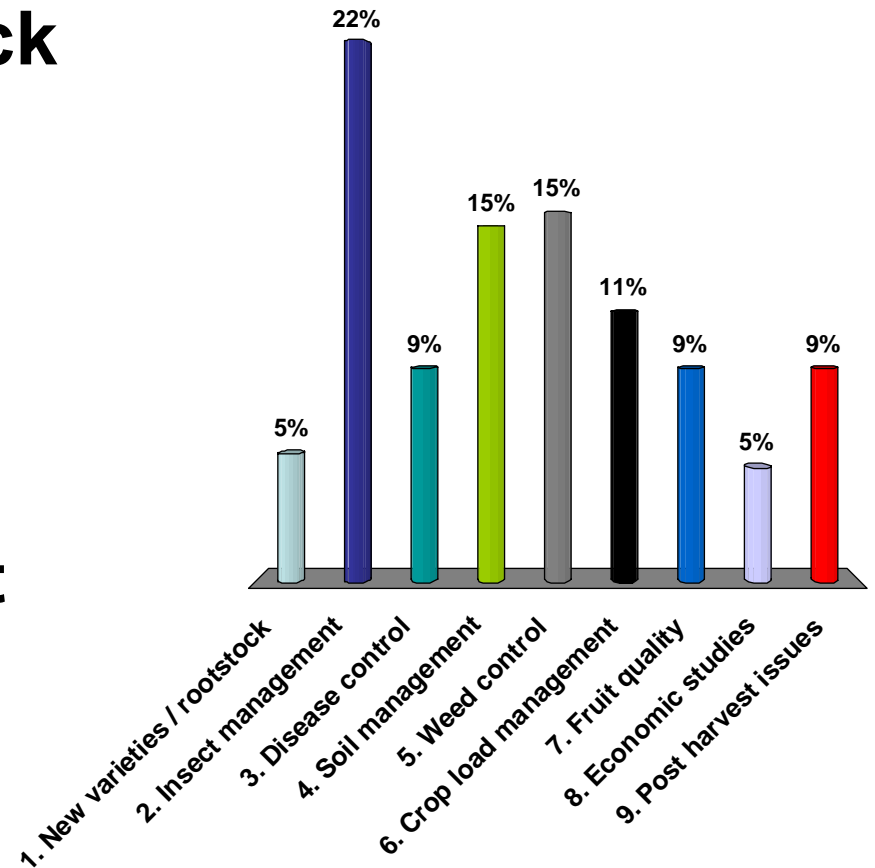


Question 1a.

Choose your **highest** priority for organic tree fruit research.

1st Priority

1. New varieties / rootstock
2. Insect management
3. Disease control
4. Soil management
5. Weed control
6. Crop load management
7. Fruit quality
8. Economic studies
9. Post harvest issues

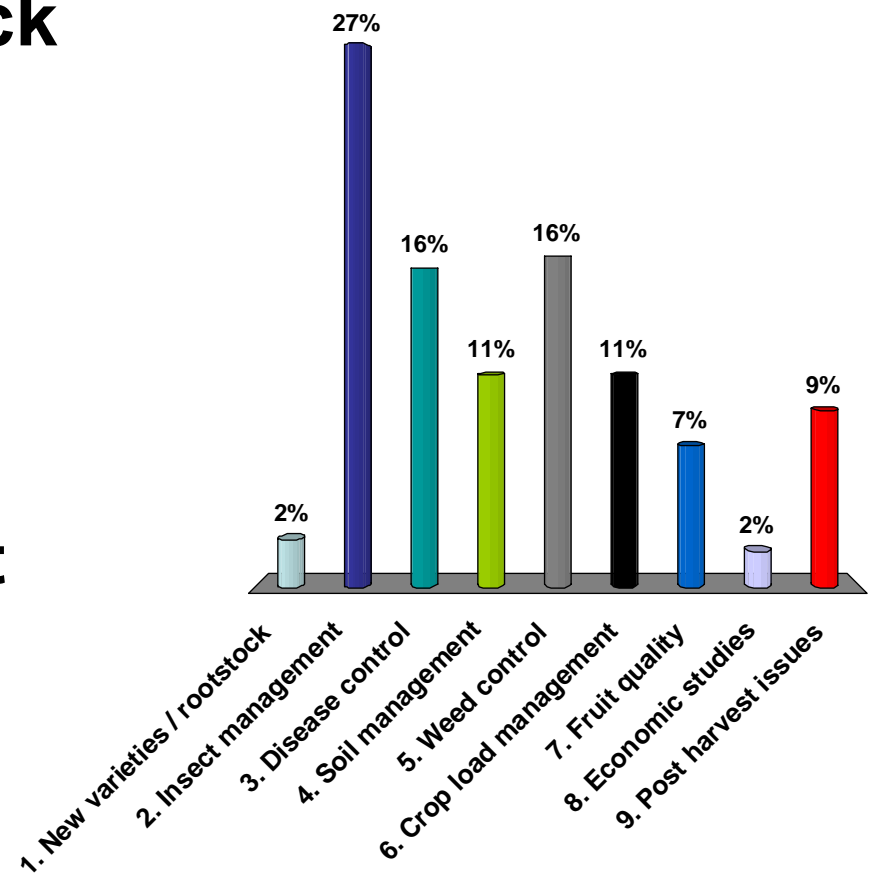


Question 1b.

Choose your **2nd** highest priority for organic tree fruit research.

