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PEACH BROWN ROT STUDIES IN
BERRIEN COUNTY, MICHIGAN
IN 1949

Thesis for the Degree of M. S.
MICHIGAN STATE COLLEGE
Donald Harry Petersen
1949

This is to certify that the

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Peach brown rot studies in
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of the requirements for

Master of Science degree in Plant Pathology

Donald Cation

Major professor

Date ~~December 8, 1949~~

PEACH BROWN ROT STUDIES
IN BERRIEN COUNTY, MICHIGAN
IN 1949

By

Donald Harry Petersen

A THESIS

Submitted to the School of Graduate Studies of Michigan
State College of Agriculture and Applied Science
in partial fulfillment of the requirements
for the degree of

MASTER OF SCIENCE

Department of Botany and Plant Pathology

Year 1949

The first part of the document
 discusses the general principles
 of the proposed system. It
 outlines the objectives and
 the scope of the project.

The second part of the document
 details the technical specifications
 and the implementation plan.

The third part of the document
 provides a summary of the findings
 and conclusions.

The fourth part of the document
 contains the references and
 the appendix.

INDEX

Acknowledgements

| | |
|---|---------|
| Introduction | 1 |
| Literature review | 2 - 12 |
| Canker studies | 13 - 17 |
| Introduction | 13 |
| Methods and materials | 13 |
| Results | 14 - 17 |
| Fungicidal control of brown rot | 18 - 52 |
| Introduction | 18 |
| Blossom sprays | 18 - 31 |
| Introduction | 18 |
| Methods and materials | 19 - 24 |
| Results | 24 - 31 |
| Post-bloom sprays | 32 - 40 |
| Methods and materials | 32 - 38 |
| Results | 39 - 40 |
| Pre-harvest sprays | 41 - 52 |
| Methods and materials | 41 |
| Results | 42 - 52 |
| Fungicidal applications under conditions of heavy inoculum | 52 - 54 |
| Dipping tests | 54 - 57 |
| Methods and materials | 54 - 55 |
| Results | 55 - 57 |
| Observations | 58 - 59 |

Conclusions 60 - 61

Literature cited

Conclusions 60 - 61

Literature cited

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The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for ensuring the integrity and transparency of the financial system. This includes documenting all income, expenses, and assets in a timely and accurate manner.

The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for robust data collection systems that can handle large volumes of information efficiently. Additionally, it discusses the importance of using advanced analytical techniques to identify trends and patterns in the data.

The third part of the document focuses on the challenges and solutions associated with data management. It addresses issues such as data security, privacy, and access control. It also provides recommendations for implementing effective data governance policies and procedures to ensure the reliability and quality of the data.

The final part of the document concludes by summarizing the key findings and recommendations. It reiterates the importance of a comprehensive data management strategy that encompasses all aspects of the data lifecycle, from collection to analysis and reporting.

Introduction

The following work discusses various aspects of peach brown rot studied during 1949. Laboratory studies and field observations were made to determine the importance of over-wintered twig cankers as a possible source of primary inoculum. Field studies involved the relationship of humidity to the timing of blossom sprays, the testing of certain fungicides in the peach spray program, and testing various chemicals as post-harvest fruit dips in an attempt to prevent brown rot in storage and transit.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data. The second part of the document provides a detailed breakdown of the financial data for the quarter. It includes a table showing the revenue generated from various sources, as well as the associated costs and expenses. The final part of the document concludes with a summary of the overall financial performance and a recommendation for future actions.

Literature Review

The common brown rot of peach encountered in Berrien County is caused by the fungus Monilinia fructicola (Wint) Honey (1). The generic name is of rather recent acceptance, the former being Sclerotinia. A group of species of Sclerotinia having a monilioid conidial stage were elevated to generic rank with M. fructicola as the type. The organism produces its conidial stage on infected parts of susceptible hosts and its apothecial stage on over-wintered mummies partially buried in the soil.

The primary infection of M. fructicola is largely restricted to the blossom blight phase of the disease. The rot of ripening, and in some cases, green fruit, may also be caused by conidia from over-wintered mummies hanging on the tree (21) and possibly conidia from over-wintered cankers.

The possible sources of inoculum for the primary infection are: ascospores from over-wintered mummies on the ground, conidia from mummies on the tree, and conidia from twig cankers.

A remarkable phenomenon is the production and maturation of ascospores from over-wintered mummies on the ground coincident with the opening of the peach blossoms. At one time it was thought that mummies had to be buried for two years in the soil before apothecia would be produced. However, many workers have demonstrated that first-year mummies are the most productive under favorable conditions. Roberts and Dunegan (21) in experimental trials maintained mummies

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which produced apothecia for 6 succeeding years though in diminishing numbers from the abundant production of the first year.

The most favorable position for the mummy in respect to apothecial production is about half-buried in the soil. If they are completely buried the apothecia tend to produce imperfect ascospores. Those resting on top of the soil seldom get sufficient moisture to produce apothecia (12).

Peach mummies buried to a depth of 2 or 3 inches and more disintegrate rapidly. In fact, Ezekiel (12) found, with one exception, complete disintegration of mummies buried at 3, 8, and 18 inches at the end of 14 months. An entire mummy is not essential for apothecial production. Roberts and Dunegan (21) have observed a fragment of sclerotium 1 cm by 2 mm produce 3 average-sized apothecia.

While it has been felt by many investigators that ascospores are the most important source of primary inoculum, this has not been satisfactorily proven in all cases. In 1947 and 1948 Cation (7) observed extremely high percentages of blossom blight (up to 85%) in orchards that had no apparent source of primary inoculum, i.e. apothecia on the tree or over-wintered mummies on the trees.

Evidence of the over-wintering of the brown rot fungus can be seen readily after the first spring rains. The surface of the over-wintered mummies hanging on the trees becomes a mass of conidial tufts or sporodochia. The ability of the fungus to withstand the adverse conditions of cold and desiccation is due to the formation of a sclerotial

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mat investing the outer tissues of the fruit. Though the majority of the rotted fruit and subsequent mummies fall to the ground before spring, some remain on the tree at least until blossoming time. Roberts and Dunegan (21) state that by late spring they become dry, cease to produce conidia, and fall to the ground. Several investigators have shown that conidia produced by these over-wintered mummies on the tree often cause blossom blight (2, 8, 20).

Conidial production may also occur in the fall of the year on newly formed mummies. It has been demonstrated that conidia formed at this time can survive the winter (22). Bartram (4) demonstrated the viability of conidia that had passed through winter temperatures as low as -32°C .

Active over-wintered twig cankers may represent a third possible source of spores for initiation of the primary infection. McClintock, in Georgia, (11) has reported observing conidia on twig cankers formed during the previous season. However, he later reported failure to find conidia on blossom blight cankers in their second year (18). Roberts and Dunegan (21) after 6 years experience in Georgia failed to find conidia on over-wintered cankers with but one exception. Smith (22) states that he occasionally saw conidial tufts on branches of the previous season's growth. Cook (9) in 1919 observed the production of conidia from cankers of the previous year and considered them important in the production of blossom blight. Berkeley (5), at St. Catherine's, Ontario, reports in the spring of 1926 many cankers active and producing conidia. He found active 2-year old cankers and concluded that possibly cankers were sources of infection for the

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data. The text also mentions that regular audits are necessary to identify any discrepancies or errors in the accounting process.

In addition, the document highlights the role of technology in modern accounting. The use of software can significantly reduce the risk of human error and streamline the workflow. It suggests that businesses should invest in reliable accounting systems that can integrate with other business processes. Furthermore, it notes that staying updated with the latest tax laws and regulations is crucial for compliance.

The second part of the document provides a detailed overview of the accounting cycle. It outlines the ten steps involved in recording and summarizing business transactions. From identifying the transaction to preparing financial statements, each step is explained in detail. The text also discusses the importance of closing the books at the end of each accounting period. This process involves transferring the balances of temporary accounts to permanent accounts, ensuring that the books are ready for the next period.

Moreover, the document touches upon the different types of accounting systems used by various businesses. It distinguishes between single-entry and double-entry systems, explaining the advantages and disadvantages of each. It also mentions the use of cost accounting for businesses that need to track the costs of their products or services. The text concludes by reiterating the importance of accuracy and integrity in all accounting practices.

blossoms.

It was once believed that the brown rot fungus after penetrating through a blighted blossom or rotted fruit to a twig, continued growing into the larger limbs where it expressed itself as a perennial peach canker (16). However, Willison points out that 97.8% of the twig cankers caused by blossom blight healed over during the summer they were formed and only 6.2% of those caused by rotted fruit increased in size during the winter. He found that none eventually resulted in the formation of Valsatype peach cankers. It was apparent that the brown rot fungus, in spite of its ability to attack wood and bark, was not a serious factor in the canker complex. However, as these lesions are open to invasion by other canker-producing organisms, these cankers may assume considerable importance indirectly (25).

In later studies, Willison (26) noted that brown rot cankers are usually delimited within a period of 3 weeks which corresponds to the time necessary for the host to lay down wood periderm and a wound-fum barrier. Still further studies by the same author (27) showed that out of 100 cankers caused by brown rot blossom blight, 80% were either healed or inactive the following year. 12 of the remaining 20 had caused twig blight and the twigs had died back nearly to the parent branch. The few typical cankers that developed were due to secondary infections of canker-producing fungi (Valsa Cincta and V. leucostoma). These studies are in agreement with those made by Hildebrand (13).

Blossom Blight Phase

Conidia from over-wintered mummies on the tree and possibly conidia from holdover twig cankers are distributed by the wind and rain. They may lodge on the floral parts, germinate, and penetrate the susceptible tissues. The ascospores are violently discharged from the apothecium at maturity to be carried by the air currents. Some of these ascospores may settle on the blossom.

Either conidia from mummies or cankers, or the ascospores are capable of causing blossom infection and this has been demonstrated many times (15, 9, 17, 18, 20). However, the phenological factors of humidity and temperature may be of great significance during germination and incubation of these spores. Amos (1) showed conidial germination at 1°C, though growth of the germ tube was very slow. Ezekiel (11) was unable to observe any difference for the various strains of the fungus at the cardinal temperatures: minimum 3°C, optimum 25°C, and maximum 33°C. Weaver (23) found the time required for germination on peach petals floated on a 4% sucrose solution varied with the temperature, from 11 to 12 hours at 5°C and increasingly shorter periods for intermediate temperatures reaching a minimum of 2½ to 3 hours at 20°C. Higher temperatures resulted in longer periods for germination with no germination at 35°C.

Conidia require precipitated moisture for germination on glass slides. On blossoms, germination occurred only on the stigma at 80% relative humidity. 96% was required for germination on the anthers and petals, and 100% for all other floral parts.

The occurrence of severe blossom blight has most often been as-

The first part of the document discusses the importance of maintaining accurate records of all transactions. This includes not only sales and purchases but also the flow of cash and the collection of receivables. The second part of the document focuses on the management of inventory, highlighting the need for regular physical counts and the use of perpetual inventory systems. The third part of the document addresses the issue of depreciation, explaining how it affects the value of fixed assets over time and how it is recorded in the financial statements. The fourth part of the document discusses the importance of budgeting and financial forecasting, which are essential tools for management to plan for the future and make informed decisions. The fifth part of the document concludes by emphasizing the role of the accounting department in providing reliable and timely financial information to the management and other stakeholders.

The accounting department is responsible for providing accurate and timely financial information to the management and other stakeholders. This information is used to make informed decisions about the company's operations and financial performance. The accounting department also plays a key role in the preparation of financial statements, which are used by investors, creditors, and other interested parties to evaluate the company's financial health. In addition, the accounting department is responsible for ensuring that the company complies with all applicable laws and regulations. This includes the preparation and filing of tax returns and the maintenance of proper records for audits. The accounting department also provides valuable insights into the company's cost structure and identifies areas where costs can be reduced. This information is used by management to improve the company's operational efficiency and profitability. Finally, the accounting department is responsible for providing financial advice to the management and other stakeholders. This includes helping them understand the implications of their financial decisions and providing recommendations on how to improve the company's financial performance.

The accounting department is a critical part of the company's financial management system. It provides the data and analysis needed for management to make informed decisions about the company's operations and financial performance. The accounting department also plays a key role in the preparation of financial statements, which are used by investors, creditors, and other interested parties to evaluate the company's financial health. In addition, the accounting department is responsible for ensuring that the company complies with all applicable laws and regulations. This includes the preparation and filing of tax returns and the maintenance of proper records for audits. The accounting department also provides valuable insights into the company's cost structure and identifies areas where costs can be reduced. This information is used by management to improve the company's operational efficiency and profitability. Finally, the accounting department is responsible for providing financial advice to the management and other stakeholders. This includes helping them understand the implications of their financial decisions and providing recommendations on how to improve the company's financial performance.

sociated with hot, humid weather. Barss (3), however, studying brown rot in Oregon, found that the moist, cool weather of early spring was often favorable for blossom blight infection. It is probable in this case that the causal fungus may have been M. laxa. Weaver (23) noted pistil infection in 10 hours and resulting complete blossom blight in 4 days in a saturated atmosphere at 10°C. 18½ hours were required for petal infection under these conditions, and 34 hours were required for the fungus mycelium to spread from the petals to the calyx. It was found that floral parts had to be maintained in a saturated atmosphere 12 hours at 15°C to cause eventual complete blighting if the flower has been pollinated. If it remained unfertilized, only 16 hours of 100% relative humidity at 10°C were required for complete destruction. Given shorter periods in a saturated atmosphere, brown rot lesions developed in less than 10 to 16 hours but no complete blight occurred.

Weaver (23) states that at humidities of 90% and above the diseased areas of the petals did not dry out. At 80% the lesions were soon delimited and dried out. He also noted that the production of sporodochia and conidia on the diseased flower parts was dependent on high humidities. Sporodochia were present on infected stamens 48 hours after inoculation at 95% relative humidity. No sporodochia were produced on completely blighted blossoms at 70 and 80% humidities.

The first observations as to the infection courts on the blossoms were made by Woronin (38). He believed that under natural conditions the stigma was the infection court. Jehle (15) thought that infection began in the calyx and spread to the stamens and pistil. Roberts and Dunegan (20) state that any part of the blossom may be invaded, though

The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting. The second part of the document provides a detailed overview of the company's financial performance over the past year. It includes a comprehensive analysis of the company's revenue, expenses, and profit margins. The third part of the document discusses the company's strategic initiatives and future plans. It outlines the company's goals and objectives for the upcoming year and provides a detailed plan of action to achieve these goals. The fourth part of the document discusses the company's risk management strategy and provides a detailed overview of the company's risk profile. The fifth part of the document discusses the company's human resources strategy and provides a detailed overview of the company's workforce. The sixth part of the document discusses the company's environmental and social responsibility strategy and provides a detailed overview of the company's environmental and social impact. The seventh part of the document discusses the company's governance structure and provides a detailed overview of the company's board of directors and executive management. The eighth part of the document discusses the company's financial outlook and provides a detailed overview of the company's financial projections for the upcoming year. The ninth part of the document discusses the company's legal and regulatory compliance strategy and provides a detailed overview of the company's legal and regulatory obligations. The tenth part of the document discusses the company's overall performance and provides a detailed overview of the company's achievements and challenges. The final part of the document provides a summary of the company's financial performance and provides a detailed overview of the company's financial results for the past year.

this is disputed by Whetzel (24). Weaver's work (23) on artificial inoculations agrees with that of Roberts and Dunegan. He states that at 90% relative humidity, 3 days after the inoculation the fungus had spread into the calyx cup from infection initiated in the petals, sepals, or stamens. After penetration of the stigma, progress down the style was comparatively slow, but the ovary and finally the entire blossom blighted. At 80% humidity only the petals and pistils became infected. At this humidity the diseased petals usually fell off, and the lesions soon became dry and papery. A few blossoms blighted completely after 6 days in this humidity, apparently from pistil infection.

Throughout Weaver's studies, the greater percentage of completely blighted blossoms was due to the spread of the fungus mycelium following stamen infection. Under most conditions the advance of the mycelium in the pistil was comparatively slow. Frequently complete blighting of all flower parts including the calyx was observed while the style was but partially brown and wrinkled. However, the first appearance of the disease was most frequently seen on the stigma.

Since all floral parts may serve as infection courts, knowledge of the percentage of infection at different stages of blossom development has practical significance. In tests conducted by Roberts and Dunegan (20) partially opened peach blossoms were not easily infected and some escaped infection entirely. Weaver (23) found that blossoms in the pink stage of development were not as readily infected as when they were open. Sepal infection was very rare in the pink stage and the progress of the fungus mycelium from petal infection to

the rest of the blossom occurred only at sustained high humidities. Large-petaled varieties of peach were less frequently blighted in the pink stage than small-petaled varieties because of the protection the petals afforded the stigmas and stamens. No blight occurred at the closed stage.

It has been noted by most investigators that the young enlarging fruit usually escapes rot by losing the diseased shuck (21).

