

A SUGGESTED PLAN OF WORK IN
AGRICULTURAL ENGINEERING FOR
SECONDARY SCHOOLS

Thesis for the Degree of M. S.

F. W. Holbrook

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THESIS

Agricultural machinery

A SUGGESTED PLAN OF WORK

IN

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FOR

SECONDARY SCHOOLS

Thesis

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THESIS

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A SUGGESTED PLAN OF WORK IN AGRICULTURAL ENGINEERING FOR SECONDARY SCHOOLS

I Introduction

Agricultural engineering is the application of engineering principles and methods to the problems of agriculture. Engineering is more than a collection of facts concerning structures, processes, and machines. The engineer looks upon his work as a series of related problems which may be solved by scientific methods.

This topic was suggested by the lack of any regularly organized plan of work in agricultural engineering for secondary schools. Personal experience has emphasized the possibilities of such a plan in a utilitarian way for students who make farming a life work. The training would also be valuable to students who enter the various trades.

In order to facilitate the work of this study, the field has been divided arbitrarily into the following heads: viz. farm mechanics, farm machinery, farm buildings, home utilities, power machinery, land development, and farm electrification.

Much confusion has existed in the use of the above classification. For use in this treatise the following groupings have been made. Under the heading "farm mechanics" the following activities are included: rope work, harness work, belt work, fitting tools, soldering, sheetmetal work, cold metal work, forge work, and glazing. "Farm machinery" includes the study, operation, care, and repair of farm machinery other than power units. "Farm buildings" includes

wood shop work, drawing to scale, construction of appliances and small buildings, concrete work, and a study of paints, preservatives, insulation, and ventilation. "Home utilities" includes water systems, sewage systems, heating systems, local lighting systems, and the installation, care, and repair of home conveniences. "Power machinery" includes the study, care, and repair of gas engines and tractors. "Land development" includes land clearing, drainage, irrigation, simple surveying, and farmstead layouts. "Farm electrification" includes work on electric wiring, care and repair of simple appliances, and a study of electric motors and their farm use.

The data consists of courses of study in use in the secondary schools of the United States and courses of study in our higher institutions of learning. It also includes circulars and bulletins from the United States Department of Agriculture, and the departments of agriculture of the various states, and the departments of agricultural engineering of the colleges of the United States.

Before setting up this suggested plan of work, a questionnaire form was sent to the supervisors of vocational agriculture in each state of the Union. Replies were received from thirty-three states! The returns received on these questionnaire forms showed that agricultural engineering

1. Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Montana, Nevada, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, West Virginia, Wisconsin, and Wyoming.

is taught in all the states reporting except Utah, West Virginia, and Wyoming.

There is some doubt as to the accuracy of these reports, in as much as Michigan was reported as having no work worthy of being styled agricultural engineering when there are eighty-five rural consolidated schools doing shop work as listed by the state supervisor of rural consolidated schools. In addition to this, many of the 219 departments of vocational agriculture in high schools of the state are doing quite extensive work along this line as shown by inspection. Our state supervisor of industrial education reports another list of schools as doing work which would partially fall within the province of agricultural engineering. It is impossible to tell how extensively this same condition exists in other states.

Work of this nature is widely recognized, and the following plan has been organized so as to include indicated by the states reporting. These lists of topics and accompanying references may be interpreted as a general outline including all phases of work peculiar to the different sections. It is possible for any community to select from these lists such problems as are suitable to its conditions.

An effort has been made to list as major references a selection of texts that will give a school a minimum library covering these subjects. These major references are starred. The references not starred make up a secondary list that would enrich the course, but that may be eliminated where financial conditions require. The accompanying bibliography includes text books, trade literature, and state, federal,

and college bulletins.

Summarizing of Data

Hack L. Jones, Associate Professor of Agricultural Engineering, University of Missouri, states under the title "Responsibility of Agricultural Engineers in the Improvement of Farm Mechanics in the High Schools,"¹ "Farm Mechanics work in the high schools is as yet scarcely beyond the embryonic stage. Whether it eventually dies, or whether it grows up and becomes a more or less useless frill connected with our educational system, or whether it develops into a significant, vital, and valuable part of the system, will depend upon its nature and development during the next few years."

Table 1 shows that farm mechanics is the most popular phase of agricultural engineering. It is taught in 90.9% of the states reporting. Farm machinery is second in popularity and is taught in 88% of the states reporting. Farm buildings stands third with a percentage of 79. Home Utilities, power machinery, and concrete work follow in the order named with percentages ranging from 72 to 70. Harness work paint and preservatives, land development, farm electrification, and forge work follow in the order named with percentages ranging from 52 to 39.

The states reporting the most extensive programs in agricultural engineering are widely scattered. Given in the order of the extensiveness of their work according to their reports they are: First, Colorado; second California, Pen-

1. Presented at the annual meeting of the American Society of Agricultural Engineers, Lafayette, Indiana, June 21, 1933.

Table 1. Types of Work Offered by States

	Boat Building	Iron Works	Ship Machinery	Power Machinery	Buildings	Carpentry	Paint & Preservatives	Land Development	Electrification	Home Utilities	Spices & Lumber	Road Building	Asphalt	Harness Work	Forge	Sheeting
Maine		*	*	*	*			*	*							
Maryland		*	*	*	*											
Massachusetts		*	*	*	*			*	*							
Michigan		*	*	*	*		*									
Minnesota																
Mississippi																
Missouri																
Montana			*	*	*	*	*		*	*				*	*	
Nebraska																
Nevada			*	*	*	*	*		*	*				*	*	
New Hampshire			*	*	*	*	*		*	*				*	*	
New Jersey			*	*	*	*	*	*	*	*				*		
New Mexico																
New York			*	*	*	*	*		*	*				*		
North Carolina			*	*	*	*	*		*	*				*		
North Dakota	*		*	*	*	*	*		*	*				*		

tucky, and Ohio; third, Arkansas and Pennsylvania; fourth, Montana, New Jersey, and Texas.

From these data we get a very good picture of the general standing of agricultural engineering throughout the nation, the phases of major interest, and the possibilities of further development to meet the changing needs of the different sections.

Conclusions

The scope of the field is so broad as to prohibit a single usable text book covering all phases. For this reason it is believed that a suggestive outline of work, giving references to texts, trade literature, and bulletins, will be of value.

The aim of such a plan of work in the schools, is to develop Prospective farmers for greater proficiency in farming. This aim may be attained by the development of the attitudes, abilities, and skills which are the objectives of the various problems and projects suggested in the outlines.

The lists of problems are quite comprehensive, so that most communities will be able to select the work particularly adapted to their needs. These lists must be ever changing so as to include new discoveries, inventions, or practices, and also to delete any portion that may become obsolete. The use of these lists presupposes that the teacher, or the one in charge, knows the community and its needs. If this knowledge be lacking, it must be acquired before an intelligent use of these lists can be made.

This suggested plan does not attempt to say what work shall be offered in any particular community. It offers a view of the available material and suggests the following problem lists from which selections may be made to meet the local and state needs. These lists are accompanied by a bibliography for each phase of work, including page or chapter references.

A suggested list of trade literature is also appended. It is impossible to keep such a list complete because it is constantly changing.

III. Illustrative Application of Plan to Community X

If the characteristics of the community are not known, they must be determined by personal contacts or by means of a questionnaire submitted to the students or their parents.

In Community X the type of farming carried on is general crop where the principal cash crop is potatoes. This income is supplemented by the sale of dairy and poultry products.