2nd Priority

1. New varieties / rootstock
2. Insect management
3. Disease control
4. Soil management
5. Weed control
6. Crop load management
7. Fruit quality
8. Economic studies
9. Post harvest issues

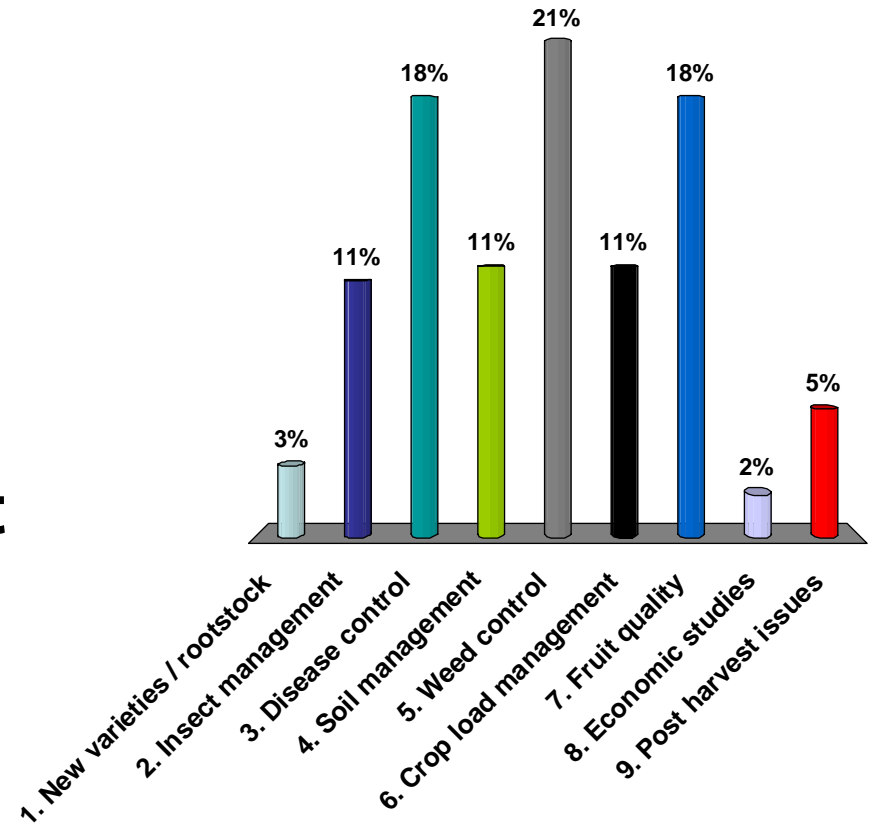


Question 1c.

Choose your **3rd** highest priority for organic tree fruit research.

3rd Priority

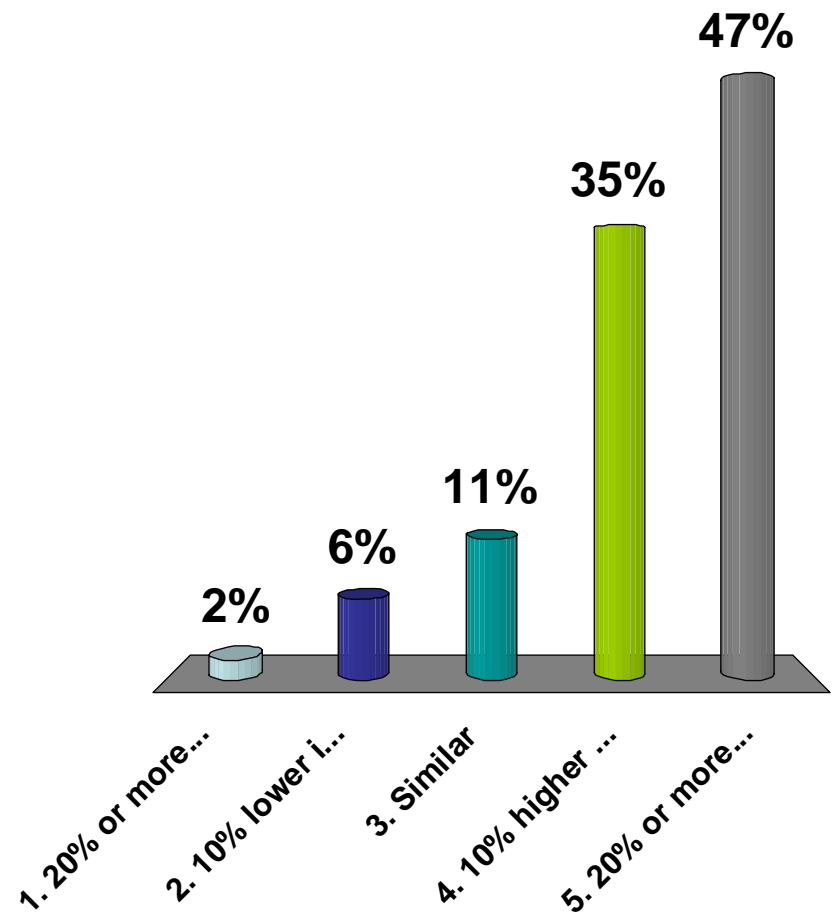
1. New varieties / rootstock
2. Insect management
3. Disease control
4. Soil management
5. Weed control
6. Crop load management
7. Fruit quality
8. Economic studies
9. Post harvest issues



Question 2.

How would you compare the cost of production for organic tree fruit to similar conventional production?