Weaver (23) states that blighting of the entire blossom rarely occurs if inoculation takes place 5 days after pollination.

The first symptom of the disease on the blossom is a faint discoloration of the part infected. Under ideal conditions for the growth of the fungus the entire blossom soon becomes brown and shriveled. Masses of ash-grey conidia are produced over the entire blossom. The petals, style, and stamens of the blighted blossom become matted together in a gummy mass, often bending downward. These masses of gum and floral parts often remain attached to the twigs for several weeks and even up into the fall and winter months. During each rain of the season, the gummy mass softens and produces a new crop of sporodochia and conidia.

The Canker and Twig Blight Phase

A frequent sequel to complete blossom blight is the formation of twig cankers. These are the result of the fungus mycelium passing down the peduncle into the tissues of the twigs. Twig cankers may

also result from a rotted fruit; however, this more often causes a complete blighting of the twig rather than the formation of a canker.

Twig cankers resulting from penetration of the fungus from a blighted blossom appear first as small, brownish, slightly sunken areas about the base of the peduncle. Subsequent growth of the fungus extends the diseased area up and down the twig from the base of the peduncle. Growth usually ceases in a few weeks time depending on the ability of the host to delimit the invaded area. Gum pockets are formed in the cankers and in rainy periods gum collects on the surface in drops or masses. As the season advances the sunken areas of the cankers are ruptured by host callus tissue, leaving a rough, cankered area on the twig.

The fungus may girdle the twig, killing it above the canker. This happens most frequently when the fungus penetrates through the peduncle following fruit rot. However, typical cankers may result in such a case.

The cankers on the twigs resulting from blighted blossoms are known to produce conidia the first summer under conditions of high humidity thus serving as a source of secondary inoculum for the fruit rot phase of the disease.

Fruit Rot Phase

The fruit rot phase of brown rot usually results from secondary spores or conidia. Though fruit rot may result from infection by the

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primary conidia of over-wintered mummies hanging on the trees, secondary conidia from blighted blossoms and from current-season twig cankers are probably the most important sources of inoculum.

Leaves infected by the peach leaf curl fungus (Exoascus deformans) may also be a source of inoculum as they have been reported easily infected by M. fructicola (19).

The rot of fruit is most frequently a rot of ripe or maturing fruit, although the green fruit may be rotted when the fungus enters through punctures or bruises. Roberts and Dunegan (21) report observing small green fruit infected from a closely appressed diseased calyx.

The conidia of the fungus are carried over to the fruit by wind and rain. Those that land in or near a fresh wound in the fruit often bring about infection. The most common wounds are those made by the plum curculio adults and larvae and the oriental fruit moth larvae. Invasion of the ripe fruit may take place through the unbroken surface primarily through hair sockets but also through the stomata (10). Smith (22) has shown that the fungus may also enter the fruit by way of the lesions made by the peach scab fungus (Cladosporium carpophilium).

Upon arrival of the conidia on near-ripe fruit, germination is often rapid. Under favorable conditions this may take place in an hour and rot symptoms may appear in 18 to 20 hours after germination (21). Soon after the appearance of the rot, sporodochia are produced

in abundant numbers which serve as a further source of inoculum for other fruit.

Some of the fruit falls to the ground before it is completely rotted. Some remains on the tree and becomes thoroughly invested with fungus hyphae. Such completely invaded fruits may dry and may either drop or remain on the tree. Those that remain do so because the fruit stem is killed by the fungus before it produces an abscission layer. The completely rotted and shriveled fruit on the tree and on the ground are the so-called mummies and are important in initiating the disease the following spring through production of conidia or ascospores.

CANKER STUDIES

Introduction

In certain orchards where severe blossom blight occurred ascospores and conidia from over-wintered mummies, the two common sources of inoculum for blossom infection, were not present. In these instances over-wintered twig cankers were suspected of being the major source of inoculum. Therefore, laboratory studies were undertaken to determine the importance of twig cankers as a source of conidia for primary infection.

Cation and Dunegan (6) in isolation studies conducted in 1948 showed that 73% of over-wintered cankers contained M. fructicola. They also reported sporulation of the cankers in the laboratory in moist chambers. Laboratory studies were undertaken in 1949 to enlarge upon these observations.

Methods and Materials

During February, 1949, cankered peach branches were collected in southwestern Michigan and brought to East Lansing. On February 16, branches of Elberta peach were cut from trees near South Haven and on February 20, branches of Halehaven peach were collected near Sodus. The day after collection the cankers were subjected to treatments of varying moisture and temperature to determine conidial production under controlled conditions.

1. The first step is to identify the problem or goal that needs to be addressed.

2. Next, it is important to gather relevant information and data related to the problem.

3. Once the information is gathered, the next step is to analyze the data and identify patterns or trends.

4. After analysis, it is necessary to develop a plan or strategy to address the problem.

5. The final step is to implement the plan and monitor the results to ensure the goal is achieved.

6. It is also important to evaluate the effectiveness of the solution and make adjustments as needed.

7. Finally, it is essential to communicate the findings and results to the relevant stakeholders.

8. The process should be documented for future reference and learning.

9. It is important to remain flexible and open to new information and ideas throughout the process.

10. The process should be iterative, allowing for continuous improvement and refinement.

11. It is also important to consider the long-term implications and sustainability of the solution.

12. Finally, it is essential to maintain clear communication and collaboration throughout the entire process.

13. The process should be transparent and accountable to all stakeholders involved.

14. It is important to celebrate successes and learn from failures along the way.

15. The process should be adaptable to changing circumstances and requirements.

16. It is also important to consider the ethical implications of the solution.

17. Finally, it is essential to ensure that the solution is practical and feasible in the real world.

18. The process should be supported by the necessary resources and expertise.

19. It is important to maintain a positive and collaborative mindset throughout the process.

20. Finally, it is essential to ensure that the solution is implemented effectively and efficiently.

21. The process should be reviewed and evaluated regularly to ensure its effectiveness.

22. It is important to maintain a focus on the overall goal and purpose of the process.

23. Finally, it is essential to ensure that the solution is sustainable and long-lasting.

24. The process should be a continuous cycle of learning and improvement.

25. It is important to remain committed and dedicated to the process throughout its duration.

Results of Canker Studies

A group of Elberta peach branches, containing 123 cankers typical of those caused by the brown rot fungus, were subjected to 9 hours of wetting and then placed in a saturated atmosphere with a temperature of 15° to 18°C. The majority of these cankers were on 2-year old wood resulting from the invasion of the fungus through blighted blossoms of the previous year. However, there were some cankers on 3 and 4-year old wood.

Conidia were first observed on the cankers after 9 hours in a saturated atmosphere. At 14 hours, 6.5% of the cankers were producing conidia. After 48 hours, a maximum of 47.1% showed sporodochia. These data are presented in TABLE I. The sporodochia were, with but one exception, produced on the lip of the canker rather than in the center. Sporodochia were also produced in some cases on tips of old fruit peduncles and on blighted twigs. Some of the fruit peduncles showed evidence of the fungus after 5 hours in a saturated atmosphere.

TABLE I. Sporulation observations of 123 cankers in a saturated atmosphere, temperature 15 to 18°C.

| Time in saturated atmosphere | Total No. of cankers producing sporodochia | % producing sporodochia. Total 123 |
|------------------------------|--|------------------------------------|
| 14 hours | 8 | 6.5% |
| 24 " | 12 | 9.8% |
| 36 " | 28 | 22.8% |
| 48 " | 58 | 47.1% |

Section 1: Introduction and Purpose

The purpose of this document is to provide a comprehensive overview of the project's objectives, scope, and the roles of the various stakeholders involved. This document serves as a guide for all participants and is intended to ensure that everyone is aligned with the project's goals and direction.

Section 2: Project Objectives and Scope

The primary objective of this project is to develop a robust and scalable system that meets the needs of our users. The scope of the project includes the design, development, testing, and deployment of the system. Key deliverables include a functional prototype, a fully developed system, and comprehensive documentation. The project is expected to be completed within a six-month timeframe.

Section 3: Roles and Responsibilities

| Role | Responsibilities | Start Date | End Date |
|------------------|--|------------|------------|
| Project Manager | Overall project coordination and communication | 2023-01-01 | 2023-06-30 |
| System Architect | Designing the system architecture and database structure | 2023-01-01 | 2023-03-31 |
| Developer | Implementing the system features and bug fixes | 2023-01-01 | 2023-06-30 |
| QA Tester | Testing the system for bugs and ensuring quality | 2023-03-01 | 2023-06-30 |

A study was then made to determine the percentage of cankers of different age groups that were capable of producing sporodochia under laboratory conditions. Cankered branches of Elberta peach were collected, the uncankered wood cut off just beyond the visible limits of the cankers, and the cankers placed in water for 9 hours. They were then removed and placed in a saturated atmosphere at a temperature of 21°C.

Results of this study showed that 1-year old cankers were the most active in producing sporodochia. At 23 hours in a saturated atmosphere, 75% of the 1-year cankers and 69% of the 2-year cankers were sporulating. None of the 3 and 4-year old cankers had produced conidia at this time, the 3-year cankers requiring over 23 hours in a saturated atmosphere and the 4-year cankers needing over 46 hours for conidial production to start. 9.5% was the maximum number of 4-year cankers to produce conidia while 22.2% of the 3-year cankers eventually produced conidia. TABLE II tabulates these data.

TABLE II. Sporulation observations of various aged *cankers in a saturated atmosphere, temperature 21°C.

| Time in saturated atmosphere | 1-year canker (total of 32) | | 2-year canker (total of 26) | | 3-year canker (total of 27) | | 4-year canker (total of 26) | |
|------------------------------|--------------------------------|----------|--------------------------------|----------|--------------------------------|----------|--------------------------------|----------|
| | No. active | % active | No. active | % active | No. active | % active | No. active | % active |
| 7 hours | 8 | 25% | 2 | 7.7% | 0 | --- | 0 | --- |
| 23 " | 24 | 75% | 18 | 69.2% | 0 | --- | 0 | --- |
| 46 " | 24 | 75% | 18 | 69.2% | 6 | 22.2% | 0 | --- |
| 70 " | 24 | 75% | 18 | 69.2% | 6 | 22.2% | 2 | 9.5% |

* Cankers were presumed to be 1 year younger than the age of that portion of the branch on which they were borne.

In all cases the cankers were held longer than 70 hours but there was no increase in the numbers producing sporodochia. In many cases in the 3 and 4-year old groups, callus tissue formation was quite extensive. The percent difference in sporulation between the 1 and 2-year old groups was not great but there was a large drop between the 2 and 3-year old groups, 69.2% to 22.2%. As a source of conidia for the primary cycles the 3 and 4-year old cankers would seem to be of little importance. The lack of healing in such cases is usually the result of secondary fungi of the peach canker complex.

Though equipment was not available to establish a series of studies on the production of sporodochia by cankers covering a complete range of temperature and humidity, an attempt was made to determine the minimum temperature at which sporodochia might be produced in a saturated atmosphere.

In this study the cankered portions of the twigs were cut out and placed in water for 7 hours. One group was then held at 4°C and the other at 7°C, both in a saturated atmosphere.

Both groups were maintained under the above conditions for 111 hours. By the end of this time there was no visible evidence of sporodochia in either group. The temperature was then increased to 21°C. After 40 hours at 21°C evidence of sporodochia appeared on the 1-year old canker in the group originally held at 7°C, but no sporodochia were ever produced on the 3-year old cankers. Though these cankers were held longer than 72 hours at 21°C no further sporodochial production took place on the inactive cankers. A max-

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the smooth operation of any business and for the protection of its interests. The text outlines various methods for recording transactions, including the use of journals and ledgers, and stresses the need for consistency and accuracy in these records.

The second part of the document addresses the issue of financial statements. It explains that these statements provide a clear and concise summary of a company's financial performance over a specific period. The text discusses the different types of financial statements, such as the balance sheet, income statement, and cash flow statement, and highlights the importance of presenting this information in a transparent and understandable manner.

The third part of the document focuses on the role of internal controls in preventing fraud and ensuring the integrity of financial data. It describes various control mechanisms, such as segregation of duties, authorization requirements, and regular audits, and explains how these measures can help to minimize the risk of errors and misstatements.

The final part of the document provides a summary of the key points discussed and offers some practical advice for implementing effective financial management practices. It encourages businesses to adopt a proactive approach to financial management and to regularly review and update their internal controls to ensure they remain effective in the face of changing circumstances.

imum of 44.4% of the 1-year cankers produced conidia. These data are presented in TABLE III.

TABLE III. Observations of sporodochial production of twig cankers at 21°C after 111 hours at 7°C.

| Additional time at 21°C. | <u>36 1-year cankers</u> | | <u>16 2-year cankers</u> | | <u>18 3-year cankers</u> | |
|--------------------------|--------------------------|----------|--------------------------|----------|--------------------------|----------|
| | No. active | % active | No. active | % active | No. active | % active |
| 48 hours | 8 | 22.2% | 4 | 25% | 0 | --- |
| 72 " | 16 | 44.4% | 4 | 25% | 0 | --- |

In the group held originally at 4°C, but 29.4% of the 1-year cankers produced sporodochia. However, 9.7% of the 3-year cankers sporulated after 74 hours at 21°C. These data are presented in TABLE IV.

TABLE IV. Observations of sporodochial production on twig cankers at 21°C after 111 hours at 4°C.

| Additional time at 21°C. | <u>34 1-year cankers</u> | | <u>25 2-year cankers</u> | | <u>31 3-year cankers</u> | |
|--------------------------|--------------------------|----------|--------------------------|----------|--------------------------|----------|
| | No. active | % active | No. active | % active | No. active | % active |
| 48 hours | 0 | --- | 0 | --- | 0 | --- |
| 74 " | 10 | 29.4% | 6 | 24% | 3 | 9.7% |

It is apparent that at temperatures of 7°C and lower, canker-produced conidia are not significant as a source of spores for the primary cycles of brown rot.

1. The first step is to identify the problem or goal.

•

2. The second step is to gather information and resources.

• The third step is to analyze the information.

3. The fourth step is to develop a plan or strategy.

4. The fifth step is to implement the plan.

5. The sixth step is to evaluate the results.

6. The seventh step is to reflect on the process.

7. The eighth step is to communicate the findings.

8. The ninth step is to share the results.

9. The tenth step is to conclude the project.

10. The eleventh step is to evaluate the overall process.

11. The twelfth step is to reflect on the experience.

12. The thirteenth step is to share the results.

13. The fourteenth step is to conclude the project.

14. The fifteenth step is to evaluate the overall process.

15. The sixteenth step is to reflect on the experience.

16. The seventeenth step is to share the results.

17. The eighteenth step is to conclude the project.

18. The nineteenth step is to evaluate the overall process.

19. The twentieth step is to reflect on the experience.

20. The twenty-first step is to share the results.

21. The twenty-second step is to conclude the project.

22. The twenty-third step is to evaluate the overall process.

•

FUNGICIDAL CONTROL OF BROWN ROT

IN 1949

As it is practically impossible to destroy all sources of inoculum by orchard sanitation practices, and as completely resistant varieties of peach are not known, the control of brown rot must be supplemented by protective sprays. Thus the major objectives of the 1949 field studies were: (1) the testing of certain spray materials, (2) a study of the timing of the fungicidal applications in accordance with susceptible periods in the development of the host and weather favorable to the fungus, and (3) observations on the epidemiology of the disease under Michigan conditions.

Blossom Sprays

Examination of the facts concerning brown rot indicate that considerable emphasis in control of fruit rot should be placed on complete control of blossom blight to eliminate a major source of secondary inoculum. It is postulated that complete control of blossom blight over a 2 or 3-year period would automatically tend to eliminate two sources of inoculum: conidia from currently blighted blossoms and future conidia from the resultant cankers. With complete control of blossom blight, the protection of the ripening fruits should be accomplished readily in light of the reduced spore load. This in turn would lead to fewer mummies for the over-wintering stages of the fungus, both on the tree and on the ground

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be clearly documented, including the date, amount, and purpose of the transaction. This ensures transparency and allows for easy reconciliation of accounts.

Additionally, it highlights the need for regular audits to identify any discrepancies or errors. By conducting these audits frequently, potential issues can be caught early, preventing them from escalating into larger problems. The document also mentions the importance of keeping records secure and accessible to authorized personnel only.

Conclusion

In conclusion, the document provides a comprehensive overview of the financial reporting process. It stresses the importance of accuracy, transparency, and regular audits to ensure the integrity of the financial data. By following the guidelines outlined in this document, organizations can maintain reliable financial records and ensure compliance with relevant regulations.

The document also serves as a valuable resource for anyone involved in financial management, offering practical advice and best practices for handling financial transactions and reporting. It is essential for all organizations to implement these practices to ensure the long-term success and stability of their financial operations.

Methods and Materials

The currently recommended program (29) for blossom sprays in Michigan is based on studies by Weaver (23) and results of certain spray programs of Dunegan (30). The schedule calls for 3 applications during the interval between the pink and full bloom stages in those orchards having a recent history of brown rot and if conditions of humidity are favorable to the development of the fungus. The timings of the applications are suggested when the blossoms are in the pink stage of development, 25% open and 75% open.