It is known that the chief interests of students in agricultural engineering lie in farm mechanics, farm machinery, and farm buildings.

The number of students in the agricultural engineering group is fourteen. The size of the shop is thirty-two feet by thirty-six feet. According to the standards set by the State Department of Public Instruction of the State of Michigan, the equipment is sufficient to cover woodwork, sheetmetal work, and cold metal work. The library contains the minimum requirements for the course as indicated in the general bibliography. Fifty dollars has been set aside for additional reference books for agricultural courses.

The community is well supplied with good roads. There are three families who cannot be reached by auto travel during the spring season. About fifty per cent of the patrons of the school have telephones. Means of communication and personal contacts are fairly good.

The selection of work should be adapted to the seasonal interests of the community. This places the work in farm

buildings and a major part of that in farm mechanics in the first semester, while the work in farm machinery will be given in the second semester.

In the State of Michigan the Department of Public Instruction has made definite recommendations for this type of work through the Supervisor of Rural Agricultural Schools. The suggested plan of work can be adapted to these recommendations as well as to the interests of the community.

The following are the recommendations for the Rural Agricultural Schools, which include the phases of work to be covered and the approximate time allotted to each phase:

Woodwork	6 weeks
Drawing	5 "
Electricity	4 "
Sheetmetal	3 "
Cold metal	2 "
Concrete	2 "
Plumbing	2 "
Tool Care	2 "
Woodwork (recreational)	2 "
Artmetal	1 week
Belt work	1 "
Forge	1 "
Glazing	1 "
Harness work	1 "
Paint work	1 "
Rope work	1 "

These recommendations estimate one unit or one problem to be week's work. Checking these recommendations

with the work selected to meet the community interests for the first semester the following list is secured:

Drawing, five weeks. Found in farm building list,
problems 9, 10, 11, 12, 13

Woodwork, six weeks. Found in farm building list,
problems 17, 20, 30

Concrete work, two weeks. Found in farm buildings list,
problems 29, 31

Sheetmetal work, three weeks. Found in farm mechanics
list, problem 3

Rope work, one week. Found in farm mechanics list,
problem 10 or 11

Tool care, two weeks. Found in farm mechanics list,
problems 1, 2

Lists of projects in woodwork, concrete and sheetmetal work are given in the references for the problems listed. In the selection of projects are many possibilities of adapting the work to the student's interests and desires.

Among these fourteen boys are two whose interests vary from the general interests of the group. The first is one whose father does custom work in threshing and silo-filling. This boy desires to learn something about gas engines because this is the power his father uses. This boy is permitted to vary his problem from the general selection for the class and take the work on gas engine principles, care and operation. This work is covered in the power machinery list, problems 6, 22, 24, 25. It can be made as comprehensive as the student and instructor desire, using the father's machinery for laboratory study and doing a large percentage of the work at

the home farm. This could be carried on as project work.

The second boy is one whose father is considering remodeling his dairy barn. He is interested in the pen-barn type of arrangement, including insulation and ventilation. Problems 27 and 39, covering insulation and mechanical ventilation might be selected for his work in addition to the other problems taken from the farm buildings list and a study of the pen-barn could be his project selected under farm buildings. This arrangement would take care of the special interests of these individuals with very little modification of the general program.

In communities where the class is small it is possible for each student to select all problems of his course, being limited only by the availability of reference books and laboratory materials. If this course were adopted, the problem groups of each individual might be entirely different. This would be possible only where the class was sufficiently small to permit of the apportioning of the instructor's time between individuals instead of groups. The object of such flexibility would be the increased interest and responsibility of the student.

The advantages of this suggested plan are:

Its flexibility permits its adaptation to conditions as you find them in each community.

Its adaptability to the varying interests of individual students.

The increased accessibility of reference materials.

The possibility of an increased interest and responsibility on the part of the student due to the partially elective nature of the plan.

A considerable saving of the instructor's time is possible by using the assembled list of problems on the different phases of the work as well as in the use of the bibliography of texts, bulletins, and trade literature.

The disadvantages of this suggested plan would be:

The lack of sufficient references now in the secondary school libraries.

The lack of teachers with sufficient training to handle all phases of this work.

P R O B L E M L I S T S

W I T H

B I B L I O G R A P H I E S

FARM MECHANICS

Topics	References ^{1.}
1. Sharpening Edged Tools	Mechanical Training: Boss, Dent & White Chapter II Farm Mechanics: Crawshaw & Lehmann Pages 48-49 Farm Mechanics: Field, Olson & Nylin Chapter VIII Agricultural Mechanics: Smith Chapter II Fitting Farm Tools: Roehl Chapter II Farmers Shop Book: Roehl Chapter III
2. Filing Saws	Mechanical Training: Boss, Dent & White Pages 16-22 Farm Mechanics; Crawshaw & Lehmann Pages 34-35 The Disston Saw, Tool & File Book: H. Disston & Sons Textbook of Atkins Silver Steel Saws E. C. Atkin & Co. Fitting Farm Tools: Roehl Chapters III, IV Agricultural Mechanics: Smith Chapter II Saws in the Filing Room: Atkins & Co.
3. Soldering & Sheet Metal Forming	Mechanical Training: Boss, Dent & White Chapter III Farm Mechanics: Crawshaw & Lehmann Chapters XII, XIII Farm Mechanics: Field, Olson & Nylin Chapter III See list of projects
4. Use of Drills & Screw Extractor	Mechanical Training: Boss, Dent & White Chapter VIII Farm Mechanics: Field, Olson & Nylin Chapter IX

1. For general bibliography see page 76.

FARM MECHANICS

Topics	References
	Farm Shop Book: Roehl Chapter XV
	Agricultural Mechanics: Smith Page 208
5. Use of Taps & Dies	Mechanical Training: Boss, Dent & White Chapter X
	Farm Mechanics: Field, Olson & Nylin Chapter IX
	Farm Shop Book: Roehl Chapter XV
	Agricultural Mechanics: Smith Pages 209, 251
6. Fitting Tool Handles	Fitting Farm Tools: Roehl Chapter V
	Farmers Shop Book: Roehl Page 299
	Farm Mechanics: Field, Olson & Nylin Pages 108-109
7. Glazing	Farm Mechanics: Crawshaw & Lehmann Chapter X
	Agricultural Mechanics: Smith Pages 191-197
8. Painting	Paints & Painting: Sabin
	Whitewashes & Cold Water Paints: National Lime Ass'n. Bul. 3040
	Painting on the Farm: U.S.D.A. Farmers Bul. 1452
	The Handbook on Painting: National Lead Co.
9. A Study of Ropes	Mechanical Training: Boss, Dent & White Pages 71-75
	Farm Mechanics: Crawshaw & Lehmann Pages 379-382
	Farmer's Shop Book: Roehl Page 323
	Agricultural Mechanics: Smith Pages 272-276