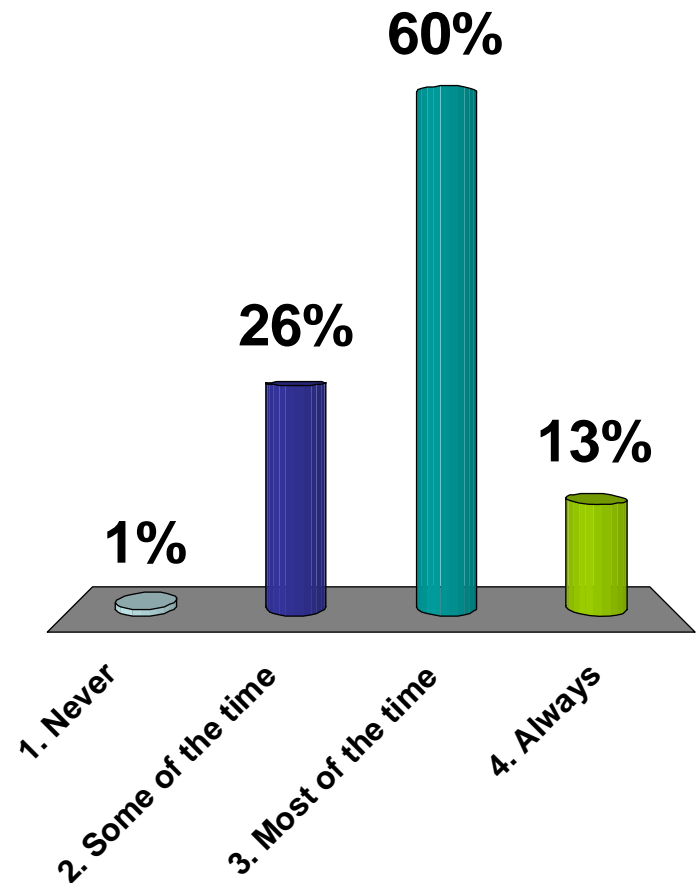
1. 20% or more lower in organic
2. 10% lower in organic
3. Similar
4. 10% higher in organic
5. 20% or more higher in organic



Question 3.

Do the returns from organic production offset the added costs of growing fruit organically?

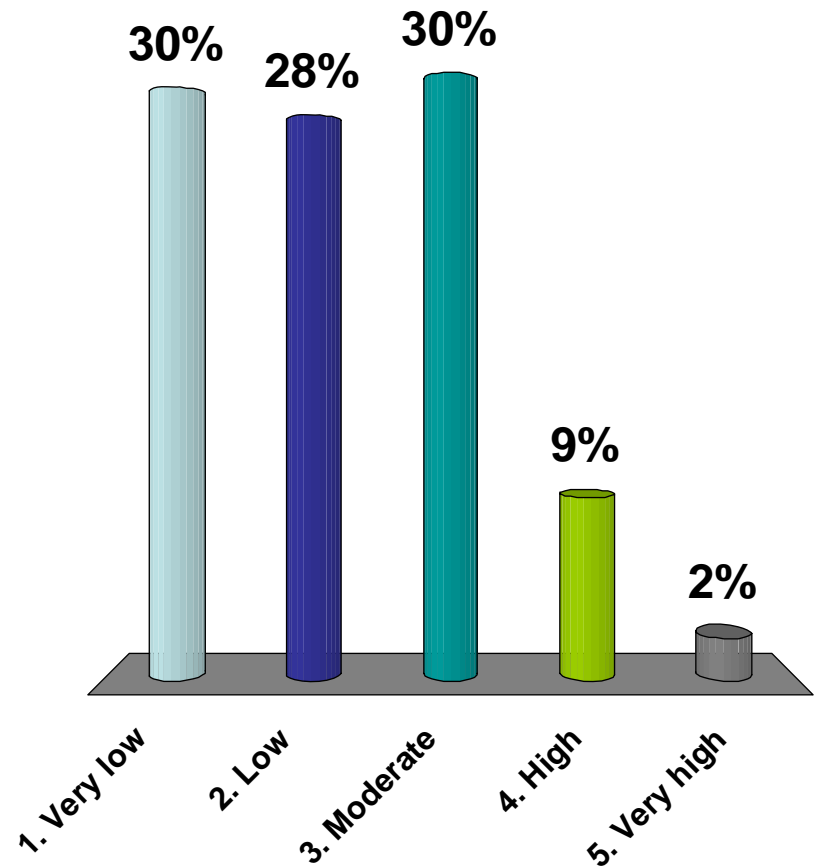
- 1. Never**
- 2. Some of the time**
- 3. Most of the time**
- 4. Always**



Question 4.

How satisfied are you with your current options for weed control in organic orchards?

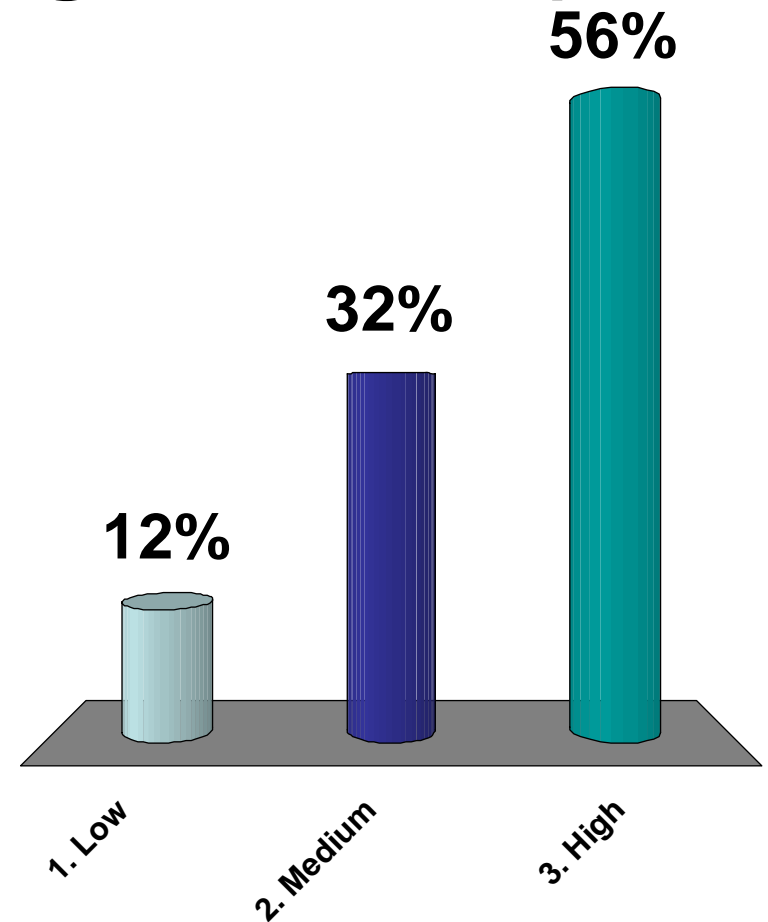
- 1. Very low**
- 2. Low**
- 3. Moderate**
- 4. High**
- 5. Very high**