Blossom blight varies year to year in severity according to climatic conditions. To be more certain of encountering blossom infection it was desirable to establish experiments in locations subject to different climatic environments.

In the area immediately adjacent to Lake Michigan there are climatic factors differing from those several miles inland. Thus 2 orchards of varied locations were selected in which to set up the experimental program. One, the Colby Orchard, was situated on the Lake shore; the other, the Handy Orchard, was 8 miles inland. In each orchard a history of both heavy blossom blight and fruit rot is known. Hold-over cankers were numerous in both situations and 3 to 5 clusters of apothecia per tree were common on the ground at blossoming time. In the orchard on the lake shore the mummies had not been removed from the trees. An attempt had been made to remove them in the Handy Orchard but the job was far from thorough.

Nine-tree plots (3 X 3) were used for each treatment with all counts being made on the center tree of each plot. This arrangement

[The text in this image is extremely faint and illegible. It appears to be a list of items or a document with multiple lines of text, possibly containing names, dates, or descriptions. Due to the low contrast and blurriness, no specific content can be transcribed.]

allowed for 1 tree on each side of the count tree to act as a buffer against spray contamination. All spraying was done from the ground using a Friend Pecan gun with a No. 10 disc and a pressure of 250 pounds. The Halehaven variety of peach was used in the trials at the Colby Orchard, and Rochester at the Handy Orchard.

In an attempt to determine the effectiveness of each individual application in relation to the phenological factors of temperature and humidity, a factorial design of 4 sprays was planned. It was hoped that the results might indicate more effective timing of sprays for control of blossom blight and to eliminate unnecessary applications.

The materials used here in the factorial design were wettable sulfur, 5 pounds in 100 gallons, plus a wetting agent (B-1956) and Stanofide, a fungicide manufactured by the Standard Oil Company (Indiana) at $\frac{1}{2}$ pint per 100 gallons. In addition to the two fungicides used in the complete program, a 4-spray treatment of liquid lime sulfur, 2 gallons in 100 plus a wetting agent (B-1956), and L-7752 and L-8299 at $\frac{1}{2}$ pint in 100 gallons were planned. The latter two numbers designate code numbers for experimental materials furnished by the Standard Oil Company (Indiana).

Since Weaver's work (23) has shown the improbability of blossom infection during the pink stage of bloom unless the stigmas were exposed, the initial spray was planned when approximately 25% of the blossoms had their stigmas exposed. The other sequences were to be applied when the blossoms had 50%, 75%, and all their stigmas ex-

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. This is essential for ensuring the integrity of the financial statements and for providing a clear audit trail.

2. The second part of the document outlines the various methods used to collect and analyze data. These methods include direct observation, interviews, and the use of specialized software tools. Each method has its own strengths and limitations, and they are often used in combination to achieve the most comprehensive results.

- The first method involves direct observation of the process being studied. This allows the researcher to see the actual activities and interactions in real-time.
- The second method involves conducting interviews with individuals who are involved in the process. This provides valuable insights into the participants' perspectives and experiences.
- The third method involves the use of specialized software tools to collect and analyze data. These tools can automate many of the data collection and analysis tasks, making the process more efficient and accurate.
- The fourth method involves the use of focus groups to explore the underlying reasons for certain behaviors or attitudes. This method is particularly useful for understanding complex or sensitive issues.
- The fifth method involves the use of surveys to collect data from a large number of participants. Surveys can be designed to measure a wide range of variables and can be distributed to participants in a variety of ways.

3. The final part of the document discusses the importance of data security and privacy. It is essential to ensure that all data collected is stored securely and that it is only accessible to authorized personnel. This is particularly important when dealing with sensitive information, such as personal data or financial records.

posed or at about $2\frac{1}{2}$ -day intervals during a normal blossoming season. TABLE V indicates the planned applications. However, the rapid advancement of the blossoms allowed only 2 applications.

TABLE V. Factorial design of spray applications for blossom blight control.

Halehaven variety -- Colby Orchard

| Plot No. | Material | Sequence of Applications | | | |
|----------|--------------------------|--------------------------|---|---|---|
| 1 | Stanofide | 1 | - | - | - |
| 2 | " | 1 | - | 3 | 4 |
| 3 | " | 1 | - | - | 4 |
| 4 | " | 1 | 2 | - | - |
| 5 | " | 1 | 2 | 3 | 4 |
| 6 | " | 1 | 2 | 3 | - |
| 7 | " | 1 | 2 | - | 4 |
| 8 | " | - | 2 | - | - |
| 9 | " | - | 2 | - | 4 |
| 10 | " | - | 2 | 3 | 4 |
| 11 | " | - | 2 | 3 | - |
| 12 | " | - | - | 3 | 4 |
| 13 | " | - | - | 3 | - |
| 14 | " | - | - | - | 4 |
| 15 | Wettable sulfur + B-1956 | 1 | - | - | - |
| 16 | " " " | 1 | - | 3 | 4 |
| 17 | " " " | 1 | - | - | 4 |
| 18 | " " " | 1 | 2 | - | - |
| 19 | " " " | 1 | 2 | - | 4 |

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|---|---|---|---|-----|-----|-----|
| - | - | - | f | 127 | 127 | 1 |
| - | - | - | f | " | " | 2 |
| - | - | - | f | " | " | 3 |
| - | - | - | f | " | " | 4 |
| - | - | f | f | " | " | 5 |
| - | - | f | f | " | " | 6 |
| - | - | - | f | " | " | 7 |
| - | - | - | f | " | " | 8 |
| - | - | - | f | " | " | 9 |
| - | - | - | f | " | " | 10 |
| - | - | - | f | " | " | 11 |
| - | - | - | f | " | " | 12 |
| - | - | - | f | " | " | 13 |
| - | - | - | f | " | " | 14 |
| - | - | - | f | " | " | 15 |
| - | - | - | f | " | " | 16 |
| - | - | - | f | " | " | 17 |
| - | - | - | f | " | " | 18 |
| - | - | - | f | " | " | 19 |
| - | - | - | f | " | " | 20 |
| - | - | - | f | " | " | 21 |
| - | - | - | f | " | " | 22 |
| - | - | - | f | " | " | 23 |
| - | - | - | f | " | " | 24 |
| - | - | - | f | " | " | 25 |
| - | - | - | f | " | " | 26 |
| - | - | - | f | " | " | 27 |
| - | - | - | f | " | " | 28 |
| - | - | - | f | " | " | 29 |
| - | - | - | f | " | " | 30 |
| - | - | - | f | " | " | 31 |
| - | - | - | f | " | " | 32 |
| - | - | - | f | " | " | 33 |
| - | - | - | f | " | " | 34 |
| - | - | - | f | " | " | 35 |
| - | - | - | f | " | " | 36 |
| - | - | - | f | " | " | 37 |
| - | - | - | f | " | " | 38 |
| - | - | - | f | " | " | 39 |
| - | - | - | f | " | " | 40 |
| - | - | - | f | " | " | 41 |
| - | - | - | f | " | " | 42 |
| - | - | - | f | " | " | 43 |
| - | - | - | f | " | " | 44 |
| - | - | - | f | " | " | 45 |
| - | - | - | f | " | " | 46 |
| - | - | - | f | " | " | 47 |
| - | - | - | f | " | " | 48 |
| - | - | - | f | " | " | 49 |
| - | - | - | f | " | " | 50 |
| - | - | - | f | " | " | 51 |
| - | - | - | f | " | " | 52 |
| - | - | - | f | " | " | 53 |
| - | - | - | f | " | " | 54 |
| - | - | - | f | " | " | 55 |
| - | - | - | f | " | " | 56 |
| - | - | - | f | " | " | 57 |
| - | - | - | f | " | " | 58 |
| - | - | - | f | " | " | 59 |
| - | - | - | f | " | " | 60 |
| - | - | - | f | " | " | 61 |
| - | - | - | f | " | " | 62 |
| - | - | - | f | " | " | 63 |
| - | - | - | f | " | " | 64 |
| - | - | - | f | " | " | 65 |
| - | - | - | f | " | " | 66 |
| - | - | - | f | " | " | 67 |
| - | - | - | f | " | " | 68 |
| - | - | - | f | " | " | 69 |
| - | - | - | f | " | " | 70 |
| - | - | - | f | " | " | 71 |
| - | - | - | f | " | " | 72 |
| - | - | - | f | " | " | 73 |
| - | - | - | f | " | " | 74 |
| - | - | - | f | " | " | 75 |
| - | - | - | f | " | " | 76 |
| - | - | - | f | " | " | 77 |
| - | - | - | f | " | " | 78 |
| - | - | - | f | " | " | 79 |
| - | - | - | f | " | " | 80 |
| - | - | - | f | " | " | 81 |
| - | - | - | f | " | " | 82 |
| - | - | - | f | " | " | 83 |
| - | - | - | f | " | " | 84 |
| - | - | - | f | " | " | 85 |
| - | - | - | f | " | " | 86 |
| - | - | - | f | " | " | 87 |
| - | - | - | f | " | " | 88 |
| - | - | - | f | " | " | 89 |
| - | - | - | f | " | " | 90 |
| - | - | - | f | " | " | 91 |
| - | - | - | f | " | " | 92 |
| - | - | - | f | " | " | 93 |
| - | - | - | f | " | " | 94 |
| - | - | - | f | " | " | 95 |
| - | - | - | f | " | " | 96 |
| - | - | - | f | " | " | 97 |
| - | - | - | f | " | " | 98 |
| - | - | - | f | " | " | 99 |
| - | - | - | f | " | " | 100 |

TABLE V (Cont).

| Plot No. | Material | Sequence of Applications | | | |
|----------|--------------------------|--------------------------|---|---|---|
| 20 | Wettable sulfur + B-1956 | 1 | 2 | 3 | 4 |
| 21 | " " " | 1 | 2 | 3 | - |
| 22 | " " " | - | 2 | - | 4 |
| 23 | " " " | - | 2 | - | - |
| 24 | " " " | - | 2 | 3 | 4 |
| 25 | " " " | - | 2 | 3 | - |
| 26 | " " " | - | - | 3 | 4 |
| 27 | " " " | - | - | 3 | - |
| 28 | " " " | - | - | - | 4 |
| 29 | L-8299 | 1 | 2 | 3 | 4 |
| 30 | L-7752 | 1 | 2 | 3 | 4 |
| 31 | Non-sprayed | - | - | - | - |
| 32 | " " | - | - | - | - |

Rochester variety - - Handy Orchard

| Plot No. | Material | Sequence of Applications | | | |
|----------|-----------|--------------------------|---|---|---|
| 1 | Stanofide | 1 | - | - | - |
| 2 | " | 1 | - | 3 | 4 |
| 3 | " | 1 | - | - | 4 |
| 4 | " | 1 | 2 | - | - |
| 5 | " | 1 | 2 | 3 | 4 |
| 6 | " | 1 | 2 | 3 | - |
| 7 | " | 1 | 2 | - | 4 |
| 8 | " | - | 2 | - | - |

| Year | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|------|------|------|------|------|------|------|------|
| 1990 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1991 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1992 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1993 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1994 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1995 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1996 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1997 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1998 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1999 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2000 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2001 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2002 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2003 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2004 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2005 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2006 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2007 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2008 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2009 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2010 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2011 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2012 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2013 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2014 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2015 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2016 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2017 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2018 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2019 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2020 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2021 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2022 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2023 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2024 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2025 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2026 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2027 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2028 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2029 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2030 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2031 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2032 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2033 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2034 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2035 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2036 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2037 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2038 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2039 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2040 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2041 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2042 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2043 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2044 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2045 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2046 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2047 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2048 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2049 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2050 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Table 1. Summary of the data used in the model. The table shows the number of individuals in each age class and sex for each year from 1990 to 2050.

Table 2

| Year | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|------|------|------|------|------|------|------|------|
| 1990 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1991 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1992 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1993 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1994 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1995 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1996 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1997 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1998 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1999 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2000 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2001 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2002 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2003 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2004 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2005 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2006 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2007 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2008 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2009 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2010 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2011 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2012 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2013 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2014 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2015 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2016 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2017 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2018 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2019 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2020 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2021 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2022 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2023 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2024 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2025 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2026 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2027 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2028 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2029 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2030 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2031 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2032 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2033 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2034 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2035 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2036 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2037 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2038 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2039 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2040 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2041 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2042 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2043 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2044 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2045 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2046 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2047 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2048 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2049 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2050 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

TABLE V (Cont).

| Plot No. | Material | Sequence of Applications | | | |
|----------|-----------------------------|--------------------------|---|---|---|
| 9 | Stanofide | - | 2 | - | 4 |
| 10 | " | - | 2 | 3 | 4 |
| 11 | " | - | 2 | 3 | - |
| 12 | " | - | - | 3 | 4 |
| 13 | " | - | - | 3 | - |
| 14 | " | - | - | - | 4 |
| 15 | Wettable sulfur † B-1956 | 1 | - | - | - |
| 16 | Non-sprayed | - | - | - | - |
| 17 | Wettable sulfur † B-1956 | 1 | - | 3 | 4 |
| 18 | " " " | 1 | - | - | 4 |
| 19 | " " " | 1 | 2 | - | - |
| 20 | " " " | 1 | 2 | 3 | 4 |
| 21 | " " " | 1 | 2 | - | 4 |
| 22 | " " " | 1 | 2 | 3 | - |
| 23 | " " " | - | 2 | - | 4 |
| 24 | " " " | - | 2 | - | - |
| 25 | " " " | - | 2 | 3 | 4 |
| 26 | " " " | - | 2 | 3 | - |
| 27 | " " " | - | - | 3 | 4 |
| 28 | " " " | - | - | 3 | - |
| 29 | " " " | - | - | - | 4 |
| 30 | Liquid lime sulfur † B-1956 | 1 | 2 | 3 | 4 |
| 31 | L-7752 | 1 | 2 | 3 | 4 |
| 32 | L-8299 | 1 | 2 | 3 | 4 |

| Item | Quantity | Unit | Description | Price | Total |
|------|----------|------|-------------|-------|-------|
| 1 | 1 | kg | ... | ... | ... |
| 2 | 1 | kg | ... | ... | ... |
| 3 | 1 | kg | ... | ... | ... |
| 4 | 1 | kg | ... | ... | ... |
| 5 | 1 | kg | ... | ... | ... |
| 6 | 1 | kg | ... | ... | ... |
| 7 | 1 | kg | ... | ... | ... |
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| 10 | 1 | kg | ... | ... | ... |
| 11 | 1 | kg | ... | ... | ... |
| 12 | 1 | kg | ... | ... | ... |
| 13 | 1 | kg | ... | ... | ... |
| 14 | 1 | kg | ... | ... | ... |
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| 31 | 1 | kg | ... | ... | ... |
| 32 | 1 | kg | ... | ... | ... |
| 33 | 1 | kg | ... | ... | ... |
| 34 | 1 | kg | ... | ... | ... |
| 35 | 1 | kg | ... | ... | ... |
| 36 | 1 | kg | ... | ... | ... |
| 37 | 1 | kg | ... | ... | ... |
| 38 | 1 | kg | ... | ... | ... |
| 39 | 1 | kg | ... | ... | ... |
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| 41 | 1 | kg | ... | ... | ... |
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| 45 | 1 | kg | ... | ... | ... |
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| 47 | 1 | kg | ... | ... | ... |
| 48 | 1 | kg | ... | ... | ... |
| 49 | 1 | kg | ... | ... | ... |
| 50 | 1 | kg | ... | ... | ... |
| 51 | 1 | kg | ... | ... | ... |
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| 53 | 1 | kg | ... | ... | ... |
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| 55 | 1 | kg | ... | ... | ... |
| 56 | 1 | kg | ... | ... | ... |
| 57 | 1 | kg | ... | ... | ... |
| 58 | 1 | kg | ... | ... | ... |
| 59 | 1 | kg | ... | ... | ... |
| 60 | 1 | kg | ... | ... | ... |
| 61 | 1 | kg | ... | ... | ... |
| 62 | 1 | kg | ... | ... | ... |
| 63 | 1 | kg | ... | ... | ... |
| 64 | 1 | kg | ... | ... | ... |
| 65 | 1 | kg | ... | ... | ... |
| 66 | 1 | kg | ... | ... | ... |
| 67 | 1 | kg | ... | ... | ... |
| 68 | 1 | kg | ... | ... | ... |
| 69 | 1 | kg | ... | ... | ... |
| 70 | 1 | kg | ... | ... | ... |
| 71 | 1 | kg | ... | ... | ... |
| 72 | 1 | kg | ... | ... | ... |
| 73 | 1 | kg | ... | ... | ... |
| 74 | 1 | kg | ... | ... | ... |
| 75 | 1 | kg | ... | ... | ... |
| 76 | 1 | kg | ... | ... | ... |
| 77 | 1 | kg | ... | ... | ... |
| 78 | 1 | kg | ... | ... | ... |
| 79 | 1 | kg | ... | ... | ... |
| 80 | 1 | kg | ... | ... | ... |
| 81 | 1 | kg | ... | ... | ... |
| 82 | 1 | kg | ... | ... | ... |
| 83 | 1 | kg | ... | ... | ... |
| 84 | 1 | kg | ... | ... | ... |
| 85 | 1 | kg | ... | ... | ... |
| 86 | 1 | kg | ... | ... | ... |
| 87 | 1 | kg | ... | ... | ... |
| 88 | 1 | kg | ... | ... | ... |
| 89 | 1 | kg | ... | ... | ... |
| 90 | 1 | kg | ... | ... | ... |
| 91 | 1 | kg | ... | ... | ... |
| 92 | 1 | kg | ... | ... | ... |
| 93 | 1 | kg | ... | ... | ... |
| 94 | 1 | kg | ... | ... | ... |
| 95 | 1 | kg | ... | ... | ... |
| 96 | 1 | kg | ... | ... | ... |
| 97 | 1 | kg | ... | ... | ... |
| 98 | 1 | kg | ... | ... | ... |
| 99 | 1 | kg | ... | ... | ... |
| 100 | 1 | kg | ... | ... | ... |

TABLE V (Cont).

| Plot No. | Material | Sequence of Applications | | | |
|----------|-------------|--------------------------|---|---|---|
| 33 | Non-sprayed | - | - | - | - |
| 34 | " " | - | - | - | - |

Coincident with the pink stage of bloom, a period of unseasonably warm weather was experienced, including warm nights. As a result the complete opening of all blossoms occurred in 4 days rather than the usual average of 10 days. Thus, it was impossible to carry out the complete program and but 2 of the 4 sequences planned were applied, these when 25% of the bloom had their stigmas exposed and at full bloom.