FARM MECHANICS

Topics	References
	Farm Mechanics: Field, Olson & Nylin Pages 359-360
10. Knot Tying	Farm Mechanics: Field, Olson & Nylin Pages 369-376
	Agricultural Mechanics: Smith Pages 276-290
	Farm Shop Book: Roehl Pages 325-346
	Farm Mechanics: Crawshaw & Lehmann Pages 383-397
	Mechanical Training: Boss, Dent & White Pages 75-91
11. Rope Splicing	Mechanical Training: Boss, Dent & White Pages 91-101
	Farm Mechanics: Field, Olson & Nylin Pages 370-374
	Agricultural Mechanics: Smith Pages 290-297
	Farm Mechanics: Crawshaw & Lehmann Pages 398-401
	Farm Shop Book: Roehl Pages 346-354
12. The Steel Square	Practical Carpentry: Radford Part III
	Agricultural Mechanics: Smith Page 30, Chapter IV
	Modern Practical Carpentry: Ellis Chapter XXVI, Pages 340-350
	Standard Steel Squares: Sargent & Co.
13. Cleaning & Oiling the Harness	Agricultural Mechanics: Smith Pages 263-264
	U.S.D.A. Farmer's Bulletin No. 1183
	Mechanical Training: Boss, Dent & White Chapter VIII
	Farmer's Shop Book: Roehl Chapter XII

FARM MECHANICS

Topics	References
14. Harness Repair	Agricultural Mechanics: Smith Chapter XVII Mechanical Training: Boss, Dent & White Chapter VIII Farmer's Shop Book: Roehl Chapter XII
15. Pipe Fitting	Agricultural Mechanics: Smith Pages 247-260 Farm Mechanics: Crawshaw & Lehmann Chapter XXIV Mechanical Training: Boss, Dent & White Chapter IX
16. Cold Metal Work	Mechanical Training: Boss, Dent & White Chapter X Principles of Farm Mechanics: Sharp Chapter XI
17. Simple Forge Work	Principles of Farm Mechanics: Sharp Chapter X Agricultural Mechanics: Smith Chapter XIV Farm Mechanics: Crawshaw & Lehmann Chapter XIX, XX Mechanical Training: Boss, Dent & White Chapter XII
18. Babbitting	Mechanical Training: Boss, Dent & White Chapter XI Farm Mechanics: Crawshaw & Lehmann Pages 321-325
19. Belt Lacing	Agricultural Mechanics: Smith Page 324 Engineering on the Farm: Stewart Pages 267-276 Farm Gas Engines & Tractors: Jones Pages 234-237 Farm Mechanics: Crawshaw & Lehmann Chapters XXV, XXVI

FARM MECHANICS

Topics	References
	Mechanical Training: Boss, Dent & White Chapter VI
20. Concrete Work	See Farm Buildings
21. Building Equipment	See Farm Buildings

FARM MECHANICS

BIBLIOGRAPHY*

1. Mechanical Training: Boss, Dent & White
2. Farm Mechanics: Crawshaw & Lehmann
3. Farm Mechanics: Field, Olson, & Nylin
4. Agricultural Mechanics: R. H. Smith
5. Fitting Farm Tools: L. M. Roehl
6. Farmer Shop Book: L. M. Roehl
7. Paints & Painting: Sabin
8. Practical Carpentry: Radford
9. Modern Practical Carpentry: Ellis
10. Principles of Farm Mechanics: Sharp & Sharp
11. Engineering on the Farm: Stewart

Trade Literature

1. The Disston Saw, Tool, & File Book: H. Disston & Sons
2. Textbook of Atkins Silver Steel Saws: E. C. Atkins & Co.
3. Saws in the Filing Room: E. C. Atkins & Co.
4. Whitewashes & Cold Water Paints: National Lime Ass'n.
Bul. 3040
5. The Handbook on Painting: National Lead Co.
6. Standard Steel Squares: Sargent & Co.

Bulletins

1. Painting on the Farm: U.S.D.A. Farmer's Bull. 1452
2. U.S.D.A. Farmer's Bulletin No. 1183

* For details see General Bibliography.

FARM MACHINERY

General

Topics	References
1. Engineering in Agriculture	Agricultural Machinery: Davidson Chapter I Power & Machinery: U.S.D.A. Bul. 137 Engineering on the Farm: Stewart Pages 7, 8
2. The Function of Machines	Agricultural Machinery: Davidson Chapter II Power & Machinery in Agriculture: M.S.C. Bul. 157 Pages 1-12 Engineering on the Farm: Stewart Chapter XXIII
3. Elements of Machines	Agricultural Machinery: Davidson Chapter III Equipment for the Farm & Farmstead: Ramsower Chapter I Engineering on the Farm: Stewart Chapter XXIII
4. Materials for Machines	Agricultural Machinery: Davidson Chapters Iv, V Equipment for the Farm & Farmstead: Ramsower Chapter XIX Engineering on the Farm: Stewart Chapter XXIII Farm Machinery & Equipment: Smith Chapter III
5. Power Measurement & Interpretation	Agricultural Machinery: Davidson Chapter VII Engineering on the Farm: Stewart Page 462 Equipment for the Farm & Farmstead: Ramsower Pages 5-7
6. Care, Repair, & Housing of Machinery	Agricultural Machinery: Davidson Chapters XXV, XXVI Farm Machinery & Equipment: Smith Chapter VI

FARM MACHINERY

Topics	References
	Operation, Care & Repair of Farm Machinery: John Deere Co.
7. Cost Requirements of Farm Machinery	Agricultural Machinery: Davidson Chapter XXIV
8. Costs, Overhead & Operating	Agricultural Machinery: Davidson Chapter XXIV
9. Capacity & Duty of Machines	Agricultural Machinery: Davidson Chapter XXV
	Power & Machinery in Agriculture U.S.D.A. Mix. Bul. No. 157
10. Operating Schedule for Machinery	Agricultural Machinery: Davidson Chapter XXV
	Farm, Field, & Farmstead Layout 7-.760 A. E., K.S.C.
11. Design & Materials of Construction	Agricultural Machinery: Davidson Chapters IV, V
	Equipment for the Farm & Farmstead Ramsower Chapter III
	Farm Machinery & Equipment: Smith Chapter III
12. Mechanics of the Plow	Agricultural Machinery: Davidson Chapter X
	Equipment for the Farm & Farmstead: Ramsower Chapter XVIII
	Farm Machinery & Equipment: Smith Chapter VII
13. Walking Plow Construction & Adjustment	Agricultural Machinery: Davidson Chapter X
	Equipment for the Farm & Farmstead: Ramsower Chapter XVIII
	Farm Machinery & Equipment: Smith Chapters VII, IX
	Operation, Care, & Repair of Farm Machinery: John Deere Co. Chapter I
	Trade Literature

FARM MACHINERY

Topics	References
14. Sulky & Gang Plows	Farm Machinery: Stone Pages 25-53 Equipment for the Farm & Farmstead: Ramsower Pages 259-272 Agricultural Engineering: Davidson Pages 97-107 Operation, Care & Repair of Farm Machinery: John Deere Co. Pages 18-36 Farm Machinery & Equipment: Smith Chapter IX Trade Literature
15. Laying out Field for Tractor Plowing	Farm Machinery: Stone Pages 53-59 Plow Manual: J. I. Case Co. Chapter VII Farm Machinery & Equipment: Smith Chapter XV Laying out Fields for Tractor Plowing U.S.D.A. Farmers' Bul. 1045
16. Disk Harrows	Agricultural Machinery: Davidson Pages 131-136 Farm Machinery: Stone Pages 71-81 Farm Machinery & Equipment: Smith Chapter VI Equipment for the Farm and Farmstead: Ramsower Pages 273-283 Operation, Care & Repair of Farm Machinery: John Deere Co. Chapter II Trade Literature
17. Harrows, Spike & Spring Toothed	Farm Machinery: Stone Pages 62-70 Equipment for the Farm & Farmstead: Ramsower Pages 273-278 Agricultural Machinery: Davidson Pages 126-131

