

Extreme Weather & Agriculture : Impacts and Adaptation

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INVESTING IN AMERICA



National Institute of Food and Agriculture
U.S. DEPARTMENT OF AGRICULTURE

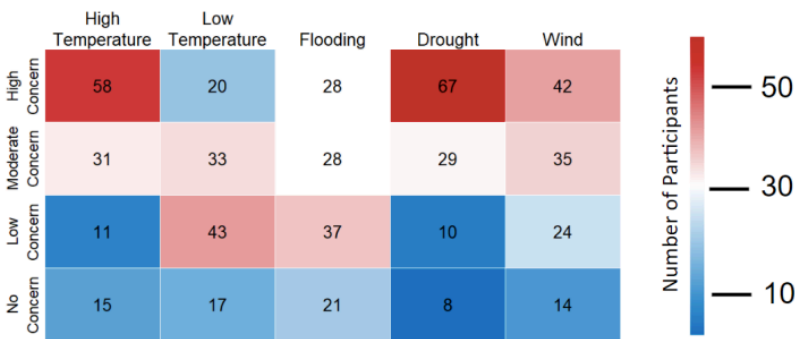


Major findings of a Spring 2024 survey of San Diego County farmers by researchers at San Diego State University. 119 farmers responded: Fallbrook & Valley Center are most represented, with Escondido, Bonsall & Ramona also well represented.

Climate Concerns

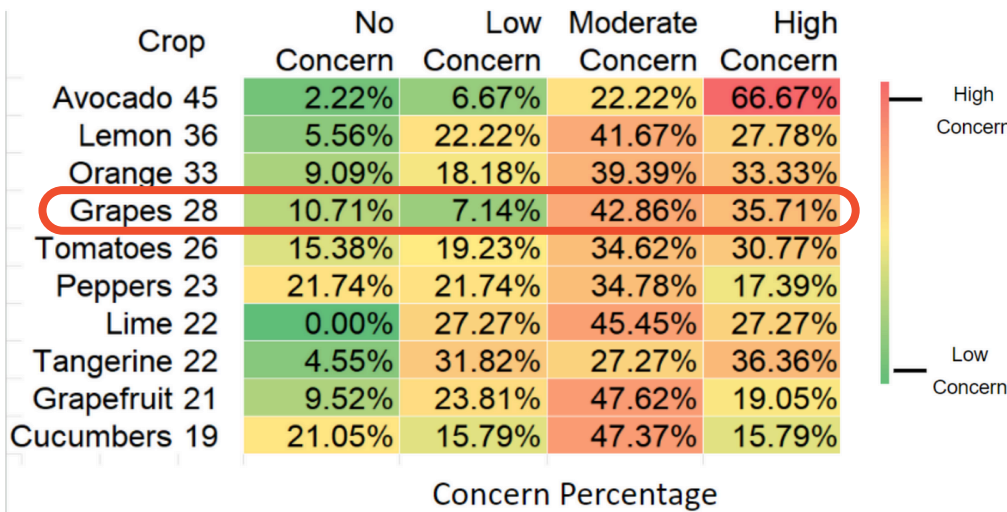
EXTREME WEATHER IMPACTS

- Nearly **59%** are highly concerned about **increased drought**.
- 50%** are highly concerned about **high temperatures**.
- More than **36%** are highly concerned about **increasing wind**.

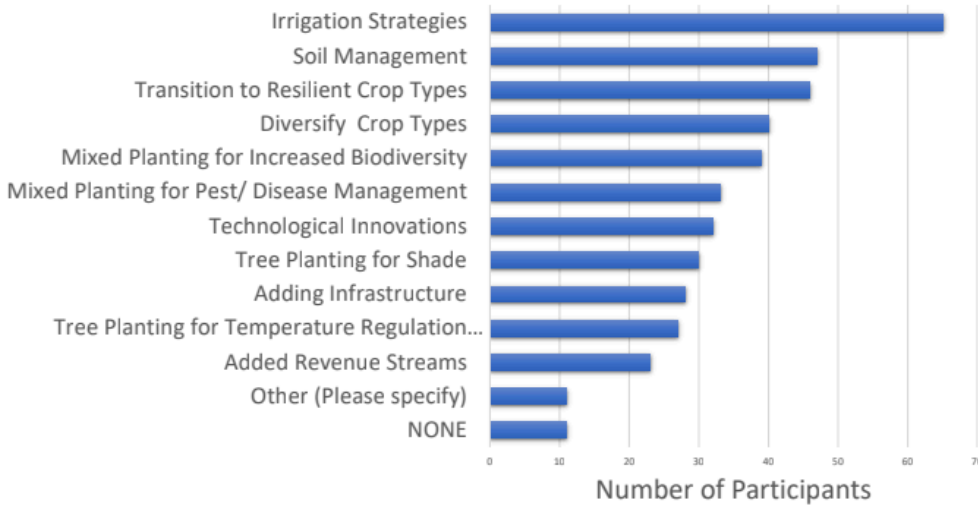


CONCERNS OF COUNTY GRAPE GROWERS

-Of 119 respondents, **32** grow grapes; this represents **27%** of responses.
-Nearly **80%** of respondents are either **highly or moderately concerned** about growing grapes in rising temperatures.