The first application was applied on the Handy plots on April 30. At the time the application started, 25% of the blossoms had their stigmas exposed. The following day, May 1, 0.4 inch of rain fell during intermittent showers throughout the daylight hours. On May 2 the first sprays were applied to the plots at the Colby Orchard. 28% of the stigmas were exposed. On May 3 and 4 the second sequence of applications were given to the Handy and Colby plots respectively. In both cases the trees were in full bloom. Blossom blight counts were made 10 days after the last sprays.

Results of Blossom Blight Studies

One of the most apparent differences in the results obtained is

Let $f(x) = x^2 + 3x - 5$. Find $f'(x)$.

$f(x) = x^2 + 3x - 5$
 $f'(x) = 2x + 3$

Let $f(x) = x^3 + 2x^2 - 7x + 4$. Find $f'(x)$.

$f(x) = x^3 + 2x^2 - 7x + 4$
 $f'(x) = 3x^2 + 4x - 7$

Let $f(x) = \sin(x)$. Find $f'(x)$.

$f(x) = \sin(x)$
 $f'(x) = \cos(x)$

Let $f(x) = e^x$. Find $f'(x)$.

$f(x) = e^x$
 $f'(x) = e^x$

the difference in the amount of blight in the non-sprayed plots in the 2 orchards. The average blight in 8000 blossoms counted in the Colby Orchard was 5.3% while the average in 9000 blossoms in the Handy Orchard was 1.11%. This could not be attributed to differences in the amount of inoculum and was probably concerned with differences in relative humidity at the critical periods of infection.

It is apparent from the results obtained in the Handy Orchard that the second spray might well have been omitted. The ineffectiveness of this spray is demonstrated by the fact that the incidence of blight in 4000 blossoms each in the Stanofide and wettable sulfur plots that received 2 applications was not materially below that of the first spray. This would be anticipated if sprays are protective only since the first spray was applied the day prior to the rain. It is apparent from these results that the rain initiated the only infectious period during bloom. With the great amount of apothecia present it might well be questioned why more blight did not occur as precipitated moisture is not necessarily essential for infections of stigmas. However, the day following the precipitation the relative humidity dropped below 70% and remained there for several days. It is possible that this accounts for the little further development of blossom blight (23). Too, the combination of the low humidities and high temperatures during the opening of the blossoms (88 to 92°F) may have stopped fungus growth and delimited the lesions if infection did occur. It was not possible to determine if infection other than that which became visible did occur. Because of the high seasonal temperatures the petals dropped in a comparatively short time after the full bloom stage was reached making accurate observations impossible

1.3. The 2 -adic integers

Let \mathbb{Z}_2 denote the set of all integers which are divisible by no prime other than 2 . We call \mathbb{Z}_2 the set of 2 -adic integers. We shall now show that \mathbb{Z}_2 is a ring with the usual addition and multiplication of integers.

Let $a, b \in \mathbb{Z}_2$. Then $a = 2^m a'$ and $b = 2^n b'$ where $a', b' \in \mathbb{Z}$ and a', b' are not divisible by 2 . Let $r = \min\{m, n\}$. Then $a = 2^r a''$ and $b = 2^r b''$ where $a'', b'' \in \mathbb{Z}$ and a'', b'' are not divisible by 2 . Hence $a + b = 2^r(a'' + b'')$ and $ab = 2^{2r}a''b''$. Since $a'' + b''$ and $a''b''$ are integers, it follows that $a + b$ and ab are 2 -adic integers. Thus \mathbb{Z}_2 is a ring.

Let $a \in \mathbb{Z}_2$. Then $a = 2^m a'$ where $a' \in \mathbb{Z}$ and a' is not divisible by 2 . Let $r = \min\{m, 1\} = 1$. Then $a = 2^1 a''$ where $a'' \in \mathbb{Z}$ and a'' is not divisible by 2 . Hence a is divisible by 2 . Thus \mathbb{Z}_2 is a subring of \mathbb{Z} .

Let $a \in \mathbb{Z}_2$. Then $a = 2^m a'$ where $a' \in \mathbb{Z}$ and a' is not divisible by 2 . Let $r = \min\{m, 1\} = 1$. Then $a = 2^1 a''$ where $a'' \in \mathbb{Z}$ and a'' is not divisible by 2 . Hence a is divisible by 2 . Thus \mathbb{Z}_2 is a subring of \mathbb{Z} .

Let $a \in \mathbb{Z}_2$. Then $a = 2^m a'$ where $a' \in \mathbb{Z}$ and a' is not divisible by 2 . Let $r = \min\{m, 1\} = 1$. Then $a = 2^1 a''$ where $a'' \in \mathbb{Z}$ and a'' is not divisible by 2 . Hence a is divisible by 2 . Thus \mathbb{Z}_2 is a subring of \mathbb{Z} .

Let $a \in \mathbb{Z}_2$. Then $a = 2^m a'$ where $a' \in \mathbb{Z}$ and a' is not divisible by 2 . Let $r = \min\{m, 1\} = 1$. Then $a = 2^1 a''$ where $a'' \in \mathbb{Z}$ and a'' is not divisible by 2 . Hence a is divisible by 2 . Thus \mathbb{Z}_2 is a subring of \mathbb{Z} .

Let $a \in \mathbb{Z}_2$. Then $a = 2^m a'$ where $a' \in \mathbb{Z}$ and a' is not divisible by 2 . Let $r = \min\{m, 1\} = 1$. Then $a = 2^1 a''$ where $a'' \in \mathbb{Z}$ and a'' is not divisible by 2 . Hence a is divisible by 2 . Thus \mathbb{Z}_2 is a subring of \mathbb{Z} .

Let $a \in \mathbb{Z}_2$. Then $a = 2^m a'$ where $a' \in \mathbb{Z}$ and a' is not divisible by 2 . Let $r = \min\{m, 1\} = 1$. Then $a = 2^1 a''$ where $a'' \in \mathbb{Z}$ and a'' is not divisible by 2 . Hence a is divisible by 2 . Thus \mathbb{Z}_2 is a subring of \mathbb{Z} .

Let $a \in \mathbb{Z}_2$. Then $a = 2^m a'$ where $a' \in \mathbb{Z}$ and a' is not divisible by 2 . Let $r = \min\{m, 1\} = 1$. Then $a = 2^1 a''$ where $a'' \in \mathbb{Z}$ and a'' is not divisible by 2 . Hence a is divisible by 2 . Thus \mathbb{Z}_2 is a subring of \mathbb{Z} .

Let $a \in \mathbb{Z}_2$. Then $a = 2^m a'$ where $a' \in \mathbb{Z}$ and a' is not divisible by 2 . Let $r = \min\{m, 1\} = 1$. Then $a = 2^1 a''$ where $a'' \in \mathbb{Z}$ and a'' is not divisible by 2 . Hence a is divisible by 2 . Thus \mathbb{Z}_2 is a subring of \mathbb{Z} .

Let $a \in \mathbb{Z}_2$. Then $a = 2^m a'$ where $a' \in \mathbb{Z}$ and a' is not divisible by 2 . Let $r = \min\{m, 1\} = 1$. Then $a = 2^1 a''$ where $a'' \in \mathbb{Z}$ and a'' is not divisible by 2 . Hence a is divisible by 2 . Thus \mathbb{Z}_2 is a subring of \mathbb{Z} .

Let $a \in \mathbb{Z}_2$. Then $a = 2^m a'$ where $a' \in \mathbb{Z}$ and a' is not divisible by 2 . Let $r = \min\{m, 1\} = 1$. Then $a = 2^1 a''$ where $a'' \in \mathbb{Z}$ and a'' is not divisible by 2 . Hence a is divisible by 2 . Thus \mathbb{Z}_2 is a subring of \mathbb{Z} .

Let $a \in \mathbb{Z}_2$. Then $a = 2^m a'$ where $a' \in \mathbb{Z}$ and a' is not divisible by 2 . Let $r = \min\{m, 1\} = 1$. Then $a = 2^1 a''$ where $a'' \in \mathbb{Z}$ and a'' is not divisible by 2 . Hence a is divisible by 2 . Thus \mathbb{Z}_2 is a subring of \mathbb{Z} .

for more than 72 hours after the precipitation.

In the Colby Orchard the rain had occurred before any sprays were applied. In these plots the second sequence of sprays or those applied during full bloom were the most effective, reducing blossom blight 89% where Stanofide was used and 87% where wettable sulfur was applied. It is true that the first application greatly reduced the incidence of blight, however where both applications were made there was little decrease in the amount of blight over the one full bloom spray. Indications are that the infection period occurred after the second spray; that the first spray retained its protection for those 28% of the open blossoms covered and that the second spray alone not only protected the analogous 28% but also the blossoms which had opened later.

There were some differences in control of blossom blight among the different materials used. In both orchards the greatest reduction of blossom blight was in the plots sprayed with the Standard Oil Company experimental sprays L-7752 and L-8299. In each case however, the percentage of blight was based on 1000 blossoms rather than on 3 or 4 thousand as were counted in the Stanofide and wettable sulfur plots, and the significance is questionable. In the Colby Orchard there was little difference in the fungicidal effectiveness between Stanofide and wettable sulfur while at the Handy Orchard the sulfur resulted in somewhat better control. Liquid lime sulfur resulted in better control than wettable sulfur at the Handy Orchard but the counts were based on 1000 blossoms in the case of the liquid lime sulfur and 4000 blossoms for the wettable sulfur and the superiority may be ques-

tioned. Even though the temperature was 89°F, 2 gallons of liquid lime sulfur in 100 caused no evident injury to the blossoms or fruit set. No phytotoxic reactions were noted from any of the materials applied. TABLES VI, VII, VIII, and IX show these data.

TABLE VI. Blossom blight counts.

Halehaven variety -- Colby Orchard.

| Plot No. | Material | Applications Applied | | Amount of Blight/1000 Blossoms | % Blight |
|----------|-----------------------------|----------------------|---|--------------------------------|----------|
| 1 | Stanofide | 1 | - | 10 | 1.0 |
| 2 | " | 1 | - | 12 | 1.2 |
| 3 | " | 1 | - | 11 | 1.1 |
| 4 | " | 1 | 2 | 7 | 0.7 |
| 5 | " | 1 | 2 | 6 | 0.6 |
| 6 | " | 1 | 2 | 7 | 0.7 |
| 7 | " | 1 | 2 | 8 | 0.8 |
| 8 | " | - | 2 | 4 | 0.4 |
| 9 | " | - | 2 | 5 | 0.5 |
| 10 | " | - | 2 | 7 | 0.7 |
| 11 | " | - | 2 | 8 | 0.8 |
| 12 | Used as check | None | | 55 | 5.5 |
| 13 | " " | " | | 55 | 5.5 |
| 14 | " " | " | | 53 | 5.3 |
| 15 | Wettable sulfur + B-1956 | 1 | - | 12 | 1.2 |
| 16 | " " | 1 | - | 15 | 1.5 |
| 17 | " " | 1 | - | 15 | 1.5 |
| 18 | " " | 1 | 2 | 3 | 0.3 |

The following table shows the results of the regression analysis. The dependent variable is the natural logarithm of the number of employees. The independent variables are the natural logarithm of the number of sales, the natural logarithm of the number of assets, and the natural logarithm of the number of liabilities. The results show that the number of sales is positively related to the number of employees, while the number of assets and liabilities are negatively related.

The regression equation is:

$$\ln(\text{Employees}) = 0.15 \ln(\text{Sales}) - 0.05 \ln(\text{Assets}) - 0.05 \ln(\text{Liabilities}) + 0.5$$

The R-squared value is 0.85, indicating that 85% of the variation in the number of employees is explained by the independent variables.

| Variable | Coefficient | Standard Error | t-statistic | p-value |
|-----------------|-------------|----------------|-------------|---------|
| ln(Sales) | 0.15 | 0.02 | 7.5 | < 0.001 |
| ln(Assets) | -0.05 | 0.01 | -5.0 | < 0.001 |
| ln(Liabilities) | -0.05 | 0.01 | -5.0 | < 0.001 |
| Constant | 0.5 | 0.05 | 10.0 | < 0.001 |

TABLE VI (Cont)

| Plot No. | Material | Applications Applied | | Amount of Blight/1000 Blossoms | % Blight |
|----------|-----------------------------|----------------------|---|--------------------------------|----------|
| 19 | Wettable sulfur + B-1956 | 1 | 2 | 4 | 0.4 |
| 20 | " " | 1 | 2 | 5 | 0.5 |
| 21 | " " | 1 | 2 | 4 | 0.4 |
| 22 | " " | - | 2 | 7 | 0.7 |
| 23 | " " | - | 2 | 7 | 0.7 |
| 24 | " " | - | 2 | 6 | 0.6 |
| 25 | " " | - | 2 | 8 | 0.8 |
| 26 | Used as check | None | | 55 | 5.5 |
| 27 | " " | " | | 53 | 5.3 |
| 28 | " " | " | | 54 | 5.4 |
| 29 | L-8299 | 1 | 2 | 2 | 0.2 |
| 30 | L-7752 | 1 | 2 | 0 | 0.0 |
| 31 | Non-sprayed | | | 49 | 4.9 |
| 32 | " " | | | 50 | 5.0 |

TABLE VII. A summary of the above table.

| Material | Applications Applied | | No. Blossoms Counted | % Blight | % Reduction |
|-----------------|----------------------|---|----------------------|----------|-------------|
| Stanofide | 1 | - | 3000 | 1.1 | 79 |
| " | - | 2 | 4000 | 0.6 | 89 |
| " | 1 | 2 | 4000 | 0.7 | 87 |
| Wettable sulfur | 1 | - | 3000 | 1.4 | 74 |

1. The first part of the document discusses the importance of maintaining accurate records of all transactions.

2. It is essential to ensure that all entries are supported by appropriate documentation and receipts.

3. Regular audits should be conducted to verify the accuracy of the records and identify any discrepancies.

4. The second part of the document outlines the procedures for handling any identified errors or irregularities.

5. It is crucial to investigate the cause of any errors and implement corrective measures to prevent recurrence.

6. The final section provides a summary of the key findings and recommendations for improving the record-keeping process.

7. The document concludes by emphasizing the ongoing nature of this process and the need for continuous improvement.

8. The following table provides a detailed breakdown of the data collected during the audit period.

9. The data shows a significant increase in the number of transactions recorded, indicating improved compliance.

10. The overall results of the audit are positive, reflecting the effectiveness of the implemented controls.

TABLE VII (Cont)

| Material | Applications Applied | | No. Blossoms Counted | % Blight | % Reduction |
|-----------------|----------------------|---|----------------------|----------|-------------|
| Wettable sulfur | - | 2 | 4000 | 0.7 | 87 |
| " " | 1 | 2 | 4000 | 0.4 | 92 |
| L-7752 | 1 | 2 | 1000 | 0.0 | 100 |
| L-8299 | 1 | 2 | 1000 | 0.2 | 96 |
| Non-sprayed | | | 8000 | 5.3 | - |

TABLE VIII. Blossom blight counts.