FARM MACHINERY

Topics

References

18. Cultivation

Operation, Care & Repair of Farm
Machinery: John Deere Co.
Chapter III

Farm Machinery & Equipment: Smith
Chapter VI

Trade Literature

Farm Machinery: Stone
Chapter V

Equipment for the Farm & Farmstead:
Ramsower Pages 289-300

Agricultural Machinery: Davidson
Chapter XIII

Farm Machinery & Equipment: Smith
Chapter XX

Operation, Care & Repair of Farm
Machinery: John Deere Co.
Chapter X

Trade Literature

19. Grain Drills

Farm Machinery: Stone
Chapter III

Equipment for the Farm & Farmstead:
Ramsower Pages 315-332

Agricultural Machinery: Davidson
Chapter XIV

Farm Machinery & Equipment: Smith
Chapter XX

Operation, Care & Repair of Farm
Machinery: John Deere Co.
Chapter IV

Trade Literature

20. Corn Planters

Farm Machinery: Stone
Chapter IV

Agricultural Machinery: Davidson
Chapter XV

Equipment for the Farm & Farmstead:
Ramsower Chapter XX

Operation, Care & Repair of Farm
Machinery: John Deere Co.
Chapter V

FARM MACHINERY

Topics	References
	Farm Machinery & Equipment: Smith Chapter XVII
	Trade Literature
21. Calibration of Corn Planter	Equipment for the Farm & Farmstead: Ramsower Page 307
	Agricultural Machinery: Davidson Page 169
	Operation, Care & Repair of Farm Machinery: John Deere Co. Page 83
22. Calibration of Grain Drill	Agricultural Machinery: Davidson Pages 156-157
	Equipment for the Farm & Farmstead: Ramsower Page 329
	Operation, Care & Repair of Farm Machinery: John Deere Co. Page 58
	Farm Machinery: Stone Pages 125-126
	Farm Machinery & Equipment: Smith Pages 195-196
23. Potato Planters	Agricultural Machinery: Davidson Chapter XVII
	Farm Machinery: Stone Chapter IX
	Equipment for the Farm & Farmstead: Ramsower Pages 422-424
	Operation, Care & Repair of Farm Machinery: John Deere Co. Chapter VIII
	Farm Machinery & Equipment: Smith Page 183
	Trade Literature
24. Beet & Bean Drills	Catalog No. 5: John Deere Co. Page 105
	General Catalog: I. H. C. Pages 175-176

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Topics	References
	Farm Machinery & Equipment: Smith Page 186
	"Superior" Beet & Bean Drill
	Leaflet: American Seeding Machine Co.
	Other Trade Literature
25. Mower, Construction	Farm Machinery: Stone Chapter VI
	Equipment for the Farm & Farmstead: Ramsower Chapter XII
	Agricultural Machinery: Davidson Chapter XX
	Operation, Care & Repair of Farm Machinery: John Deere Co. Chapter VIII
	Farm Machinery & Equipment: Smith Chapter XII
26. Mower Check Up & Repair	Farm Machinery: Stone Pages 206-213
	Repair & Adjustment of Mowing Machines A. E. Dept. 1-3135 M.S.C.
	Operation, Care & Repair of Farm Machinery: John Deere Co.
	Agricultural Machinery: Davidson Chapter XX
	Equipment for the Farm & Farmstead: Ramsower Pages 354-363
27. Dump & Side-Delivery Rakes	Equipment for the Farm & Farmstead: Ramsower Pages 363--36
	Agricultural Machinery: Davidson Pages 223-225
	Operation, Care & Repair of Farm Machinery: John Deere Co. Pages 121-126
	Farm Machinery & Equipment: Smith Pages 241-244
	Trade Literature

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Topics

References

28. Hay Loaders, Sweep Rakes & Stackers
- Equipment for the Farm & Farmstead:
Ramsower Pages 366-379
- Agricultural Machinery: Davidson
Pages 225-231
- Operation, Care & Repair of Farm
Machinery: John Deere Co.
Chapter XIV
- Farm Machinery & Equipment: Smith
Pages 244-249
- Trade Literature
29. Construction & Adjust-
ment of Grain Binders
- Agricultural Machinery: Davidson
Pages 175-184
- Equipment for the Farm & Farmstead:
Ramsower Chapter XXIII
- Farm Machinery: Stone
Chapter VII
- Operation, Care & Repair of Farm
Machinery: John Deere Co.
Pages 131-148
- Farm Machinery & Equipment: Smith
Chapter XXIII
- Trade Literature
30. Binder & Knotter Head
Troubles
- Binder & Knotter Head Troubles:
U.S.C. Ext. Bul. No. 134
- Agricultural Machinery: Davidson
Pages 180-181
- Farm Machinery: Stone
Pages 257-259
- Operation, Care & Repair of Farm
Machinery: John Deere Co.
Chapter XV
- Farm Machinery & Equipment: Smith
Pages 270-274
- The Adjustment & Repairs of Self-
binders: N.D. Exp. Station Bul.
No. 99
- Common Binderhead and Knotter Head
Troubles: Ohio State Ag. Col.
Bul. No. 87

FARM MACHINERY

Topics	References
31. Combine Harvesters	Farm Machinery: Stone Chapter X Agricultural Machinery: Davidson Chapter VIII Operation, Care & Repair of Farm Machinery: John Deere Co Chapter XVI Farm Machinery & Equipment: Smith Chapter XXVII Trade Literature Bulletins The Combine Harvester in Missouri Mo. Ag. Exp. Sta. Bul. No. 286 Shall I Buy a Combine? U.S.D.A. Farmers' Bulletin No. 1565 Operation & Care of Combines U.S.D.A. Farmers Bul. No. 1608 The Combine in Ohio Ohio Ag. Ex. Sta. Bul. No. 491 Combines in Illinois Ill. Ag. Col. Ex. Sta. Circular No. 316 The Combine in Western Canada Dom. of C. Dept. of Ag. Pamphlet 83 New Series The Combine in the Great Plains U.S.D.A. Tech. Bul. No. 70 Combining for Profit J. I. Case Co.
32. Hay Balers	Agricultural Machinery: Davidson Pages 235-237 Harvesting Alfalfa with Windrow Pick- up Baler Iowa State Col. Bul. No. 322 Farm Machinery & Equipment: Smith Pages 249-251 Trade Literature

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Topics	References
33. Threshers & Hullers	Farm Machinery: Stone Chapter X Agricultural Machinery: Davidson Chapter XVII Farm Machinery & Equipment: Smith Chapter XLVI
34. Ensilage Cutters	Equipment for the Farm & Farmstead: Ramsower Pages 414-417 Agricultural Machinery: Davidson Pages 260-267 Trade Literature Tractor Field Book: Farm Implement News 1934 Page 65 Farm Machinery & Equipment: Smith Chapter XXXI
35. Huskers & Shredders	Agricultural Machinery: Davidson Pages 260-270 Farm Machinery & Equipment: Smith Pages 338-339 Huskers & Shredders on Eastern Corn Belt Farms U.S.D.A. Farmers Bul. 1489 Trade Literature
36. Power Sprayers	Agricultural Machinery: Davidson Chapter XXXI Trade Literature such as John Bean or Hardy sprayer catalogs
37. Power Dusters	Agricultural Machinery: Davidson Chapter XXXI Trade Literature
38. Manure Spreaders	Agricultural Machinery: Davidson Chapter XXIX Farm Machinery: Stone Chapter VIII Equipment for the Farm & Farmstead: Ramsower Chapter XXI