Question 5.

Rank the importance of developing in-orchard nitrogen sources (e.g. legumes, N fixing microbes)?

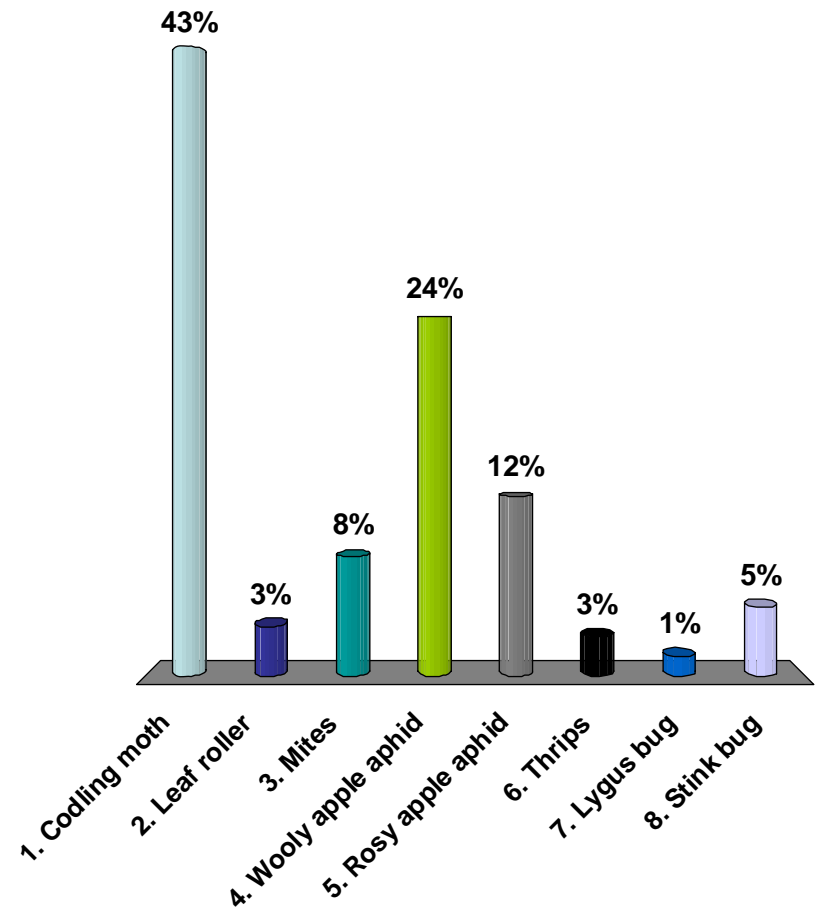
- 1. Low**
- 2. Medium**
- 3. High**



Question 6a.

Rank the **most** difficult insect pest to control in organic apple production.

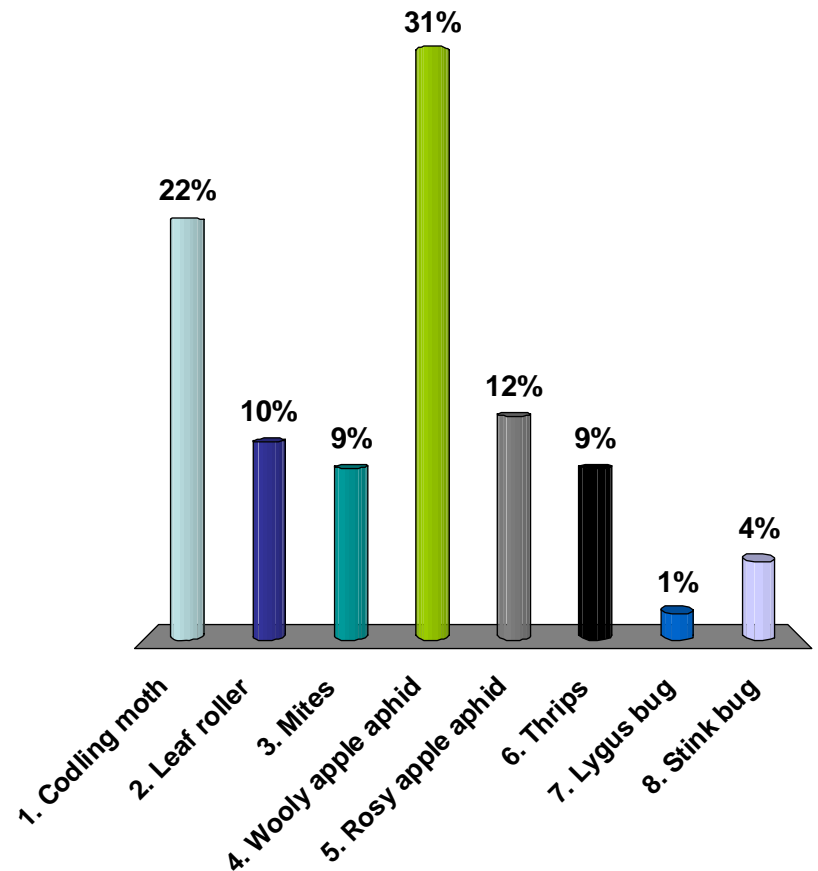
1. Codling moth
2. Leaf roller
3. Mites
4. Woolly apple aphid
5. Rosy apple aphid
6. Thrips
7. Lygus bug
8. Stink bug



Question 6b.