Rochester variety - Handy Orchard

| Plot No. | Material | Applications Applied | | Amount of Blight/1000 Blossoms | % Blight |
|----------|-----------|----------------------|---|--------------------------------|----------|
| 1 | Stanofide | 1 | - | 0 | 0.0 |
| 2 | " | 1 | - | 2 | 0.2 |
| 3 | " | 1 | - | 1 | 0.1 |
| 4 | " | 1 | 2 | 1 | 0.1 |
| 5 | " | 1 | 2 | 2 | 0.2 |
| 6 | " | 1 | 2 | 0 | 0.0 |
| 7 | " | 1 | 2 | 0 | 0.0 |
| 8 | " | - | 2 | 3 | 0.3 |
| 9 | " | - | 2 | 1 | 0.1 |
| 10 | " | - | 2 | 2 | 0.2 |
| 11 | " | - | 2 | 0 | 0.0 |

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TABLE VIII (Cont)

| Plot No. | Material | Applications Applied | Amount of Blight/1000 Blossoms. | % Blight |
|----------|--------------------------------|-------------------------|---------------------------------------|----------|
| 12 | Used as check | None | 1 | 0.1 |
| 13 | " " | " | 0 | 0.0 |
| 14 | " " | " | 0 | 0.0 |
| 15 | Wettable sulfur + B-1956 | 1 - | 1 | 0.1 |
| 16 | Non-sprayed | | 2 | 0.2 |
| 17 | Wettable sulfur + B-1956 | 1 - | 0 | 0.0 |
| 18 | " " | 1 - | 0 | 0.0 |
| 19 | " " | 1 2 | 1 | 0.1 |
| 20 | " " | 1 2 | 1 | 0.1 |
| 21 | " " | 1 2 | 0 | 0.0 |
| 22 | " " | 1 2 | 0 | 0.0 |
| 23 | " " | - 2 | 2 | 0.2 |
| 24 | " " | - 2 | 1 | 0.1 |
| 25 | " " | - 2 | 3 | 0.3 |
| 26 | " " | - 2 | 0 | 0.0 |
| 27 | Used as check | None | 1 | 0.1 |
| 28 | " " | " | 0 | 0.0 |
| 29 | " " | " | 2 | 0.2 |
| 30 | Liquid lime sulfur + B-1956 | 1 2 | 1 | 0.1 |
| 31 | L-7752 | 1 2 | 0 | 0.0 |
| 32 | L-8299 | 1 2 | 0 | 0.0 |
| 33 | Non-Sprayed | | 1 | 0.1 |
| 34 | " " | | 3 | 0.3 |

| Year | Month | Day | Event | Notes |
|------|-------|-----|-------|-------|
| 1911 | Jan | 1 | ... | ... |
| 1911 | Jan | 2 | ... | ... |
| 1911 | Jan | 3 | ... | ... |
| 1911 | Jan | 4 | ... | ... |
| 1911 | Jan | 5 | ... | ... |
| 1911 | Jan | 6 | ... | ... |
| 1911 | Jan | 7 | ... | ... |
| 1911 | Jan | 8 | ... | ... |
| 1911 | Jan | 9 | ... | ... |
| 1911 | Jan | 10 | ... | ... |
| 1911 | Jan | 11 | ... | ... |
| 1911 | Jan | 12 | ... | ... |
| 1911 | Jan | 13 | ... | ... |
| 1911 | Jan | 14 | ... | ... |
| 1911 | Jan | 15 | ... | ... |
| 1911 | Jan | 16 | ... | ... |
| 1911 | Jan | 17 | ... | ... |
| 1911 | Jan | 18 | ... | ... |
| 1911 | Jan | 19 | ... | ... |
| 1911 | Jan | 20 | ... | ... |
| 1911 | Jan | 21 | ... | ... |
| 1911 | Jan | 22 | ... | ... |
| 1911 | Jan | 23 | ... | ... |
| 1911 | Jan | 24 | ... | ... |
| 1911 | Jan | 25 | ... | ... |
| 1911 | Jan | 26 | ... | ... |
| 1911 | Jan | 27 | ... | ... |
| 1911 | Jan | 28 | ... | ... |
| 1911 | Jan | 29 | ... | ... |
| 1911 | Jan | 30 | ... | ... |
| 1911 | Jan | 31 | ... | ... |

TABLE IX. A summary of the above table.

| Material | Applications Applied | | No. Blossoms Counted | % Blight | % Reduction |
|--------------------|----------------------|---|----------------------|----------|-------------|
| Stanofide | 1 | - | 3000 | 0.75 | 32.2 |
| " | - | 2 | 4000 | 1.5 | -26.0 |
| " | 1 | 2 | 4000 | 0.75 | 32.4 |
| Wettable sulfur | 1 | - | 3000 | 0.33 | 70.3 |
| " " | - | 2 | 4000 | 1.5 | -26.0 |
| " " | 1 | 2 | 4000 | 0.5 | 55.0 |
| Liquid lime sulfur | 1 | 2 | 1000 | 0.1 | 91.0 |
| L-7752 | 1 | 2 | 1000 | 0.0 | 100.0 |
| L-8299 | 1 | 2 | 1000 | 0.0 | 100.0 |
| Non-sprayed | | | 9000 | 1.11 | |

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Post-bloom and Pre-harvest Sprays

Methods and Materials

One of the considerations during the 1949 season's study was the testing of certain new materials. One of these newer fungicides is Stanofide, the trade name of a fungicide produced by the Standard Oil Company of Indiana. Its use thus far has been confined primarily on apples as a protectant against apple scab. Since this product indicated considerable control of brown rot in small-scale tests by the Standard Oil Company workers the previous season, it seemed advisable to undertake more thorough trials using this fungicide. The Michigan State College Spray Calendar (29) suggests 3 sprays shortly after bloom. Any fungicide to be of value during these sprays would need to be compatible with the insecticides used in controlling the plum curculio and with D. D. T. used in control of the oriental fruit moth, also the sucking insects responsible for "catfacing". Therefore, the post-bloom sprays were designed to test the compatibilities of the fungicides and certain insecticides as well as comparative control of diseases by the different combinations. In addition to Stanofide, L-7752, L-8299, and wettable sulfur were compared as fungicides during these trials. The fungicidal plots were so established that they would form a continuous fungicidal program from petal fall to harvest time. Additional fungicides, to be indicated later, were also used during the pre-harvest sprays.

The two orchards selected for these trials were different from those used in the blossom studies so that all plots would have had

Section 1

The first part of the document discusses the importance of maintaining accurate records. It states that records are essential for the proper management of an organization and for ensuring accountability. The document emphasizes that records should be kept up-to-date and accessible to all relevant personnel.

The second part of the document outlines the procedures for handling records. It describes the steps for creating, updating, and archiving records. It also discusses the importance of security and access control for records. The document states that records should be stored in a secure and accessible location and that access should be restricted to authorized personnel only.

The third part of the document discusses the importance of training and education for personnel. It states that personnel should be trained in the proper handling of records and in the use of record management systems. The document emphasizes that training should be ongoing and that personnel should be encouraged to stay up-to-date on the latest record management practices.

The fourth part of the document discusses the importance of regular audits and reviews. It states that audits and reviews are essential for ensuring the accuracy and integrity of records. The document emphasizes that audits and reviews should be conducted regularly and that any discrepancies should be identified and corrected immediately.

The fifth part of the document discusses the importance of disaster recovery and business continuity planning. It states that records are a critical asset for an organization and that it is essential to have a plan in place to ensure the recovery of records in the event of a disaster. The document emphasizes that disaster recovery and business continuity planning should be an ongoing process and that plans should be tested regularly.

The sixth part of the document discusses the importance of compliance with applicable laws and regulations. It states that organizations must ensure that their record management practices comply with all applicable laws and regulations. The document emphasizes that compliance is an ongoing process and that organizations should stay up-to-date on the latest laws and regulations.

The seventh part of the document discusses the importance of communication and collaboration. It states that effective record management requires communication and collaboration between all personnel. The document emphasizes that personnel should be encouraged to share information and to work together to ensure the accuracy and integrity of records.

The eighth part of the document discusses the importance of continuous improvement. It states that record management practices should be regularly reviewed and improved. The document emphasizes that continuous improvement is an ongoing process and that organizations should be encouraged to seek out new and better ways to manage their records.

identical treatments previous to this phase of the experiments beginning with the petal fall spray. As before the orchard locations were varied. Plots of Rochester and Elberta varieties were established on the Deaner Farms, 8 miles inland from Lake Michigan, and plots of Haven and Elberta varieties were set up in the Closson Orchard, $\frac{1}{2}$ mile from the lake shore. Nine-tree blocks (3 x 3) were used and where possible all counts and observations were made from the center tree in each block.

Fungicides were used in combination with insecticides in three sprays. These applications were made at petal fall, when 75% of the shucks were off, and 2 weeks after the latter (first cover).

The purpose of a fungicide in these sprays is two-fold: control of brown rot and control of peach scab. Very little data is available to show the actual value of a fungicide at this time for brown rot control. The young fruits are seldom seen rotting unless a wound has occurred. It is possible during prolonged periods of wet weather for the fungus to penetrate a young fruit from a diseased calyx. However, weather conditions are seldom encountered where such infections occur, and it is doubtful that the fungicide would be of value in such a case.

TABLE X records the various insecticide-fungicide combinations used in the above sprays. The amounts of the various materials used in this series of sprays and in the pre-harvest sprays per 100 gallons of solution is indicated in TABLE XI.

D. D. T. was included in the smuck fall and first cover sprays at the Closson Orchard, but none was used at the Deaner Farms at the request of the owner.

No effort was made to accurately determine the effectiveness of the various insecticide-fungicide combinations in regards to control of insect pests, so the study was concerned solely with the injury phase.

TABLE X - Post-bloom sprays.

Rochester variety -- Deaner Farms

| Plot No. | Fungicide | Insecticide |
|----------|-----------------------------|---------------------------|
| 4 | Stanofide | Basic lead |
| 5 | Stanofide | BHC |
| 6 | Stanofide | Chlordane |
| 7 | Stanofide | Acid lead plus corrective |
| 8 | None | None |
| 9 | Stanofide | Acid lead |
| 13 | None | Acid lead plus corrective |
| 14a | Wettable sulfur plus B-1956 | Chlordane |
| 15 | Wettable sulfur plus B-1956 | Chlordane |
| 16 | Wettable sulfur plus B-1956 | Acid lead plus corrective |
| 17 | Wettable sulfur plus B-1956 | Chlordane |
| 18 | Stanofide | None |

Elberta variety -- Deaner Farms

| Plot No. | Fungicide | Insecticide |
|----------|-----------|---------------|
| 1a,b,c | None | Chlordane |
| 2 | None | Chlordane |
| 3 | Stanofide | Parathion |
| 4 | Stanofide | Basic lead |
| 10a | Arathane | Arathane |
| 10b | None | None |
| 11 | L-8299 | See page "39" |

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TABLE X (Cont)

| Plot No. | Fungicide | Insecticide |
|----------|-----------|---------------------------|
| 12 | L-7752 | See page "39" |
| 13 | None | Acid lead plus corrective |

Halehaven variety -- Closson Orchard

| Plot No. | Fungicide | Insecticide |
|----------|--------------------------------|---------------------------|
| 1 | Stanofide | Acid lead plus correvtice |
| 2 | Stanofide | Chlordane |
| 3 | Stanofide | BHC |
| 4 | Stanofide | Basic lead |
| 5 | Stanofide | None |
| 6 | None | Acid lead plus corrective |
| 7 | Stanofide | Parathion |
| 11 | Wettable sulfur plus B-1956 | Chlordane |
| 13 | L-7752 | See page "39" |
| 15 | None | None |

Elberta variety -- Closson Orchard

| Plot No. | Fungicide | Insecticide |
|----------|-----------|---------------------------|
| 2 | Stanofide | Chlordane |
| 6 | None | Acid lead plus corrective |
| 7 | Stanofide | Parathion |

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

Additionally, it is noted that the records should be kept for a minimum of five years. This is a standard requirement for most businesses to ensure compliance with tax regulations and to provide a clear audit trail.

Financial Summary

| Category | Item | Amount | Notes |
|------------|--------------|--------|-------|
| Revenue | Sales | 1200 | |
| Revenue | Service Fees | 800 | |
| Revenue | Interest | 50 | |
| Revenue | Dividends | 20 | |
| Revenue | Other | 10 | |
| Expenses | Salaries | 600 | |
| Expenses | Rent | 300 | |
| Expenses | Utilities | 150 | |
| Expenses | Travel | 75 | |
| Expenses | Insurance | 100 | |
| Expenses | Depreciation | 100 | |
| Expenses | Other | 50 | |
| Net Income | | 100 | |

The second part of the document provides a detailed breakdown of the financial data presented in the table above. It explains the various components of revenue and expenses, and how they contribute to the overall net income.

It is important to note that the net income is calculated after all expenses have been deducted from the total revenue. This figure represents the profit earned by the business during the reporting period.

The document concludes by stating that the information provided is for informational purposes only and should not be used as a substitute for professional financial advice.

TABLE X (Cont)

| Plot No. | Fungicide | Insecticide |
|----------|--------------------------------|---------------------------|
| 8 | Wettable sulfur plus B-1956 | Chlordane |
| 9 | Wettable sulfur plus B-1956 | Acid lead plus corrective |
| 10 | Wettable sulfur plus B-1956 | Chlordane |
| 11 | Wettable sulfur plus B-1956 | Chlordane |
| 12 | None | None |
| 13 | L-7752 | See page "39" |
| 14 | L-8299 | See page "39" |

TABLE XI. Amounts of materials used in the post-bloom and pre-harvest sprays per 100 gallons.

| Fungicides | Amount per 100 gallon |
|---|-----------------------|
| Acti-dione | 20, 10, 5, and 2 ppm |
| Arathane | 3/4 lb |
| CR 305 (Rohm and Haas experimental) | 1 1/2 lb |
| Liquid lime sulfur | 3 qts |
| L-7752 (Standard Oil (Ind.) experimental) | 1/2 pt |
| L-8299 (Standard Oil (Ind.) experimental) | 1/2 pt |
| Stanofide | 1/2 pt |
| Wettable sulfur | 5 lbs |
| Wetting agent (B-1956) | 1 1/2 oz |

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TABLE XI (Cont)

| Insecticides | Amount per 100 gallons |
|-----------------------------------|------------------------|
| Acid lead | 2 lbs |
| Arathane | 3/4 lbs |
| Basic lead | 3 lbs |
| BHC | 3 lbs |
| Chlordane | 2 lbs |
| Corrective: Zinc sulphate (flake) | 4 lbs |
| spray lime | 4 lbs |
| D. D. T. (50%) | 1 1/2 lbs |
| Parathion (15%) | 1 1/2 lbs |

1950-1951

The following table shows the results of the survey conducted in the year 1950-1951. The data is presented in a tabular format, with columns representing different categories and rows representing specific items or measurements. The values are listed in the right-hand column of the table.

| Category | Value |
|----------|-------|
| Item 1 | 100 |
| Item 2 | 200 |
| Item 3 | 300 |
| Item 4 | 400 |
| Item 5 | 500 |
| Item 6 | 600 |
| Item 7 | 700 |
| Item 8 | 800 |
| Item 9 | 900 |
| Item 10 | 1000 |
| Item 11 | 1100 |
| Item 12 | 1200 |
| Item 13 | 1300 |
| Item 14 | 1400 |
| Item 15 | 1500 |
| Item 16 | 1600 |
| Item 17 | 1700 |
| Item 18 | 1800 |
| Item 19 | 1900 |
| Item 20 | 2000 |

The total value for all items combined is 20,000. This total is derived from the sum of the individual values listed in the table above.

Summary of results for the year 1950-1951.

Spray Injury

There was no evidence to suspect incompatibility or detrimental results following the use of Stanofide mixed with Parathion, EHC, and Chlordane, with or without D. D. T. added. All tank mixes were obtained without difficulty. Experience indicated, however, that the Stanofide be added to the tank when the latter is nearly full. This tends to prevent excessive foaming which may occur if the fungicide is added to a partially-filled tank.

Some difficulty was experienced in mixing certain insecticides in combination with the fungicides L-7752 and L-8299. The insecticides tried in combination with these two fungicides were Chlordane, EHC, and Parathion and D. D. T. alone and in combination with the other 3 insecticides. A good mix was finally obtained by adding the fungicide to the tank as soon as the agitators were covered and in operation. The insecticide was sifted into the tank as it neared the full point. This resulted in considerable foaming but not so much so as to impair the activity of the pump. As several combinations of insecticide-fungicides were used on each plot of L-7752 and L-8299, no insecticide is indicated in the TABLES following these two fungicides.

Severe injury resulted whenever lead arsenate was used as the insecticide. Typical arsenical injury on foliage occurred where acid lead plus a corrective of zinc sulphate and lime (2-4-4) was used without a fungicide. The injury was not enhanced by adding wettable sulfur to the insecticide. There was, however, somewhat more arsenic-

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data. The second part of the document provides a detailed breakdown of the financial data for the period covered. It includes a table showing the various categories of income and expenses, along with their respective amounts. The final part of the document summarizes the overall financial performance and provides a conclusion based on the analysis.