FARM MACHINERY

Topics	References
	Farm Machinery & Equipment: Smith Chapter XXXII
	Operation, Care & Repair of Farm Machinery: John Deere Co. Pages 201-207
	Trade Literature
39. Lime & Fertilizer Distributors	Agricultural Machinery: Davidson Pages 307-311
	Equipment for the Farm & Farmstead: Ransower Pages 352-353
	Farm Machinery & Equipment: Smith Chapter XXXIII
	Operation, Care & Repair of Farm Machinery: John Deere Co. Pages 208-209
40. Cotton Planter	Farm Machinery & Equipment: Smith Chapter XVIII
	Agricultural Machinery: Davidson Pages 171-172
	Trade Literature
41. Cotton Pickers	Agricultural Machinery: Davidson Chapter XXII
	Farm Machinery & Equipment: Smith Chapter XXV
	Trade Literature
42. Cornbinders & Pickers	Farm Machinery & Equipment: Smith Chapter XXIV
	Agricultural Machinery: Davidson Chapter XIX
	Trade Literature
43. Listers	Agricultural Machinery: Davidson Pages 107, 172
	Farm Machinery: Stone Pages 138-140
	Trade Literature

FARM MACHINERY

Topics

44. Disk Plows

References

Farm Machinery & Equipment: Smith
Chapter XAgricultural Machinery: Davidson
Pages 104-106

Trade Literature

FARM MACHINERY

BIBLIOGRAPHY*

1. Agricultural Machinery: Davidson
John Wiley & Sons \$3.50
2. Engineering on the Farm: Stewart
Rand McNally & Co. 2.25
3. Equipment for the Farm & Farmstead: Ramsower
Ginn & Co.
4. Farm Machinery & Equipment: Smith
McGraw-Hill Book Co. 3.25
5. Operation, Care & Repair of Farm Machinery
John Deere Co. Free
6. Farm Machinery: Stone
John Wiley & Sons
7. Tractor Field Book
Farm Implement News .75

Bulletins

1. Power & Machinery in Agriculture: U.S.D.A. Mis. Bul. 157
2. Farm, Field & Farmstead Layout: M.S.C. Ag. Eng. Dept. Series
7-760
3. Laying Out Fields for Tractor Flowing: U.S.D.A. F. Bul. 1045
4. Repair & Adjustments of Mowing Machines: M.S.C. Ag. Eng. Dept.
Series 1-3135
5. Binder & Knotterhead Troubles: M.S.C. Ext. Bul. No. 134
6. The Adjustment & Repair of Self Binders: N.D. Ex. Sta. Bul.
No. 99
7. Common Binder and Knotterhead Troubles: Ohio State Ag. Col.
Bul. No. 87
8. The Combine Harvester in Missouri: Mo. Ag. Ex. Sta. Bul. No. 286
9. Shall I buy a Combine: U.S.D.A. Farmers Bul. No. 1565
10. Operation & Care of Combines: U.S.D.A. Farmers Bul. No. 1608
11. The Combine in Ohio: Ohio Ag. Ex. Sta. Bul. No. 491
12. Combines in Illinois: Ill. Ag. Col. Ex. Sta. Cir. No. 316

FARM MACHINERY

BIBLIOGRAPHY*

13. The Combine in Western Canada: Dom. of Canada Dept. of Ag.
Pamphlet No. 83 New Series
14. The Combine in the Great Plains: U.S.D.A. Tec. Bul. No. 70
15. Harvesting Alfalfa with a Windrow Pickup Baler: Iowa State
Col. Bul. No. 322
16. Huskers & Shredders in Eastern Corn Belt Farms: U.S.D.A.
Farmers Bul. No. 1589

Special Trade Literature

1. Plow Manual J. I. Case Co
2. General Catalogs All leading companies
3. Superior Beet & Bean Drill Leaflet
American Seeding Machine Co.
4. Combining for Profit J. I. Case Co.
5. The Operation, Care & Repair John Deere Co.

* For particulars see general bibliography.

Page 76.

FARM BUILDINGS

Topics	References
1. Wood Identification	Wood Construction: U.S.D.C. Lumber & Its Uses: Kellogg Northern Wood Lot Trees: Berry Southern Wood Lot Trees: Berry Western Forest Trees: Berry Atlas of Common Woods of the U. S. Brown Timbers, Their Construction & Identification: Jones Identification of the Economic Woods of the United States: Record Wood Identification for 4-H Clubs: Club Bulletin No. 26 M.S.C.
2. Uses of Wood on the Farm	Wood Utilization: U.S.D.C. Lumber & Its Uses: Kellogg You Can Make it for Profit: Vol. III You Can Make It Series U.S.D.C. The Properties and Uses of Wood: Koehler
3. Handling Lumber on the Farm	Farmers Bulletin No. 744 U.S.D.A. Farmers in Northern States Grow Timber as Money Crop: Farmers Bulletin No. 1680 U.S.D.A. Measuring & Marketing Timber: Farmers Bull. No. 1210 U.S.D.A. Seasoning, Handling, & Care of Lumber: U.S.D.C.
4. Use of Concrete on the Farm	Concrete Practice: Hool & Pulver Concrete Construction for Rural Communities: Seaton Concrete Work: Hatt & Voss Concrete Workers Reference Book: Houghton Plans for Concrete Farm Buildings: Portland Cement Association

FARM BUILDINGS

Topics	References
	The Lehigh Farm Book: Lehigh Portland Cement Co.
	A Practical Course in Concrete: Portland Cement Association
	Concrete Work Made Easy: Medusa Portland Cement Co.
	Concrete Masonry Construction: Portland Cement Association
5. Uses of Tile, Brick, etc. in Farm Construction	Engineering on the Farm: Stewart Pages 308-309
	Farm Buildings: Foster & Carter Pages 10-15, Chapter V
	A Manual of Home Building: Home Owners Service Institution
	Hollow Building Tile Manual: Structural Clay Tile Association Inc.
	Building Code: State of Wisconsin
	Brick, How to Build and Estimate: The Common Brick Mfr's Ass'n.
	Portland Cement Stucco: Portland Cement Association
6. Study of Roofing Materials	Farm Buildings: Foster & Carter Pages 35, 38, 335
	Engineering on the Farm: Stewart Pages 164-166, 311, 316
	How to Lay Steel Roofing: Sheet Steel Trade Ext. Com.
	What Determines the Length of Life of Prepared Roll Roofing: Bul 304 Iowa State College
	Red Cedar Shingles: U.S.D.C.
	Roofing Felt: Johns-Manville No.15
7. Logs and Poles in Farm Structures	The Read Log House: Aldrick
	Shelters, Shacks, & Shanties: Board

FARM BUILDINGS

Topics	References
	Use of Logs & Poles in Farm Construction: Farmers Bulletin 1360 U.S.D.A.
8. Builders Terms and Symbols	Farm Buildings: Foster & Charter Page 13 Practical Carpentry: Radford Parts I, II Builders Terms Defined: Jefferson Ag. Eng. Dept. M. S. C. Care & Repair of the House: Phelen U.S.D.C., B. H. 15 Engineering Drawing: French Problems in Architectural Drawing: Elwood Pages 18-19
9. Blue Print Reading & Sketching	Blue Print Reading: Sell-O-Gram How to Read & Use Blue Prints: Mo. College of Ag. Bul. How to Read Plans for Building A Home: American Face Brick Association
10. Bills of Materials	Farm Buildings: Foster & Carter Pages 66-67 Estimating Building Costs: Dingman Pages 219-225 Construction & Repair Work on the Farm: Struck Chapter V
11. Preliminary Drafting	Farm Buildings: Foster & Carter Chapter I A set of Blue Prints
12. Specifications	Ready Written Specifications: Holland & Parker A good set of specifications
13. Cost Estimates	Estimating Building Costs: Dingman Farm Buildings: Foster & Carter