Rank the **second** most difficult insect pest to control in organic apple production.

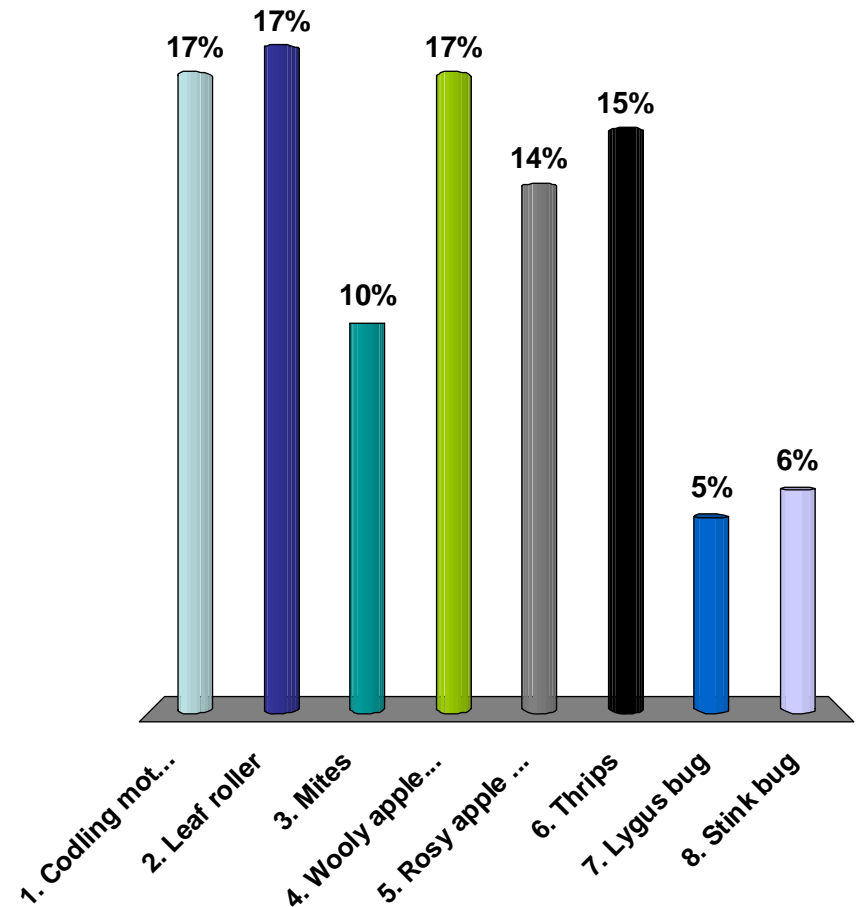
1. Codling moth
2. Leaf roller
3. Mites
4. Woolly apple aphid
5. Rosy apple aphid
6. Thrips
7. Lygus bug
8. Stink bug



Question 6c.

Rank the **third** most difficult insect pest to control in organic apple production.

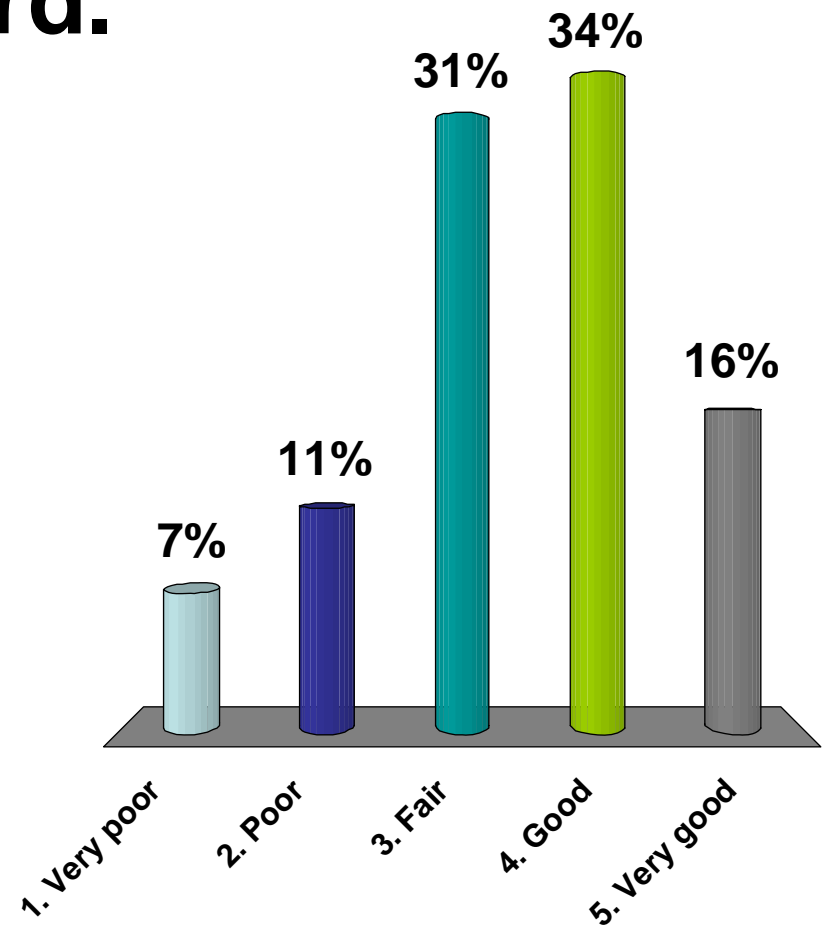
1. Codling moth
2. Leaf roller
3. Mites
4. Woolly apple aphid
5. Rosy apple aphid
6. Thrips
7. Lygus bug
8. Stink bug



Question 7.