The following table shows the financial data for the period from January to December. The table is organized into columns for each month and rows for different categories of income and expenses. The total income for the year is \$120,000, and the total expenses are \$80,000, resulting in a net profit of \$40,000. The document also includes a detailed explanation of each category and how it contributes to the overall financial picture. The final part of the document provides a summary of the findings and a recommendation for future actions.

The document concludes with a final summary of the key findings and a recommendation for future actions. It suggests that the company should continue to focus on maintaining accurate records and improving its financial management practices. The document also includes a list of references and a bibliography for further reading. The overall tone of the document is professional and informative, providing a clear and concise overview of the financial data and analysis.

al injury when Stanofide was added to the acid lead plus the corrective. Stanofide and basic lead caused injury in the approximate severity as with acid lead and a corrective used alone or in combination with wettable sulfur. The combination of acid lead without a corrective and Stanofide caused 50% defoliation following one application.

The result of these fungicide-insecticide combinations indicate that Stanofide has no corrective action for lead arsenate and the combination should not be used on peaches.

Pre-harvest Spray Trials

Methods and Materials

Most of the plots set up in the post-bloom sprays were continued using the same fungicide throughout the pre-harvest applications. Additional plots of Acti-dione (an anti-biotic chemical, cycloheximide, produced by the Upjohn Company) and CR-305 (Rohm and Haas experimental fungicide) were applied during the pre-harvest sprays only. Plots on which these materials were used had received 3 applications of an insecticide (Chlordane), during the three post-bloom sprays. D. D. T. was added to all fungicide plots in the first two pre-harvest sprays.

Applications of fungicidal sprays were started one month before harvest taking into consideration the estimated picking dates of the varieties and their locations. 4 applications were made at approximately 10-day intervals, the last one applied the day previous to picking.

All peaches were harvested at the firm-ripe stage of maturity. A two-bushel sample was picked from each plot. One bushel was placed in cold storage (34°F) for 48 hours and then removed to common storage for 4 additional days. The other bushel was placed in common storage for 6 days. At the end of the 6 days each sample was examined to determine the extent of the infection incurred.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial reporting and compliance with regulatory requirements. This section also highlights the role of internal controls in preventing errors and fraud, and the need for regular audits to ensure the integrity of the data.

2. The second part of the document focuses on the implementation of robust risk management strategies. It outlines the process of identifying, assessing, and mitigating various risks that could impact the organization's operations and financial health. This includes the development of risk registers, the establishment of risk appetite, and the implementation of control measures to reduce the likelihood and impact of adverse events. The document also discusses the importance of communication and reporting in risk management, ensuring that stakeholders are kept informed of the organization's risk profile and the actions being taken to address them.

3. The third part of the document addresses the need for continuous improvement and innovation. It encourages the organization to regularly review its processes and procedures to identify areas for optimization and to embrace new technologies and methodologies that can enhance efficiency and effectiveness. This section also discusses the importance of fostering a culture of innovation and learning, where employees are encouraged to share ideas and take ownership of their work. The document concludes by emphasizing the need for leadership to drive these changes and ensure that the organization remains competitive and resilient in a rapidly changing market environment.

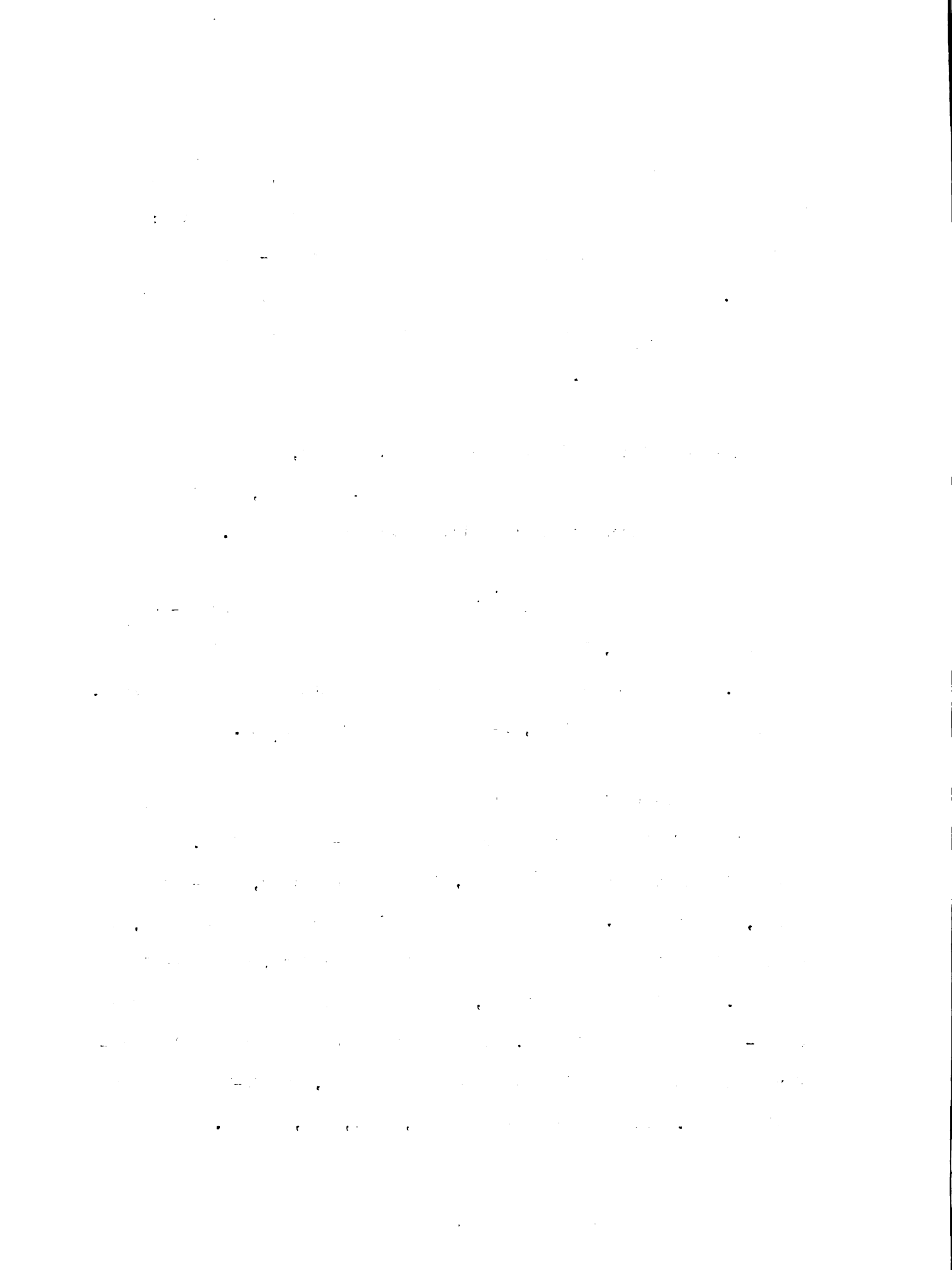
Discussion of Results

In the trials on the Rochester variety of peach, the wettable sulfur and liquid lime sulfur gave the best control of brown rot: 88 and 97% respectively under conditions of 2 days cold - 4 days common storage. Only with the Chlordane combination (Plot 6) did Stanofide compare with the above two fungicides giving 88% control under the same storage procedure.

Under conditions of continuous common storage, the advantage of wettable sulfur over Stanofide was indicated. However, liquid lime sulfur was not superior to Stanofide in this type storage.

On the Halehaven variety under conditions of 2 days cold - 4 days common storage, liquid lime sulfur gave the best results with 94% control. Stanofide was slightly superior in continuous common storage. Under the latter conditions, L-7752 gave but 49% control.

On Elberta variety several fungicides gave 100% control under conditions of little brown rot even on the non-sprayed plots. These materials included wettable sulfur, liquid lime sulfur, Acti-dione at 5 ppm, and Arathane. Stanofide with basic lead as the insecticide, a combination not recommended because of foliage injury, also gave 100% control. In all the above tests, the peaches were subjected to 2 days cold - 4 days common storage. The grower program of a liquid lime sulfur (2 quarts in 100 gallons) and 3 sulfur dusts, and CR-305 were not satisfactory. These data in TABLES XII, XIII, XIV, and XV.



| Year | Location | Method | Result |
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TABLE XII. FRUIT ROT

| Year | Location | Method | Result |
|------|----------|--------|--------|
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| 2030 | ... | ... | ... |

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Rochester Variety

| Plot No. | Fungicide | Insecticide (applied in 3 post- bloom sprays only) | No. fruit counted |
|----------|-------------------------------------|--|-------------------------|
| 4 | Stanofide | Basic lead | 152 |
| 5 | Stanofide | BHC | 230 |
| 6 | Stanofide | Chlordane | 197 |
| 7 | Stanofide | Acid lead plus corrective | 186 |
| 8 | Non-sprayed | Non-sprayed | 195 |
| 9* | Stanofide | Acid lead | 142 |
| 14-a** | Wettable sulfur plus B-1956 | | |
| b** | Liquid lime sul- fur plus B-1956 | Chlordane | 157 |
| 15 | Wettable sulfur plus B-1956 | Chlordane | 188 |
| 16 | Wettable sulfur plus B-1956 | Acid lead plus corrective | 209 |
| 17-a** | Wettable sulfur plus B-1956 | Chlordane | 213 |
| b** | Stanofide | | |
| 18 | Stanofide | None | 201 |

* 1 post-bloom spray at petal-fall; 4 pre-harvest applications of Stanofide.

** a-Spray program for the 3 post-bloom sprays.

b-Spray program for the 4 pre-harvest sprays.

| % rot cold storage | No. fruit counted | Deaner Farms | | |
|--------------------------|-------------------------|----------------------------|------------------------------------|-------------------|
| | | % rot common storage | % rot reduction cold storage | common storage |
| 36 | No sample | --- | 60 | --- |
| 19 | 239 | 26 | 79 | 73 |
| 11 | 236 | 33 | 88 | 67 |
| 41 | 173 | 45 | 53 | 54 |
| 89 | 190 | 97 | --- | --- |
| 59 | No sample | --- | 33 | --- |
| 11 | 144 | 55 | 88 | 43 |
| 3 | 198 | 17 | 97 | 82 |
| 3 | 198 | 8 | 97 | 92 |
| 17 | 189 | 32 | 80 | 67 |
| 43 | 174 | 69 | 52 | 29 |

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to ensure the validity of the results.

3. The third part of the document describes the different types of data that are collected and how they are used to inform decision-making. It notes that a combination of quantitative and qualitative data is often used to provide a comprehensive view of the organization's performance.

4. The fourth part of the document discusses the challenges and limitations of data collection and analysis. It identifies common issues such as data quality, bias, and incomplete information, and offers strategies to mitigate these risks.

5. The fifth part of the document provides a summary of the key findings and conclusions from the study. It reiterates the importance of data-driven decision-making and the need for ongoing monitoring and evaluation to ensure the organization's long-term success.

6. The final part of the document offers recommendations for future research and practice. It suggests areas for further exploration and provides practical advice for implementing effective data collection and analysis processes in various organizational contexts.

TABLE XIII. FRUIT ROT

| Year | Location | Method | Result |
|------|----------|--------|--------|
| 1917 | ... | ... | ... |
| 1918 | ... | ... | ... |
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| 1926 | ... | ... | ... |
| 1927 | ... | ... | ... |
| 1928 | ... | ... | ... |
| 1929 | ... | ... | ... |
| 1930 | ... | ... | ... |

TABLE XIII. FRUIT ROT

| Year | Location | Method | Result |
|------|----------|--------|--------|
| 1931 | ... | ... | ... |
| 1932 | ... | ... | ... |
| 1933 | ... | ... | ... |
| 1934 | ... | ... | ... |
| 1935 | ... | ... | ... |
| 1936 | ... | ... | ... |
| 1937 | ... | ... | ... |
| 1938 | ... | ... | ... |
| 1939 | ... | ... | ... |
| 1940 | ... | ... | ... |

- 1. ...
- 2. ...
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- 14. ...
- 15. ...
- 16. ...
- 17. ...
- 18. ...
- 19. ...
- 20. ...

Halehaven variety

| Plot No. | Fungicide | Insecticide (applied in 3 post- bloom sprays only) | No. fruit counted |
|----------|-------------------------------------|--|-------------------------|
| 1 | Stanofide | Acid lead plus corrective | 172 |
| 2 | Stanofide | Chlordane | 196 |
| 3 | Stanofide | BHC | 192 |
| 4 | Stanofide | Basic lead | --- |
| 5 | Stanofide | None | 184 |
| 6 | None | Acid lead plus corrective | 205 |
| 7 | Stanofide | Parathion | 166 |
| 11-a*** | Wettable sulfur plus B-1956 | | |
| b*** | Liquid lime sul- fur plus B-1956 | Chlordane | 196 |
| 13 | L-7752**** | See page "39" | 229 |

* Percent reduction based on rot in Plot 6.

** Many, small, necrotic areas were just beginning to appear but these were not counted due to the inability to identify them as brown rot.

*** a Spray program for the 3 post-bloom sprays.

b Spray program for the 4 pre-harvest sprays.

**** Fruit heavily infected with bacterial spot.

Closson Orchards

| % rot cold storage | No. fruit counted | % rot common storage | % rot reduction* | |
|--------------------------|-------------------------|----------------------------|------------------|-------------------|
| | | | cold storage | common storage |
| 5 | 166 | 11 | 71 | 81 |
| 3 | 232 | 6 | 82 | 90 |
| 3 | 148 | 4 | 82 | 93 |
| --- | 218 | 6 | --- | 90 |
| 7** | 165 | 52 | 59 | 10 |
| 17 | 187 | 58 | --- | --- |
| 2 | 224 | 9 | 88 | 81 |
| 1 | 154 | 7 | 94 | 89 |
| 4 | 194 | 29 | 76 | 49 |

QUESTION 1

1.1.1. The following table shows the number of students who took part in a school sports day. The students were divided into 5 groups. The number of students in each group is given in the table below.

| Group | Group 1 | Group 2 | Group 3 | Group 4 | Group 5 |
|------------------------|---------|---------|---------|---------|---------|
| Number of students | 12 | 15 | 18 | 20 | 25 |
| Percentage of students | 10% | 12.5% | 15% | 17.5% | 20% |
| Number of students | 12 | 15 | 18 | 20 | 25 |
| Percentage of students | 10% | 12.5% | 15% | 17.5% | 20% |
| Number of students | 12 | 15 | 18 | 20 | 25 |
| Percentage of students | 10% | 12.5% | 15% | 17.5% | 20% |
| Number of students | 12 | 15 | 18 | 20 | 25 |
| Percentage of students | 10% | 12.5% | 15% | 17.5% | 20% |

QUESTION 2

2.1.1. The following table shows the number of students who took part in a school sports day. The students were divided into 5 groups. The number of students in each group is given in the table below.

| Group | Group 1 | Group 2 | Group 3 | Group 4 | Group 5 |
|------------------------|---------|---------|---------|---------|---------|
| Number of students | 12 | 15 | 18 | 20 | 25 |
| Percentage of students | 10% | 12.5% | 15% | 17.5% | 20% |
| Number of students | 12 | 15 | 18 | 20 | 25 |
| Percentage of students | 10% | 12.5% | 15% | 17.5% | 20% |
| Number of students | 12 | 15 | 18 | 20 | 25 |
| Percentage of students | 10% | 12.5% | 15% | 17.5% | 20% |
| Number of students | 12 | 15 | 18 | 20 | 25 |
| Percentage of students | 10% | 12.5% | 15% | 17.5% | 20% |

QUESTION 3

3.1.1. The following table shows the number of students who took part in a school sports day. The students were divided into 5 groups. The number of students in each group is given in the table below.

Elberta variety

| Plot No. | Fungicide | Insecticide (applied in 3 post- bloom sprays only) | No. fruit counted |
|----------|-------------------------------------|--|-------------------------|
| 2 | Stanofide | Chlordane | --- |
| 6 | None | Acid lead plus corrective | 145 |
| 7 | Stanofide | Farathion | 85 |
| 8-a** | Wettable sulfur plus B-1956 | Chlordane | 123 |
| b** | Stanofide | | |
| 10 | Wettable sulfur plus B-1956 | Chlordane | 176 |
| 11-a** | Wettable sulfur plus B-1956 | | |
| b** | Liquid lime sul- fur plus B-1956 | Chlordane | 172 |
| 12 | Non-sprayed | Non-sprayed | 152 |
| 13 | L-7752*** | See page "39" | 105 |
| 14 | L-8299 | See page "39" | 128 |

* More rot present than in the non-sprayed plot.

** a Spray program for the 3 post-bloom sprays.

b Spray program for the 4 pre-harvest sprays.