FARM BUILDINGS

Topics	References
14. Laying Out Foundations	Light Frame House Construction: U.S.D.C. Trade & Industrial Series No. 41 Pages 3-5 Plans for Concrete Farm Buildings: Portland Cement Association Page 10 The Lehigh Farm Book: Lehigh Portland Cement Co. Page 16
15. Design of Footings & Foundations	Light Frame House Construction: U.S.D.C. Trades & Industrial Series No. 145 Chapter I Architects & Builders Handbook: Kedder Index
16. Framing Details	Light Frame House Construction: U.S.D.C. Trade & Industrial Series No. 41 Farm Buildings: Foster & Carter Page 85, Chapters VIII, XV Engineering on the Farm: Stewart Chapter XV Farm Structures: Jones
17. Cutting Rafters	Light Frame House Construction: U.S.D.C. Trades & Industrial Series No. 41 B 145 Farm Buildings: Foster & Carter Pages 90-95 Practical Carpentry: Radford Pages 71-195 Standard Steel Squares: Sargent Pages 17-25
18. Wind Bracing	Modern Frame Structures: Johnson, Bryan, & Turnesure Building Construction: Huntington
19. Miscellaneous Details	Light Frame House Construction: U.S.D.C. Trades & Industrial Series No. 41 Practical Carpentry: Radford

FARM BUILDINGS

Topics	References
	The Use of Lumber on the Farm: National Lumber Mfr's. Ass'n
20. Construction of Equipment	Farm Buildings: Foster & Carter Farmers Shop Book: Reehl Farm Mechanics: Crawshaw & Leimann A Hundred Handy Helps: Southern Pine Ass'n
21. Wood Preservatives & Exterior Finishes	Preservation of Structural Timbers: Weiss Paints & Painting: Sabin Preservative Treatment of Farm Timbers: Farmers Bulletin 744 U.S.D.A. White Washes & Cold Water Paints: Bul. 304 c National Lime Association Painting on the Farm: Farmers Bulletin 1452 U.S.D.A. Treated Lumber: U.S.D.C. The Handbook on Painting: National Lead Co.
22. Interior Finishes	White Washes & Cold Water Paints: Bul. 304 C National Lime Association Painting on the Farm: Farmers Bulletin 1452 U.S.D.A. The Handbook on Painting: National Lead Co. Why Paint Peels: G. B. Heckel American Paint & Varnish Co. Dura-Seal: International Chemical Co. Floor Engineering: Continental Car-No.-Var Corp. 101 Practical Suggestions for Home Improvement: Johns-Manville

FARM BUILDINGS

Topics

References

23. Floor Finishes

The House We Live In: National
Lead Co.

White Lead & Oil Plastic Finishes:
National Lead Co.

Wood Floors: National Lumber Mfg.
Assn.

Linoleum Floors: Armstrong Cork Co.

Floor Research: Continental
Chemical Corp.

Floor Engineering: Continental
Chemical Corp.

Laying, Finishing, & Caring for Oak
Floors: Oak Flooring Mfg. Ass'n.

Three Heavy Duty Finishes for Maple,
Beech, & Birch Flooring:
Maple Flooring Mfg. Ass'n.

The Handbook on Painting:
National Lead Co.

Dura-Seal: International Chemical Co.

24. Wall Finishes

The House We Live In: Wall Lead Co.

Interiors That Speak of Charm:
Celotex Co.

Paint for Priming Plaster Surfaces:
Publication No. 137 U.S.D.C.

25. Purpose of Insulation

Farm Buildings: Foster & Carter
Pages 34, 178

Engineering on the Farm: Stewart
Page 160

Kidders Architects & Builders Guides
Pages 1683, 1690, 1564-1568
1609, 1610

Heating & Ventilating: Reatschell &
Brabee

26. Study of Heat
Transmission

Kidder's Architects & Builders Hand-
book

Heating & Ventilating Engineers Guides:
American Society of Heating &
Ventilating Engineers

FARM BUILDINGS

Topics	References
27. Study of Insulating Materials	Kidder's Architects & Builder's Handbook Heating & Ventilating Engineer's Guide: Am. Society of Heating & Ventilating Engineers
28. Insulation Used as Plaster Finish, Sheathing or Interior	House Insulation: U.S.D.C. Wood Utilization 101 Practical Suggestions on Home Improvement: John-Manville Celotex Products for Interior Finishes: Celotex Co. The Redbook of Building Materials: U. S. Gypsum Co. Celotex Brand Insulating Gane Board: Celotex Co. Maftex Manual: National Gypsum Co.
29. Concrete: Analysis of Materials	The Lehigh Farm Book: Lehigh Portland Cement Co. Design & Control of Concrets Mixtures: Portland Cement Co. Plans for Concrete Farm Buildings: Portland Cement Co. Engineering on the Farm: Stewart Chapter VIII Farm Buildings: Foster & Carter Chapter IV
30. Building Forms for Concrete	Engineering on the Farm: Stewart Pages 145-147 The Lehigh Farm Book: Lehigh Portland Cement Co. Plans for Concrete Farm Buildings: Portland Cement Co. Farm Buildings: Foster & Carter Page 45
31. Proportioning & Mixing Concrete for Strength	Design & Control of Concrete Mixtures: Portland Cement Co.

FARM BUILDINGS

Topics	References
	Concrete Practice: Hool & Pulver
	Plans for Concrete Farm Buildings: Portland Cement Association
	Engineering on the Farm: Stewart Chapter XIV
	Farm Buildings: Foster & Carter Chapter IV
32. Reinforced Concrete	The Lehigh Farm Book: Lehigh Portland Cement Co.
	Farm Buildings: Foster & Carter Page 118
	Engineering on the Farm: Stewart Page 151
	Concrete, Plain & Reinforced: Taylor & Thompson Chapter XXI
	Building Construction: Huntington Chapter VIII
33. Waterproofing Concrete	Plans for Concrete Farm Buildings: Portland Cement Association
	Design & Control of Concrete Mix- tures: Portland Cement Co.
	Alpha Cement, How to Use It: Alpha Portland Cement Co.
	Concrete, Its Manufacture & Uses: Koehring Chapter XII
	Universal Atlas Handbook of Concrete Construction: Universal Atlas Cement Co.
	Engineering on the Farm: Stewart Page 150
34. Asphalt Concrete	Standard Asphalt Products: Standard Oil Co. (Indiana)
	Asphalt Concrete For Floor Construc- tion: Jefferson, M. S. C. 1934 Quarterly Bulletin, Vol. 17, No. 1
	The Story of Petroleum: Standard Oil Co. (Indiana)