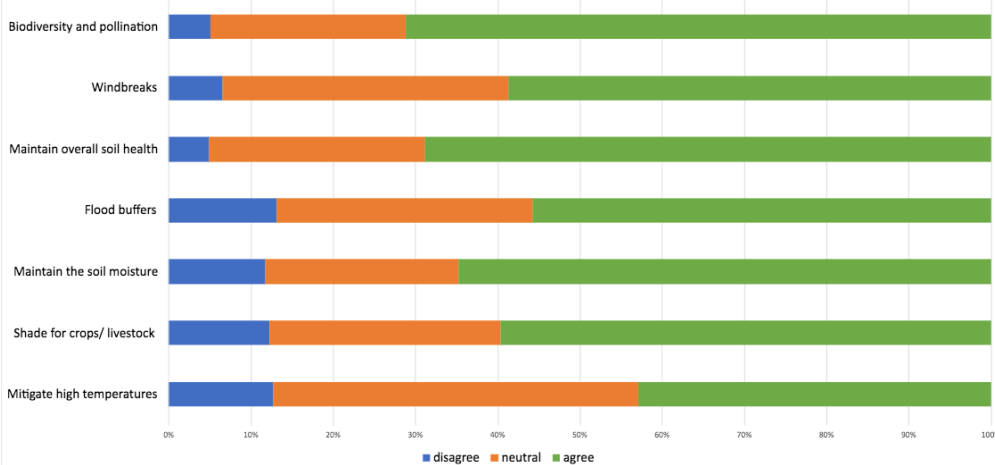
ADAPTATION STRATEGIES BEING USED BY SAN DIEGO FARMERS



- 54%** of respondents have adjusted **irrigation strategies**.
- 39%** of respondents practice **soil management**
- 38%** of respondents have transitioned to **resilient crop types**

Agroforestry Practices as Adaptation Strategies

EFFECTIVENESS OF AGROFORESTRY PRACTICES IN ADDRESSING EXTREME WEATHER



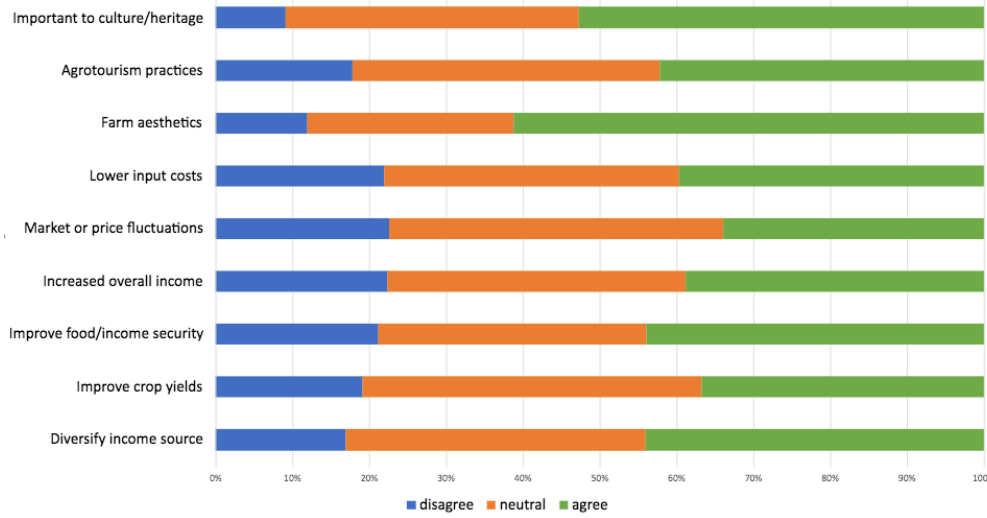
ENVIRONMENTAL BENEFITS OF AGROFORESTRY

- **>60%** of farmers who use agroforestry said it **helps maintain soil moisture & soil health.**
- Nearly **70%** said it **enhances farm biodiversity and pollination rates.**

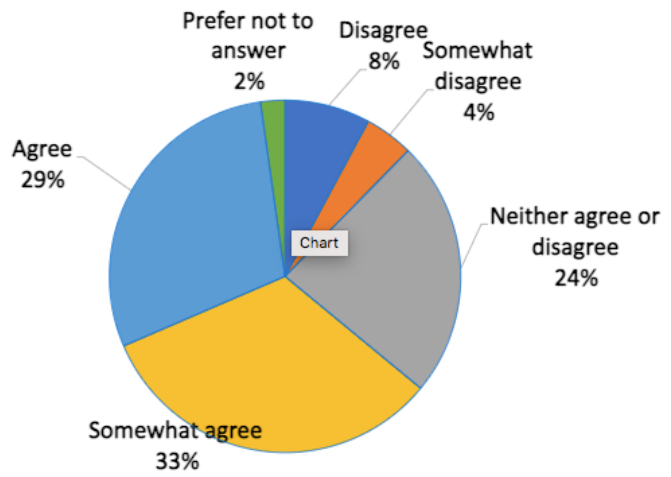
SOCIAL AND ECONOMIC BENEFITS OF AGROFORESTRY

- Nearly **40%** of farmers who use agroforestry say it has **lowered their inputs costs.**
- More than **40%** of farmers who use agroforestry say it helps **diversify their income sources.**

EFFECTIVENESS OF AGROFORESTRY PRACTICES IN ADDRESSING SOCIAL AND/OR FINANCIAL SCENARIOS



IS AGROFORESTRY AN EFFECTIVE WAY TO ADAPT TO EXTREME WEATHER?



CHALLENGES TO AGROFORESTRY

- **Added Labor Costs**
- **Increased Water Usage**
- **Burdensome Regulations**
- **High Investment Costs**
- **Tree Maturity Times**
- **Increased Pest Management Costs**

2022 USDA data suggests

<1%

of San Diego farmers use some type of agroforestry

Our survey indicates

82%

use some type of agroforestry practice in San Diego County