*** Fruit heavily infected with bacterial spot.

Clossen Orchards

| % rot cold storage | No. fruit counted | % rot common storage | % rot reduction cold storage | common storage |
|-----------------------------------|----------------------------------|-------------------------------------|---|---------------------------|
| --- | 69 | 20 | --- | 29 |
| 12 | 135 | 37 | (-33)* | (-24)* |
| 4 | 86 | 15 | 50 | 46 |
| 2 | 114 | 12 | 75 | 56 |
| 0 | 169 | 10 | 100 | 64 |
| 0 | 173 | 12 | 100 | 57 |
| 8 | 147 | 28 | --- | --- |
| 2 | 128 | 25 | 75 | 11 |
| 3 | 124 | 16 | 65 | 43 |

Table 1. Summary of the study

| Study | Year | Country | Sample Size | Response Rate |
|-------|------|---------|-------------|---------------|
| 1 | 2001 | USA | 1,000 | 85% |
| 2 | 2002 | USA | 1,000 | 80% |
| 3 | 2003 | USA | 1,000 | 82% |
| 4 | 2004 | USA | 1,000 | 88% |
| 5 | 2005 | USA | 1,000 | 84% |
| 6 | 2006 | USA | 1,000 | 86% |
| 7 | 2007 | USA | 1,000 | 83% |
| 8 | 2008 | USA | 1,000 | 87% |
| 9 | 2009 | USA | 1,000 | 81% |
| 10 | 2010 | USA | 1,000 | 89% |
| 11 | 2011 | USA | 1,000 | 85% |
| 12 | 2012 | USA | 1,000 | 82% |
| 13 | 2013 | USA | 1,000 | 86% |
| 14 | 2014 | USA | 1,000 | 84% |
| 15 | 2015 | USA | 1,000 | 87% |
| 16 | 2016 | USA | 1,000 | 83% |
| 17 | 2017 | USA | 1,000 | 88% |
| 18 | 2018 | USA | 1,000 | 85% |
| 19 | 2019 | USA | 1,000 | 82% |
| 20 | 2020 | USA | 1,000 | 86% |

TABLE XV. FRUIT ROT

| Year | Location | Cultivar | Percentage of Fruit Rot |
|------|----------|----------|-------------------------|
| 1911 | ... | ... | ... |
| 1912 | ... | ... | ... |
| 1913 | ... | ... | ... |
| 1914 | ... | ... | ... |
| 1915 | ... | ... | ... |
| 1916 | ... | ... | ... |
| 1917 | ... | ... | ... |
| 1918 | ... | ... | ... |
| 1919 | ... | ... | ... |
| 1920 | ... | ... | ... |

The following table shows the percentage of fruit rot in various cultivars of ... during the years 1911 to 1920. The data is as follows:

- 1911: ...
- 1912: ...
- 1913: ...
- 1914: ...
- 1915: ...
- 1916: ...
- 1917: ...
- 1918: ...
- 1919: ...
- 1920: ...

Elberta variety

| Plot No. | Fungicide | Insecticide (applied in 3 post- bloom sprays only) | No. fruit counted |
|----------|--------------------|--|-------------------------|
| 1-a* | | | |
| b* | | | |
| c* | None | Chlordane | |
| e* | Acti-dione (10ppm) | | 91 |
| f* | Acti-dione (5ppm) | | 113 |
| g* | Acti-dione (2ppm) | | 97 |
| 2-a** | None | | |
| b** | CR 305 | Chlordane | 104 |
| 3 | Stanofide | Parathion | 97 |
| 4 | Stanofide | Basic lead | 97 |
| 10-a | Arathane | Arathane | 76 |
| b | Non-sprayed | Non-sprayed | 56 |
| 11 | L-8299 | See page "39" | 96 |
| 12 | L-7752 | See page "39" | 102 |
| 13 | None | Acid lead plus corrective | --- |
| | Grower program*** | | 68 |

* 1 a,b,c Spray program for the 3 post-bloom sprays.

1 e,f,g Spray program for the 4 pre-harvest sprays.

** 2 a Spray program for the 3 post-bloom sprays.

2 b Spray program for the 4 pre-harvest sprays.

*** Grower program: 3 post-bloom sprays of BHC and sulfur paste.

Pre-harvest applications: (1) 2 qts liquid lime
sulfur, (2) sulfur dust, (3 and 4) sulfur dust
by plane.

**** More rot than in non-sprayed plot.

Deaner Farms

| <u>% rot cold storage</u> | <u>No. fruit counted</u> | <u>% rot common storage</u> | <u>% rot reduction cold storage</u> | <u>common storage</u> |
|-----------------------------------|----------------------------------|-------------------------------------|---|---------------------------|
| 1 | 100 | 23 | 86 | 36 |
| 0 | ---- | ---- | 100 | ---- |
| 2 | ---- | ---- | 71 | ---- |
| 3 | 96 | 36 | 57 | 3 |
| 1 | 114 | 20 | 86 | 44 |
| 0 | 114 | 16 | 100 | 56 |
| 0 | ---- | ---- | 100 | ---- |
| 7 | 75 | 36 | ---- | ---- |
| 1 | 100 | 16 | 86 | 56 |
| 1 | 100 | 18 | 86 | 50 |
| ---- | 100 | 30 | ---- | 17 |
| 3 | 64 | 42 | 57 | (-14)**** |

TABLE 1

Summary of the results of the analysis of variance for the effects of the different factors on the response variables. The values in parentheses are the degrees of freedom for each factor and the values in brackets are the corresponding error degrees of freedom.

| Response Variable | Factor | D.F. | F-value | P-value |
|----------------------|-----------|------|---------|---------|
| Survival (%) | Sex | 1 | 1.2 | 0.27 |
| | Age | 2 | 0.8 | 0.45 |
| | Sex x Age | 2 | 0.5 | 0.82 |
| | Sex | 1 | 0.1 | 0.75 |
| | Age | 2 | 0.3 | 0.85 |
| | Sex x Age | 2 | 0.2 | 0.92 |
| | Sex | 1 | 0.4 | 0.53 |
| | Age | 2 | 0.6 | 0.71 |
| | Sex x Age | 2 | 0.3 | 0.85 |
| | Sex | 1 | 0.2 | 0.65 |
| | Age | 2 | 0.4 | 0.68 |
| | Sex x Age | 2 | 0.1 | 0.95 |
| Growth (mm) | Sex | 1 | 1.5 | 0.22 |
| | Age | 2 | 1.1 | 0.34 |
| | Sex x Age | 2 | 0.7 | 0.61 |
| | Sex | 1 | 0.3 | 0.58 |
| | Age | 2 | 0.5 | 0.61 |
| | Sex x Age | 2 | 0.4 | 0.68 |
| | Sex | 1 | 0.2 | 0.65 |
| | Age | 2 | 0.4 | 0.68 |
| | Sex x Age | 2 | 0.3 | 0.85 |
| | Sex | 1 | 0.1 | 0.75 |
| | Age | 2 | 0.3 | 0.85 |
| | Sex x Age | 2 | 0.2 | 0.92 |
| Condition Factor (K) | Sex | 1 | 1.8 | 0.18 |
| | Age | 2 | 1.3 | 0.28 |
| | Sex x Age | 2 | 0.9 | 0.41 |
| | Sex | 1 | 0.4 | 0.53 |
| | Age | 2 | 0.6 | 0.71 |
| | Sex x Age | 2 | 0.4 | 0.68 |
| | Sex | 1 | 0.2 | 0.65 |
| | Age | 2 | 0.4 | 0.68 |
| | Sex x Age | 2 | 0.3 | 0.85 |
| | Sex | 1 | 0.1 | 0.75 |
| | Age | 2 | 0.3 | 0.85 |
| | Sex x Age | 2 | 0.2 | 0.92 |

A severe phytotoxic reaction on the foliage occurred where L-7752 was used as the fungicide in the pre-harvest sprays. The injury was characterized by large, irregular, necrotic areas on the leaf which soon dropped out. Where the necrotic areas were numerous the leaf took on a very ragged appearance after the lesions had fallen. The injury was not noted on the plots after receiving the 3 post-bloom sprays, but it was common on both Halehaven and Elberta varieties during the pre-harvest sprays. A slight streaking of the color on the fruit was noted about 3 weeks prior to harvest. However, this had largely disappeared at picking time.

In all Stanofide plots on the Rochester variety, a slight scattering of small, shot-holes was seen after the first pre-harvest spray was applied. This reaction was not observed on Halehaven or Elberta varieties at any time nor was it observed on Rochester following the later sprays. Attempts to duplicate the injury on other Rochester trees failed.

Acti-dione caused severe cracking of firm-ripe Halehaven peaches and to a lesser extent Elbertas. The cracks, often $\frac{1}{4}$ inch deep and varying from 2 to 8 in number per peach, radiated in several directions. In addition, the spray mottled the fruit, seeming to actually dissolve the red coloring of the skin.

A slight amount of sulfur burn on the foliage was noted on those trees receiving liquid lime sulfur (3 quarts in 100). This was most evident on the suckers and terminal leaves of the twigs.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the success of any business or organization. The text outlines various methods for recording transactions, including the use of journals, ledgers, and spreadsheets. It also discusses the importance of regular audits and reconciliations to ensure the accuracy of the records.

The second part of the document focuses on the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the success of any business or organization. The text outlines various methods for recording transactions, including the use of journals, ledgers, and spreadsheets. It also discusses the importance of regular audits and reconciliations to ensure the accuracy of the records.

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The fourth part of the document focuses on the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the success of any business or organization. The text outlines various methods for recording transactions, including the use of journals, ledgers, and spreadsheets. It also discusses the importance of regular audits and reconciliations to ensure the accuracy of the records.

The fifth part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the success of any business or organization. The text outlines various methods for recording transactions, including the use of journals, ledgers, and spreadsheets. It also discusses the importance of regular audits and reconciliations to ensure the accuracy of the records.

At harvest time there was no apparent differences in the stage of maturity in respect to the different treatments. Stanofide, L-7752, and L-8299-sprayed fruit showed slightly brighter color because of the absence of apparent residue than did the fruit sprayed with liquid lime sulfur, wettable sulfur, CR-305, and Arathane.

Fungicidal Applications Under Conditions of Heavy
Inoculum

Near harvest time an orchard of Halehaven peaches with a high incidence of infection came to our attention. It had received only a haphazard spray program after the blossom sprays because of the prospects of a small crop. Counts of the fruit on 3 random trees revealed 11.4% rotted fruit hanging in the trees at this time. Comparative sprays of fungicides mixed with 100 gallons of water, namely: wettable sulfur (5 lbs) plus B-1956, Stanofide ($\frac{1}{2}$ pt), and Acti-dione (20ppm), were applied the same day the grower applied a spray of liquid lime sulfur (2 pts) plus B-1956 to the remainder of the orchard. Two days later a picking was made. 2-bushel samples were harvested from each treatment and placed in cold storage for 2 days and then removed to common storage for 3 days.

2 days after the first picking another application of the same materials was made and compared with another grower-applied liquid lime sulfur spray. No second application of Acti-dione was made because of the severe cracking of the fruit. After picking, the fruit was subjected to the same storage procedure as after the first application.

The control effected by Stanofide and wettable sulfur was superior to that obtained by the grower using liquid lime sulfur while Acti-dione under these conditions showed a high rot count. The high rot count for Acti-dione might have resulted from the fruit cracking attributed to that material. TABLE XVI shows the percentage of brown

Section 10: The Role of the Teacher

Introduction

The role of the teacher is a complex and multifaceted one. It is not simply a matter of transmitting knowledge from one generation to the next. Rather, it is a process of facilitating learning, creating an environment where students can explore, question, and discover. The teacher is a guide, a mentor, and a facilitator. They are responsible for assessing the needs of their students and tailoring their instruction accordingly. They are also responsible for fostering a positive classroom culture where students feel safe, respected, and motivated to learn. The teacher's role is to empower students to take ownership of their learning and to become lifelong learners. This requires a deep understanding of the subject matter, as well as a strong command of pedagogical strategies. The teacher must be able to adapt to the needs of individual students and to the changing demands of the educational landscape. In this section, we will explore the various aspects of the teacher's role and the challenges they face in the classroom.

One of the primary responsibilities of the teacher is to create a safe and supportive learning environment. This involves establishing clear expectations and boundaries, as well as fostering a sense of community and respect among students. The teacher should encourage students to express their ideas and opinions, and to engage in collaborative learning. It is also important for the teacher to be aware of the diverse needs and backgrounds of their students and to provide differentiated instruction to meet those needs. The teacher should also be a role model for their students, demonstrating the values and attitudes they wish to see in the classroom. This includes being fair, honest, and respectful, as well as showing a commitment to professional growth and development. The teacher's role is to inspire and motivate their students to reach their full potential and to become active participants in their own learning.

The teacher's role is also to assess and evaluate student learning. This involves using a variety of assessment strategies to measure student understanding and progress. The teacher should use formative assessment to provide ongoing feedback to students and to adjust their instruction as needed. They should also use summative assessment to evaluate student learning at the end of a unit or course. The teacher should be able to analyze student work and to provide meaningful feedback that helps students improve their learning. It is also important for the teacher to be reflective in their practice, to evaluate their own teaching and to make adjustments as needed. The teacher should be a lifelong learner, staying current in their field and seeking out new opportunities for professional growth. In this section, we will explore the various aspects of the teacher's role and the challenges they face in the classroom.

rot following the different treatments.

TABLE XVI. Fruit rot under conditions of heavy inoculum.

| Material | 1st application | | 2nd application | |
|---|-------------------|-------|-------------------|-------|
| | No. fruit counted | % rot | No. fruit counted | % rot |
| Stanofide | 309 | 71 | 249 | 55 |
| Wettable sulfur plus B-1956 | 236 | 67 | 210 | 46 |
| Acti-dione (20ppm) | 283 | 84 | 111* | 92 |
| Liquid lime sulfur plus B-1956 (grower applied) | 134 | 89 | 238 | 79 |

* Only 1 application put on because of the severe cracking of the fruit due to the chemical.

Dipping Tests

Most of the loss from fruit rot caused by the brown rot fungus occurs in storage or in transit between the grower and the consumer. Infection during this stage apparently is due to conidia lodged on the fruit at picking time and germinating later, or conidia that have germinated just prior to harvest. In an attempt to prevent rot by killing the surface-borne spores or perhaps retarding germination and infection of the fruit with a coating of fungus-inhibiting chemicals, a series of dipping tests were tried.

Methods and Materials

25-gallon mixes of various chemicals were made up in a 100-gal-

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lon drum. The peaches to be dipped were put in open field boxes and placed in the solution. They were immersed for approximately 30 seconds and the solution washed thru them by raising and lowering the container. 2-bushel samples were used for each treatment. After draining for $1\frac{1}{2}$ hours they were placed in common storage for 5 days.

The peaches in this test were the Rochester variety. The samples were picked out of a grower-load and hand-sorted for bad and over-ripe fruit. These peaches had previously received a complete spray program of blossom, post-bloom, and pre-harvest sprays, both fungicides and insecticides.

The samples were from two different parts of the farm and are designated as the Lower and Upper Orchards. They received an identical spray schedule throughout the season, applications being made on the same day. However, certain horticultural practices differed. The Lower Orchard was heavily fertilized promoting lush growth that cut down air circulation allowing longer periods of wet fruit and interfered with spray penetration into the tree. The Lower Orchard had not been pruned during the previous dormant season as had the Upper Orchard. A good deal more rotted fruit was hanging in the trees at harvest time in the Lower Orchard. These factors account for, at least in part, the difference in the percentage of rotted fruit in the non-dipped samples after 5 days in storage.

None of the materials used in the dipping tests materially reduced the incidence of brown rot. Liquid lime sulfur was the most effective reducing the rot 14 and 15%. In many instances the dipping

- The first part of the document is a list of names and addresses of the members of the committee. The names are listed in alphabetical order. The addresses are given in full, including street, city, and state.

- The second part of the document is a list of names and addresses of the members of the committee. The names are listed in alphabetical order. The addresses are given in full, including street, city, and state.

- The third part of the document is a list of names and addresses of the members of the committee. The names are listed in alphabetical order. The addresses are given in full, including street, city, and state.

- The fourth part of the document is a list of names and addresses of the members of the committee. The names are listed in alphabetical order. The addresses are given in full, including street, city, and state.

- The fifth part of the document is a list of names and addresses of the members of the committee. The names are listed in alphabetical order. The addresses are given in full, including street, city, and state.

resulted in more rot than developed in the non-dipped samples. These data are presented in TABLE XVII.