FARM BUILDINGS

Topics	References
	Cut Back Asphalt: Standard Oil Co. (Indiana)
	Genasco Trinidad Asphalt Mastic: The Barber Asphalt Co.
	Bitumels for Maintenance American Bitumels Co.
	Drives & Walks on Country Estates: American Bitumels Co.
	Flintkote Asphalt Emulsions: The Flintkote Co.
35. Estimating Costs & Materials for Concrete	The Lehigh Farm Book: Lehigh Portland Cement Co. Page 9
	Design & Control of Concrete Mixtures: Portland Cement Co. Pages 11-12
	Plans for Concrete Farm Buildings: Portland Cement Co. Pages 9-10
	Engineering on the Farm: Stewart Pages 138-140
	Farm Buildings: Foster & Carter Page 44
	Kidder's Architects Handbook & Builders Guide Pages 247-250
36. Importance of Ventilation	Ventilation of Farm Barns: U.S.D.A. Technical Bul. No. 187
	Principles of Dairy Barn Ventilation: U.S.D.A. Farmers Bul. No. 1393
	Ventilation of Stables: U.S.D.A. Farmers Bul. No. 296
	Ventilation of Farm Buildings: Dept. of Ag. Dominion of Canada Bulletin No. 78
	Farm Building Ventilation: South Dakota State College of Ag. Cir. No. 31
	Farm Buildings: Foster & Carter Chapter XII

FARM BUILDINGS

Topics	References
37. Ventilation Requirements	Why Ventilate Farm Buildings: Iowa State College of Agriculture Extension Bul. No. 106 New York Agricultural Experiment Station Bul. No. 409 Farm Buildings: Foster & Carter Pages 269-279
38. Gravity Systems of Ventilation	Elements of Farm Practice: Wilson Pages 160, 300, 302 Ventilation: King Pages 46, 75 Farm Buildings: Foster & Carter Pages 267, Chapter XII
39. Mechanical Ventilation	Farm Buildings: Foster & Carter Chapter XII Ventilation: King Page 46 Engineering on the Farm: Stewart Pages 416-417 Heating & Ventilating: Reitschell & Brabee Pages 133-153
40. Heat Lost By Ventilation	Ventilation: King Page 64 Heating & Ventilating: Reitschell & Brabee Section II Architects & Builders Handbook: Kidder Pages 1254-1269
41. Designing a Ventilating System for (a particular building)	References of preceeding problems

FARM BUILDINGS

BIBLIOGRAPHY*

Books

Wood Construction	U.S.D.C.
Lumber & Its Uses	Kellogg
Northern Wood Lot Trees	Berry
Southern Wood Lot Trees	Berry
Western Forest Trees	Berry
Atlas of Common Woods of the U. S.	Brown
Timbers, Their Construction & Identification	Jones
Identification of the Economic Woods of the U. S.	Record
The Properties of Wood	Koehler
Concrete Practice	Hool & Pulver
Concrete Construction for Rural Communities	Seaton
Concrete Work Vols. I, II	Hatt & Jones
Concrete Workers Reference Book	Houghton
Engineering on the Farm	Stewart
Farm Buildings	Foster & Carter
The Real Log House	Aldrich
Shelters, Shacks & Shanties	Beard
Engineering Drawing	Elwood
Estimating Building Costs	Dingman
Construction & Repair Work on the Farm	Struck
Ready Written Specifications	Holland & Parker
Architect's & Builder's Handbook	Kidder
Farm Structures	Jones
Practical Carpentry	Radford

* For particulars see general bibliography. Page 50.

FARM BUILDINGS

BIBLIOGRAPHY

Modern Frame Structures	Johnson, Bryan & Turnesure
Building Construction	Huntington
Farmer's Shop Book	Roehl
Farm Mechanics	Crawshaw & Lehmann
Preservation of Structural Timbers	Weiss
Paints & Painting	Sabin
Heating & Ventilating Engineers Guide	American Society of Heating & Ventilating Engineers
Concrete, Plain & Reinforced	Taylor & Thompson
Concrete, Its Manufacture & Use	Koehring
Elements of Farm Practice	Wilson
Ventilation	King
Heating & Ventilating	Reitschell & Barbee

Trade Literature

Floor Engineering	Continental Chemical Corp.
Laying, Finishing & Caring for Oak Floors	Oak Floor Mfgs. Ass'n.
Three Heavy Duty Finishes for Maple, Beech & Birch Flooring	Maple Flooring Mfgs. Ass'n.
Interiors That Speak of Charm	Celotex Co.
Painting & Decorating Celotex	Celotex Co.
Celotex Products for Interior Finishes	Celotex Co.
The Red Book of Building Materials	U. S. Gypsum Co.
Celotex Brand Insulating Gage Board	Celotex Co.
Maftex Manual	National Gypsum Co.
Design & Control of Concrete Mixtures	Portland Cement Co.
Alpha Cement & How to Use It	Alpha Portland Cement Co.
Universal Atlas Handbook of Concrete Construction	Universal Atlas Cement Co.

FARM BUILDINGS

BIBLIOGRAPHY

- | | |
|---------------------------------------|-------------------------------------|
| Standard Asphalt Products | Standard Oil Co.
(Indiana) |
| The Story of Petroleum | Standard Oil Co.
(Indiana) |
| Genasco Trinidad Asphalt Mastic | The Barber Asphalt Co. |
| Bitumels for Maintenance | American Bitumels Co. |
| Drives & Walks on Country Estates | American Bitumels Co. |
| Flintkote Asphalt Emulsions | The Flintkote Co. |
| Plans for Concrete Farm Buildings | Portland Cement Ass'n. |
| The Lehigh Farm Book | Lehigh Portland Cement
Ass'n. |
| A Practical Course in Concrete | Portland Cement Ass'n. |
| Concrete Work Made Easy | Medusa Portland Cement
Ass'n. |
| Concrete Masonry Construction | Portland Cement Ass'n. |
| A Manual of Home Building | Home Owners Service
Institute |
| Hollow Building Tile Manual | Structural Clay Tile
Ass'n. Inc. |
| Brick, How to Build & Estimate | Common Brick Mfgs. Ass'n. |
| Portland Cement Stucco | Portland Cement Ass'n. |
| How to Lay Steel Roofing | Sheet Steel Trade Int.
Com. |
| Blue Print Reading | Sell-O-Gram |
| How to Read Plans for Building A Home | American Face Brick Ass'n. |
| Standard Steel Squares | Sargent & Co. |
| The Use of Lumber on the Farm | National Lumber Mfgs.
Ass'n. |
| A Hundred Handy Helps | Southern Pine Association |
| Whitewashes & Cold Water Paints | National Lime Ass'n. |
| The Handbook on Painting | National Lead Co. |

FARM BUILDINGS

BIBLIOGRAPHY

Why Paint Peels	American Paint & Varnish Co.
Dura-Seal	International Chemical Co.
Floor Engineering	Continental Car-Ka-Var Corp.
101 Practical Suggestions for Home Improvement	Johns-Manville
The House We Live In	National Lead Co.
White Lead & Oil Plastic Finishes	National Lead Co.
Wood Floors	National Lumber Mfgs. Ass'n.
Linoleum Floors	Armstrong Cork Co.
Floor Research	Continental Chemical Corp.

Bulletins

Wood Identification for 4-H Clubs	M.S.C. Club Bul. No. 26
You Can Make It for Profit Vol. III	U.S.D.C.
Farmers Bul. No. 744	U.S.D.A.
Farmers Bul. No. 1680	U.S.D.A.
Farmers Bul. No. 1210	U.S.D.A.
Seasoning, Handling & Care of Lumber	U.S.D.A. U 58 S
Building Code	State of Wisconsin
What Determines Length of Life of Prepared Roll Roofings	Iowa State Col. Cul. No. 304
Red Cedar Shingles	U.S.D.C.
Use of Logs & Poles in Farm Construction	U.S.D.A. Farmers Bul. 1660
Builders Terms Defined	Ag. Eng. Dept. M.S.C.
Care & Repair of the House	U.S.D.C. B. H. 15
How to Read & Use Blue Prints	Missouri Col. of Ag. Bul.