Rate the ability of existing tools to control codling moth in an organic orchard.

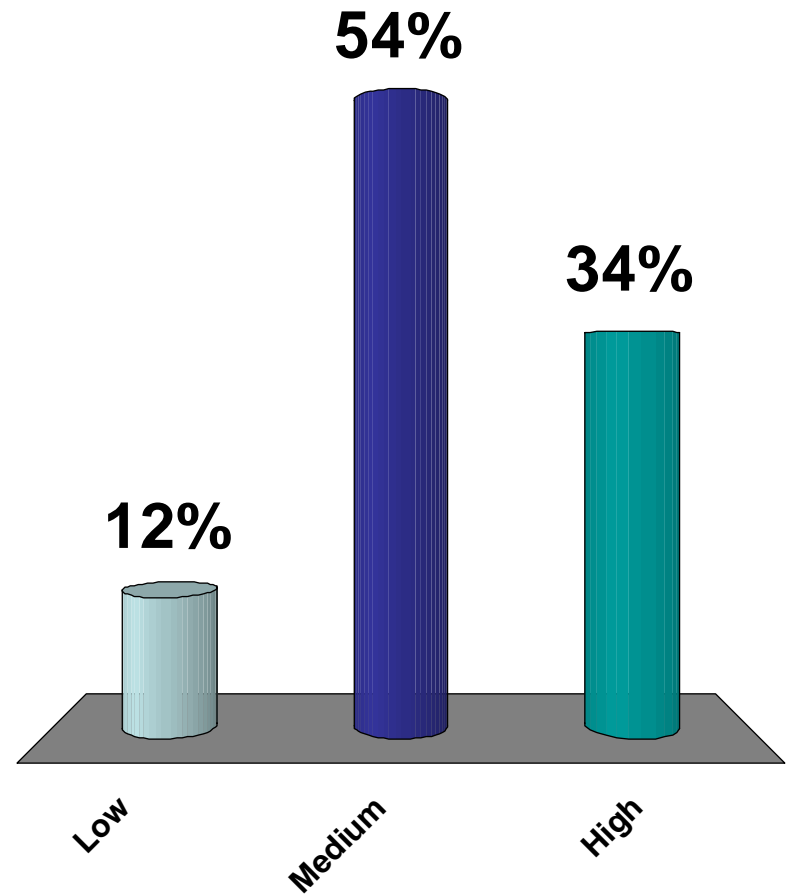
- 1. Very poor**
- 2. Poor**
- 3. Fair**
- 4. Good**
- 5. Very good**



Question 8.

Rate the need for additional coding moth control tools for organics.

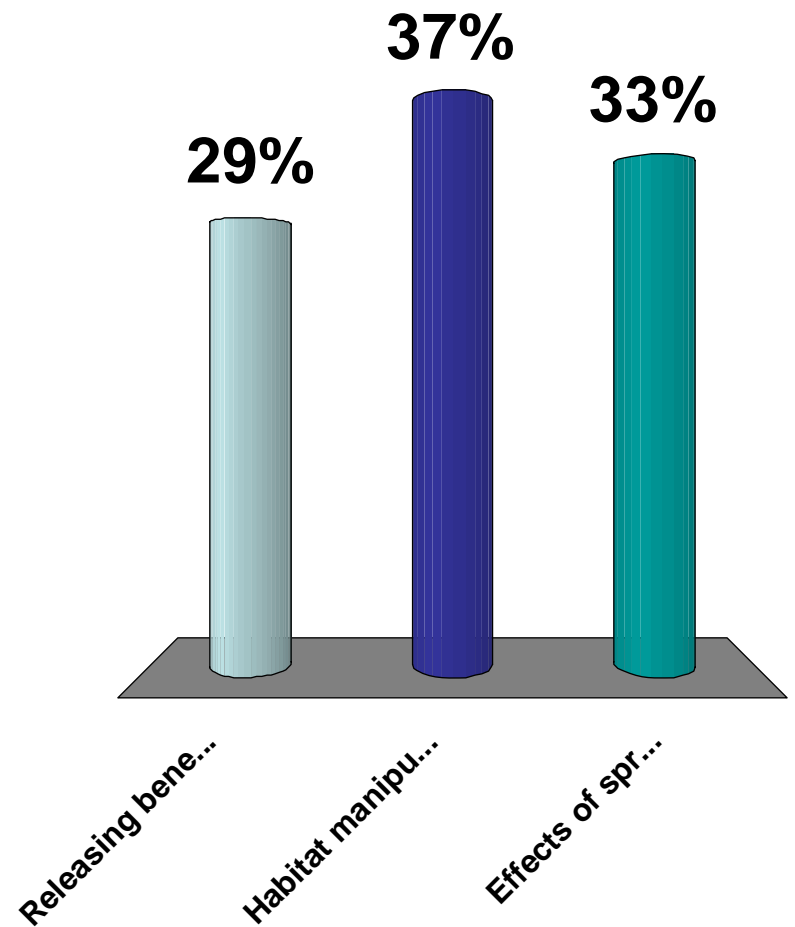
- 1. Low**
- 2. Medium**
- 3. High**



Question 9.