TABLE XVII. Dipping trials.

| Lower Orchard | | | |
|---|----------------------|----------|--------------------------------|
| Material | No. fruit counted | % Rot | % Reduction over non-dipped |
| Not dipped | 280 | 94 | --- |
| Water | 258 | 97 | (-3) |
| Wettable sulfur (5 lbs) | 292 | 86 | 9 |
| Wettable sulfur (5 lbs) plus B-1956 | 296 | 88 | 6 |
| Liquid lime sulfur (3 qts) | 272 | 81 | 14 |
| Liquid lime sulfur (3 qts) plus B-1956 | 286 | 80 | 15 |
| Acti-dione (2ppm) | 286 | 95 | (-1) |
| Acti-dione (5ppm) | 310 | 84 | 11 |
| Acti-dione (10ppm) | 279 | 95 | (-1) |
| Acti-dione (20ppm) | 292 | 90 | 4 |
| Stanofide ($\frac{1}{2}$ pt) | 253 | 99 | (-5) |
| B-1956 (2 oz) | 250 | 99 | (-5) |
| Fermate ($1\frac{1}{2}$ lbs) plus B-1956 | 292 | 96 | (-2) |
| Dithane (D-14, 1 qt) | 262 | 97 | (-3) |
| Arathane ($\frac{3}{4}$ lbs) | 119 | 95 | (-2) |

1. $\frac{1}{x^2} = x^{-2}$
 $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$

2. $\frac{1}{x^3} = x^{-3}$
 $\frac{d}{dx} x^{-3} = -3x^{-4} = -\frac{3}{x^4}$

3. $\frac{1}{x^4} = x^{-4}$
 $\frac{d}{dx} x^{-4} = -4x^{-5} = -\frac{4}{x^5}$

4. $\frac{1}{x^5} = x^{-5}$
 $\frac{d}{dx} x^{-5} = -5x^{-6} = -\frac{5}{x^6}$

5. $\frac{1}{x^6} = x^{-6}$
 $\frac{d}{dx} x^{-6} = -6x^{-7} = -\frac{6}{x^7}$

6. $\frac{1}{x^7} = x^{-7}$
 $\frac{d}{dx} x^{-7} = -7x^{-8} = -\frac{7}{x^8}$

7. $\frac{1}{x^8} = x^{-8}$
 $\frac{d}{dx} x^{-8} = -8x^{-9} = -\frac{8}{x^9}$

8. $\frac{1}{x^9} = x^{-9}$
 $\frac{d}{dx} x^{-9} = -9x^{-10} = -\frac{9}{x^{10}}$

9. $\frac{1}{x^{10}} = x^{-10}$
 $\frac{d}{dx} x^{-10} = -10x^{-11} = -\frac{10}{x^{11}}$

10. $\frac{1}{x^{11}} = x^{-11}$
 $\frac{d}{dx} x^{-11} = -11x^{-12} = -\frac{11}{x^{12}}$

11. $\frac{1}{x^{12}} = x^{-12}$
 $\frac{d}{dx} x^{-12} = -12x^{-13} = -\frac{12}{x^{13}}$

12. $\frac{1}{x^{13}} = x^{-13}$
 $\frac{d}{dx} x^{-13} = -13x^{-14} = -\frac{13}{x^{14}}$

TABLE XVII (Cont)

| Upper Orchard | | | |
|--|-------------------|-------|-----------------------------|
| Material | No. fruit counted | % Rot | % Reduction over non-dipped |
| Not dipped | 488 | 16 | --- |
| Water | 411 | 78 | (-89) |
| L-7752 ($\frac{1}{2}$ pt) | 411 | 47 | (-66) |
| L-8299 ($\frac{1}{2}$ pt) | 417 | 51 | (-69) |
| Sodium hypochlorite (200 cc of 5.25%) | 454 | 47 | (-66) |
| Craig 341 B ($2\frac{1}{4}$ lbs) | 388 | 56 | (-71) |
| Craig 341 C (1 pt) | 410 | 37 | (-57) |
| CR 305 ($1\frac{1}{2}$ lbs) | 266 | 54 | (-70) |

OBSERVATIONS

The following notes are observations on the epidemiology of brown rot made during the 1949 season by the author.

A plentiful number of apothecia was observed in many orchards. It was commonplace to find 6 or 8 clusters of apothecia under a tree. In one instance 28 clusters were counted under a single tree. The majority of these apothecia were mature during the time peaches were in bloom. Yet the average blossom blight in several orchards where many apothecia were present was less than 1%. In one case, 5.3% blight was counted on non-sprayed trees.

Usually mummies require at least partial burial before apothecia are produced. It was noted, however, that in some orchards where a heavy cover crop existed creating a local atmosphere of high moisture content, apothecia were coming from mummies on the surface of the soil. In all cases the stripes came from the underside of the mummy where it was in contact with the soil moisture.

No cankers except the ones formed as a result of blossom blight during the current season were observed to sporulate in the field during observations conducted from March to September.

An important fact must be kept in mind in attempts to control brown rot. And that fact is this: all possible sources of inoculum must be eliminated. For instance, in 1949 the importance of the present season's blossom blight and previous season's cankers as a source

of secondary spores was negligible. Yet fruit rot was serious in certain orchards, as much as 11% counted on the tree at picking time and up to 90% after 5 days in common storage. The inoculum for this rot must come from somewhere and the fact that there were occasional mummies left hanging in the trees indicated that they were important in continuing the epidemic. The writer observed these mummies clinging to the tree throughout the summer. In addition, these mummies were observed to produce conidia all season with each rain sufficient to soak the sclerotial membrane.

Another source of secondary spores was important on Red Haven and Oriole varieties during the 1949 season. These two varieties developed a considerable number of split pits when they were about half-grown. As development of these peaches continued an opening occurred at the stem end. In many of these peaches rot was initiated on the inside and soon enveloped the entire peach. This provided a tremendous amount of inoculum for the near-ripe fruit on the tree.

1. The first part of the text discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice, and that these documents should be stored in a secure and accessible location. This practice not only helps in tracking expenses but also provides a clear audit trail for tax purposes.

2. The second part of the text focuses on the importance of regular reconciliation. It suggests that accounts should be reviewed at least once a month to ensure that the recorded balances match the actual bank statements. This process helps in identifying any discrepancies early on and prevents them from escalating into larger issues.

3. The third part of the text discusses the importance of budgeting. It suggests that a budget should be created at the beginning of each year, outlining the expected income and expenses. This helps in managing cash flow and ensuring that there is enough money to cover all necessary expenses throughout the year.

4. The fourth part of the text discusses the importance of staying organized. It suggests that all financial documents should be kept in a systematic and organized manner, making it easy to find them when needed. This includes keeping receipts, invoices, and bank statements in separate folders or a digital database.

5. The fifth part of the text discusses the importance of seeking professional advice. It suggests that consulting with a qualified accountant or financial advisor can provide valuable insights and help in making informed financial decisions. This is particularly important for businesses with complex financial structures or those that are expanding.

6. The sixth part of the text discusses the importance of staying up-to-date with financial news and trends. It suggests that individuals should regularly read financial publications or follow reputable financial news sources. This helps in understanding the current economic environment and its potential impact on personal or business finances.

7. The seventh part of the text discusses the importance of having an emergency fund. It suggests that individuals should set aside a portion of their income each month to build up a fund that can be used in case of unexpected expenses or financial emergencies. This provides a safety net and helps in avoiding debt during difficult times.

8. The eighth part of the text discusses the importance of diversifying investments. It suggests that individuals should not put all their eggs in one basket but instead spread their investments across different asset classes and sectors. This helps in reducing the overall risk of the investment portfolio.

9. The ninth part of the text discusses the importance of reviewing and adjusting financial goals. It suggests that individuals should regularly assess their financial progress and adjust their goals as needed. This ensures that they are staying on track and making progress towards their long-term financial objectives.

10. The tenth part of the text discusses the importance of seeking continuous education. It suggests that individuals should invest in their own education and stay updated with the latest financial knowledge and skills. This helps in making more informed financial decisions and staying ahead of the curve.

CONCLUSIONS

Laboratory studies were undertaken to determine the possibility of conidial production from over-wintered cankers. After an initial 9 hours wetting, 25% of the 1-year cankers were producing conidia within 7 hours in a saturated atmosphere. At the end of 24 hours 75% were active. Prolonged periods in a saturated atmosphere did not increase the number found sporulating. 69% of the 2-year cankers were active after 24 hours. Indications were that the 3 and 4-year cankers are of little importance as a source of conidia for the primary cycles of peach brown rot. No sporodochia were produced at temperatures of 4 or 7°C after 111 hours in a saturated atmosphere. TABLES II and III.

Blossom blight control experiments showed the importance of a protective spray on the exposed blossoms just prior to a rain. TABLE XI. Wettable sulfur was superior to Stanofide as a fungicide during the blossom sprays with the 2 experimental spray materials of the Standard Oil Company showing promise. Controls of 70 to 100% were obtained.

In compatibility tests, Stanofide showed no corrective action for lead arsenate, basic or acid. The combination should not be used on peaches. The experimental fungicides L-7752 and L-8299 mixed with difficulty with Chlordane, BHC, Parathion, and D. D. T.

Wettable sulfur and liquid lime sulfur gave the best control of brown rot on fruit in the pre-harvest sprays where the incidence of

The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is essential for ensuring transparency and accountability in the organization's operations.

The second part of the document outlines the various methods and techniques used to collect and analyze data. It highlights the need for a systematic approach to data collection and the importance of using reliable sources of information.

The third part of the document focuses on the analysis and interpretation of the collected data. It discusses the various statistical and analytical tools that can be used to identify trends and patterns in the data.

The fourth part of the document discusses the implications of the findings and the need for further research. It emphasizes that the results of the study should be used to inform decision-making and to guide the development of future initiatives.

The fifth part of the document discusses the challenges and limitations of the study. It acknowledges that there are several factors that could have influenced the results and that the study is not without its limitations.

The sixth part of the document provides a summary of the key findings and conclusions. It reiterates the importance of accurate record-keeping and the need for a systematic approach to data collection and analysis.

The seventh part of the document discusses the implications of the findings for the organization and the broader industry. It suggests that the results of the study could be used to improve internal processes and to inform the development of new products and services.

The eighth part of the document discusses the need for further research and the potential for future studies. It suggests that there are several areas that need to be explored in more detail and that future research should focus on these areas.

The ninth part of the document provides a final summary and conclusion. It reiterates the key findings and the importance of the study and expresses the hope that the results will be useful to the organization and the industry.

The tenth part of the document discusses the acknowledgments and the contributions of the various individuals and organizations that supported the study. It expresses gratitude to all those who helped make the study possible and to those who provided valuable feedback and insights.

rot was high. Arathane and L-8299 gave promise. TABLES XIII to XVI.

L-7752 injured foliage during the pre-harvest sprays and Actidione severely cracked firm-ripe fruit.

In dipping no material tested significantly reduced the incidence of brown rot infection in harvested peaches.

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Bibliography

- (1) Amos, A. The temperature relations of some fungi causing storage rots. *Phytopath.* 5:11-19. 1915.
- (2) Arthur, J. C. Rotting of cherries and plums, Oidium fructigina S. and K. *New York Agr. Exp. Sta. Ann. Rpt.* 4:280-285. 1886.
- (3) Barss, H. P. Brown Rot and related diseases of stone fruits in Oregon. *Ore. Agr. Exp. Sta. Circ.* 53:1-18. 1925.
- (4) Bartram, H. E. A study of the brown rot fungus in northern Vermont. *Phytopath.* 6:71-78. 1916.
- (5) Berkeley, G. H. Brown rot. *Canadian Dept. Agr. Div. Bot. Dominion Rpt.* 1926:64-65. 1926.
- (6) Cation, D., and Dunegan, J. C. The over-wintering of Monolinia fructicola in twig cankers under Michigan conditions. *Pl. Dis. Rptr.* 33:97-98. 1949.
- (7) Cation, D. Unpublished notes gathered in 1946, 1947, and 1948.
- (8) Chester, F. D. The rot of peach and other stone fruits. *Peninsula Hort. Soc. (Delaware) Trans.* 6:57-64. 1893.
- (9) Cook, M. T. The blossom blight of peach. *Phytopath.* 11:290-294. 1921.
- (10) Curtis, K. M. The morphological aspect of resistance to brown rot in stone fruit. *Ann. Bot. (London).* 42:39-68. 1928.
- (11) Ezekiel, W. N. Fruit-rotting Sclerotinias. II. The American brown rot fungi. *Md. Agr. Exp. Sta. Bul.* 271:87-142. 1924
- (12) _____ Fruit-rotting Sclerotinias, III. Longevity of buried brown rot mummies. *Md. Agr. Exp. Sta. Bul.* 284.

1. The first part of the document is a list of names and addresses.

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26. The twenty-sixth part of the document is a list of names and addresses.

1926.

- (13) Hildebrand, E. M. Peach cankers and their control. Cornell
Ex. Bul. 657. 1944
- (14) Honey, E. E. The monilioid species of Sclerotinia. Mycologia.
20:125-157. 1928.
- (15) Jehle, R. A. The brown rot canker of peach. Phytopath. 3:105-
110. 1913.
- (16) _____ Peach cankers and their treatment. Cornell Agr.
Exp. Sta. Cir. 26. 1914.
- (17) McClintock, J. A. Peach disease control. Ga. Agr. Exp. Sta.
Bul. 139:11. 1921.
- (18) _____ The brown rot situation in 1929. Am. Fr.
Growers Mag. 50:11, 30. 1930.
- (19) Mix, A. J. Brown rot, leaf and twig blight, following peach
leaf curl. Phytopath. 20:265-266. 1930.
- (20) Roberts, J. W., and Dunegan, J. C. Blossom blight of peach.
Phytopath. 16:217-222. 1926.
- (21) _____ Peach brown rot. U.S. Dept. Agr.
Tech. Bul. 328. 1932.
- (22) Smith, E. F. Peach rot and peach blight. Jour. Mycol. 5:131.
1889.
- (23) Weaver, L. O. Effect of temperature and relative humidity on
the occurrence of blossom blight of stone fruit. Thesis
(unpublished) Cornell U. 1943.
- (24) Whetzel, H. H. Unpublished notes. Cornell U. 1935.
- (25) Willison, R. S. Peach canker investigations. I. Sci. Agr.
14:39. 1933.
- (26) _____ Peach canker investigations. II. Canadian Jour.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This not only helps in tracking expenses but also ensures compliance with tax regulations. The second part of the document outlines the various methods used to collect and analyze data. It includes a detailed description of the survey process, from identifying the target population to the final analysis of the results. The third part of the document provides a comprehensive overview of the project's progress. It details the challenges faced during the implementation phase and the strategies used to overcome them. Finally, the document concludes with a summary of the key findings and recommendations for future research.

The data collected from the survey shows a clear trend towards digitalization among small businesses. This is particularly evident in the use of accounting software and online banking services. The analysis also reveals that while many businesses have adopted digital tools, they often lack the necessary training and support to use them effectively. This highlights the need for targeted training programs and technical assistance. The findings also indicate that digitalization is not just about adopting new technologies but also about changing the way businesses operate. This involves streamlining processes, improving communication, and enhancing customer service.

In addition to the survey, the project also involved a series of focus group discussions with business owners and managers. These discussions provided valuable insights into the specific challenges and opportunities associated with digitalization. For example, many participants expressed concerns about the security of their data and the reliability of digital services. However, they also identified several key benefits, such as increased efficiency and the ability to reach a wider market. The project also conducted a series of pilot tests to evaluate the effectiveness of the proposed solutions. These tests showed that the proposed digital tools and training programs were well-received and had a positive impact on business performance.

The project's findings have several important implications for policy makers and business leaders. First, it highlights the need for a coordinated effort between the government and the private sector to promote digitalization. This could involve providing financial incentives, technical support, and training programs. Second, it emphasizes the importance of addressing the digital divide, particularly for small businesses and rural areas. This could be achieved through targeted interventions and partnerships with local organizations. Finally, the project's findings suggest that digitalization is not just a one-time event but an ongoing process. Businesses need to continuously invest in new technologies and skills to stay competitive in a rapidly changing market.

In conclusion, the project has provided a comprehensive overview of the current state of digitalization among small businesses. It has identified key challenges and opportunities and provided practical recommendations for addressing them. The findings suggest that digitalization is a critical factor for the success of small businesses in the future. By adopting digital tools and improving their digital skills, businesses can increase their efficiency, reduce costs, and reach a wider market. However, this process requires a coordinated effort from all stakeholders, including the government, the private sector, and educational institutions. The project's findings provide a solid foundation for developing effective policies and programs to support digitalization and the growth of small businesses.

Res. 14:40-41. 1936.

- (27) _____ Peach canker investigations. III. Canadian
Jour. Res. 15:328. 1937.
- (28) Woronin, M. Uber Sclerotinia Cinirea and S. fructigena.
Mem. Acad. Sci. St. Peterbourgh. Phys. - Math. 10:1-38.
1900.
- (29) Mitchell, A. E., Hutson, R., and Cation, D. The spraying cal-
ender. Mich. State College Ext. Bul. 154.
- (30) Dunegan, J. C., and Goldsworthy, M. C. The control of blossom
blight and its relation to brown rot of Red Bird peaches
at harvest. Pl. Dis. Rptr. 32: 4: 136-137. 1948.

1. The first part of the document discusses the importance of maintaining accurate records.

2. The second part of the document discusses the importance of maintaining accurate records.

3. The third part of the document discusses the importance of maintaining accurate records.

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