What is your highest priority for insect biocontrol research?

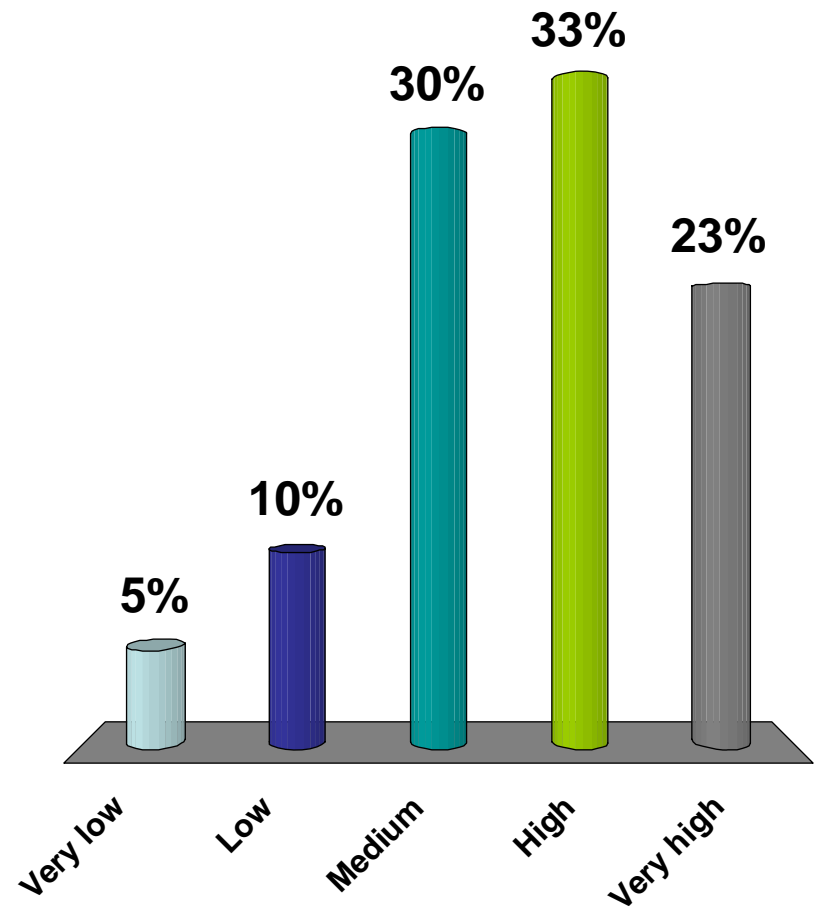
1. Releasing beneficials
2. Habitat manipulation (e.g. rose garden, cover crops)
3. Effects of sprays on beneficials



Question 10.

Rank the need for more research on post-harvest diseases of organic apples.

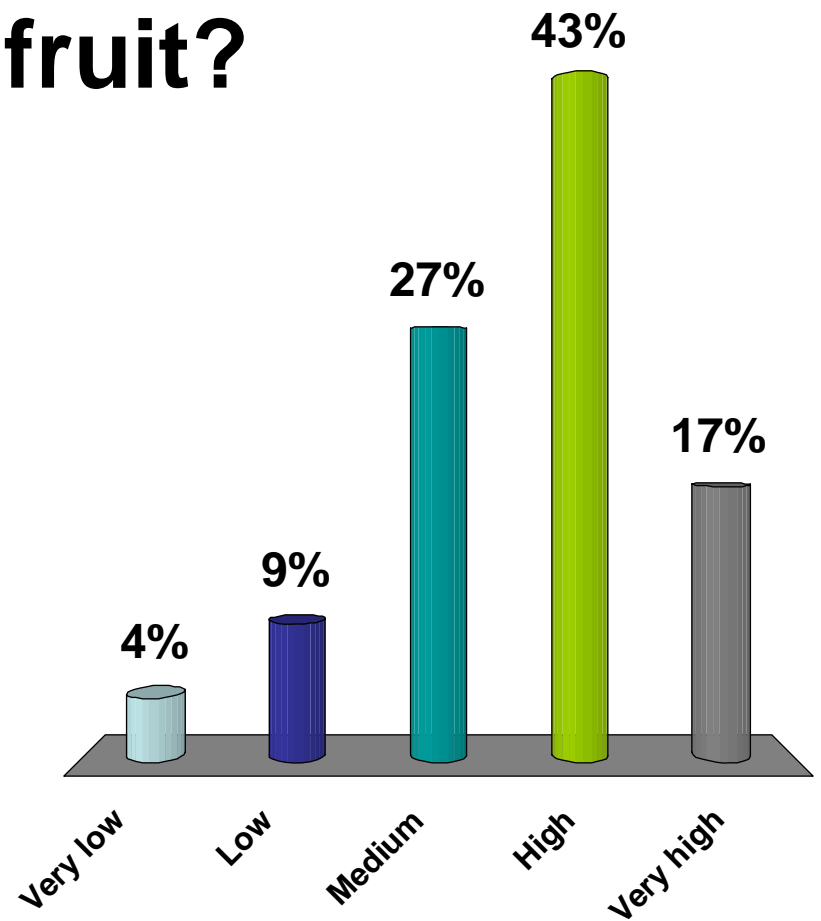
- 1. Very low**
- 2. Low**
- 3. Medium**
- 4. High**
- 5. Very high**



Question 11.

Rank the importance of research to develop methods to measure soil quality changes and the impacts on trees and fruit?

- 1. Very low**
- 2. Low**
- 3. Medium**
- 4. High**
- 5. Very high**



Systems Research

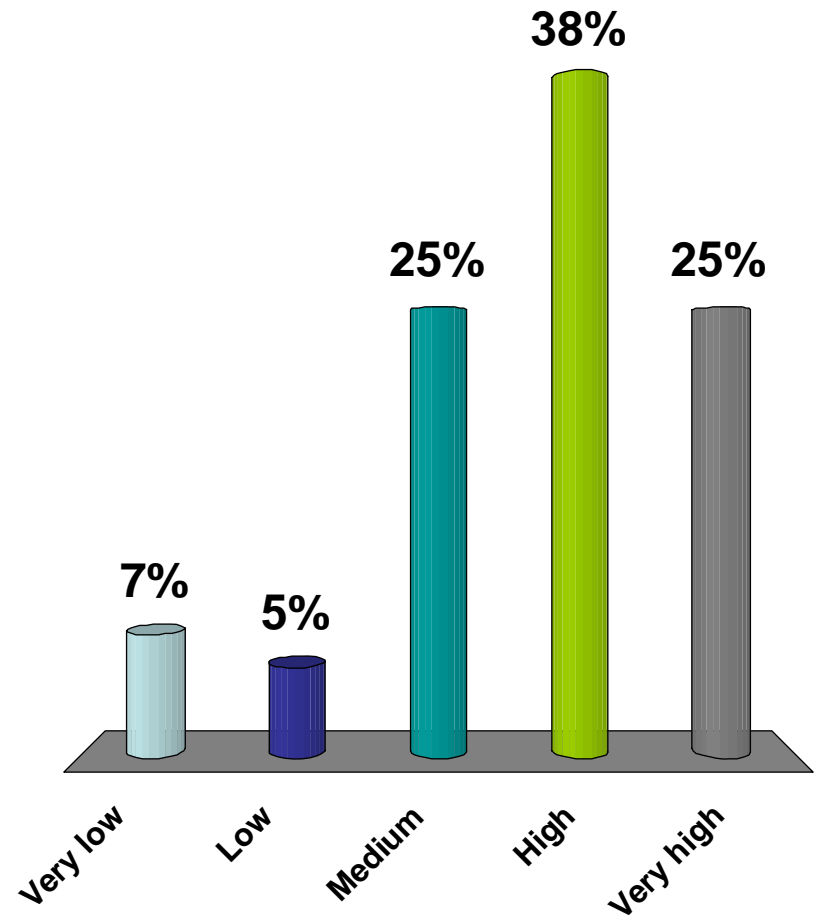
- Long-term
- Interdisciplinary – bugs, dirt, and money!
- Interaction of parts – effects of soil on fruit quality; fertility and diseases, ...
- Ecological design of the orchard system – training systems, rose gardens, ground cover, water use, ...
- Other – climate change impacts, energy, etc.

Benefits: more self-regulation of pests, fertility; more stability; lower environmental impact, lower input costs; ...

Question 12.

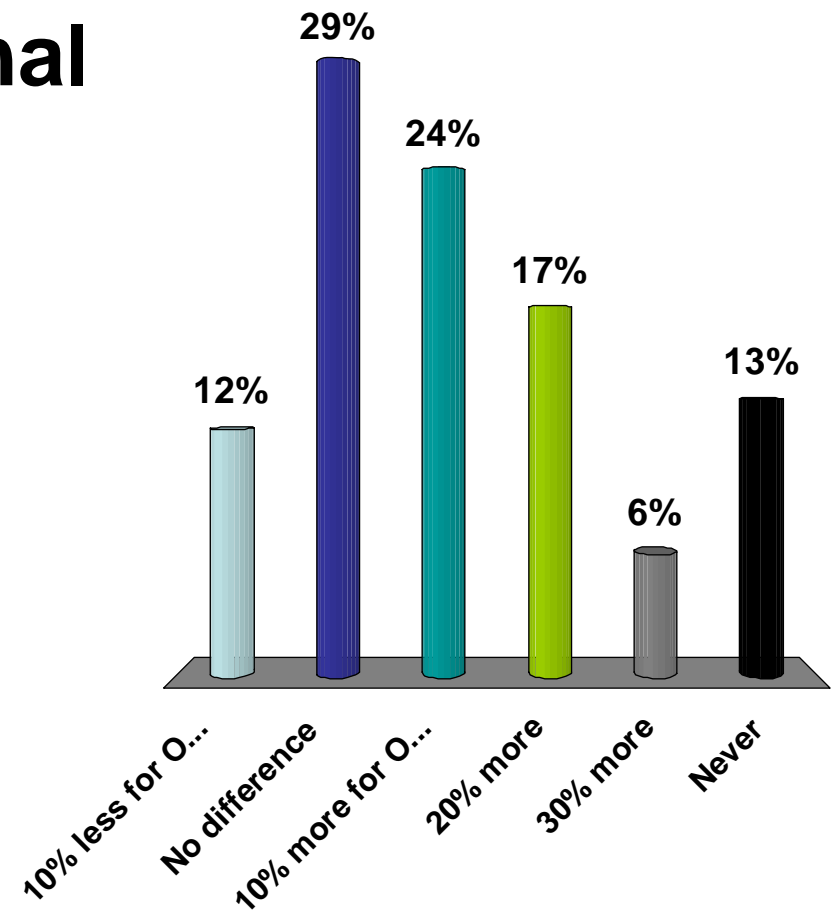
Rank the importance of investing in a long-term organic research site.

- 1. Very low**
- 2. Low**
- 3. Medium**
- 4. High**
- 5. Very high**



At what point would you consider switching back to conventional production – minimum difference between Organic and Conventional bin returns of:

- 1. 10% less for Org.**
- 2. No difference**
- 3. 10% more for Org.**
- 4. 20% more**
- 5. 30% more**
- 6. Never**



Question 13.



*Thanks for
participating !*