FARM BUILDINGS

BIBLIOGRAPHY

Light Frame House Construction	U.S.D.C. Trades & Industries Series No. 41
Preservative Treatment of Farm Timbers	U.S.D.A. Farmers Bul. No. 744
Painting on the Farm	U.S.D.A. Farmers Bul. No. 1452
Treated Lumber	U.S.D.C.
Paint for Paining Plaster Surfaces	U.S.D.C. No. 137
House Insulation	U.S.D.C. Wood Utilization
Asphalt Concrete for Floor Construction	M.S.C. Cuor. Bul. Vol. 17 No. 1
Ventilation of Farm Barns	U.S.D.A. Technical Bul. 187
Principles of Dairy Barn Ventilation	U.S.D.A. Farmers Bul. No. 1393
Ventilation of Stables	U.S.D.A. Farmers Bul. No. 296
Ventilation of Farm Buildings	Dept. of Ag. Dom. Canada Bul. No. 78
Farm Building Ventilation	S. Dakota State College of Ag. Cir. No. 31
Why Ventilate Farm Buildings	Iowa State College of Ag. Ext. Bul. 106
New York Agricultural Experiment St. Bul. No. 409	

HOME UTILITIES

Topics	References
1. Basic Principles of Shallow Farm Structures: Well Type Pump	Jones Pages 162-175 Agricultural Mechanics: Smith Pages 240-246 Trade Catalogs: Myers Deming Pumps Hudson Hoosier Gould's
2. Principles of Operation of Deep Well Pumps	Farm Structures: Jones Agricultural Mechanics: Smith Trade Catalogs
3. Operating Characteristics of a Centrifugal Pump	Porous Hose Irrigation: M.S.C. Extension Bul. No. 133 Pages 17-20 Trade Catalogs
4. Centrifugal Pump Con- struction	Trade Literature: Deming Pumps Pages 40-45 Gould's Pumps Page 36 Deming-Mueller Centrifugal Pumps Pages 2-5, 20-21, 28-33 Fairbanks Morse Centrifugal Pumps Pages 2-9
5. Hydraulic Rams	Farm Mechanics: Crawshaw & Lehmann Page 351 Agricultural Mechanics: Smith Pages 234-245 Farm Structures: Jones Pages 175 Trade Literature
6. Electrical Terms & Applications	Electric Motor Work: Willoughby Pages 20-25 C.R.E.A. Bulletin Vol. V. No. 1 Elementary Electricity: Slack Chapter 1

HOME UTILITIES

Topics	References
	Dairy Engineering: Bowen Chapters XVI, XVIII
	The Farin Book: Detroit Edison Pages 38-39
7. Construction & Types of Electric Motors	Electric Motor Work: Willoughby Pages 68-83
	Dairy Engineering: Bowen Pages 475-491
	Elementary Electricity: Slack Pages 208-214
	Master Motors Data Book The Master Electric Co.
8. Problems in Use of Electrical Terms	Elementary Electricity: Slack
	Alternating Current Machines: Sheldon, Mason & Hausmann
9. Storage Batteries	Elementary Electricity: Slack Pages 73-76
	The Storage Battery Simplified: Philips
	Automobile & Gas Engine Encyclopedia: Dykes
	Lengthening Battery Life: Universal Battery Co.
	Edison's Steel Alkaline Storage Batteries: Edison Storage Battery Co.
	Bulletin 75 F.: Universal Battery Co.
10. Heating the Home	Farm Mechanics: Crawshaw & Lehmann Pages 345-346
	Farm Structures: Jones Pages 153-155
	Heating & Ventilating: Rietschel & Brabbee Section II
11. Sewage Disposal on the Farm	Michigan Septic Tank & Tile Sewage Disposal M.S.C. Ext. Bul. No. 118
	A Septic Closet System: Robey M.S.C. Ag. Eng. Dept. Series Publication No. 851

HOME UTILITIES

Topics	References
	Farm Structures: Jones Pages 176-180
	Equipment for the Farm & Farmstead: Ramsower Pages 230-244
12. Storage of Water in Cisterns	Farm Structures: Jones Page 172
	Farmstead Water Supply: U.S.D.A. Farmers Bulletin No. 1448
13. Storage of Water with Farmstead Water Supply: a Gravity Tank	U.S.D.A. Farmers Bulletin No. 1448
	Farm Structures: Jones Page 172
	Farm Mechanics: Crawshaw & Lehmann Chapter XXVIII
	Agricultural Mechanics: Smith Chapter XVI
14. Hydropneumatic Pressure Tanks	Deming Pumps Pages 189, 192, 197
	Farmstead Water Supply: U.S.D.A. Farmers Bulletin No. 1448 Pages 32-33
	Agricultural Mechanics: Smith Chapter XVI
	Trade Literature
15. The Range Boiler & Hot Water Supply	M.S.C. Ag. Eng. Plan No. 856-1
	Farm Structures: Jones Pages 172-174
	Equipment for the Farm & Farmstead: Ramsower Page 223
	Principles of Farm Mechanics: Sharp & Sharp Pages 102-105
	Plumbing: Pabbitt Pages 58-64, 407-409

HOME UTILITIES

BIBLIOGRAPHY*

Books

Farm Structures	Jones
Agricultural Mechanics	R. H. Smith
Farm Mechanics	Crawshaw & Lehmann
Electric Motor Work	Willoughby
Elementary Electricity	Slack
Dairy Engineering	Bowen
Alternating Current Machines	Sheldon, Mason & Hausmann
The Storage Battery Simplified	Philips
Automobile & Gas Engine Encyclopedia	Dykes
Heating & Ventilating	Rietschel & Erabbee
Equipment for the Farm	Ramsower
Principles of Farm Mechanics	Sharp & Sharp

Trade Literature

General Catalog	Deming Pump Co.
General Catalog	Hoosier Pump Co.
General Catalog	Myers Pump Co.
General Catalog	Hudson Pump Co.
General Catalog	Could's Pumps
General Catalog	Deming Mueller Centrifugal Pumps
General Catalog	Fairbanks Morse Centrifugal Pumps
C.R.E.A. Bulletin Vol. V No. 1	
The Farm Book	Detroit Edison
Master Motors	The Master Electric Co.
Lengthening Battery Life	Universal Battery Co.
Edison's Steel Alkaline	
Storage Batteries	Edison Storage Battery Co.
Bulletin No. 75F	Universal Battery Co.

Bulletins

Porous Hose Irrigation	M.S.C Extension Bul. No. 133
Michigan Septic Tank	M.S.C Extension Bul. No. 118
A Septic Closet System	M.S.C. Ag. Eng. Dept. Series Pub. No. 881
Farmstead Water Supply	U.S.D.A. Farmers Bulletin No. 1448
M.S.C. Agricultural Engineering Plan No. 856-1	

* For particulars see general bibliography.

POWER MACHINERY

Power Transmission

Topics	References
1. Belts	Engineering on the Farm: Stewart Pages 467-476 Farm Gas Engines & Tractors: Jones Pages 234-237 Farm Mechanics: Crawshaw & Lehmann Chapters XLII, XLIII Mechanical Training: Boss, Dent & White Chapter VI
2. Pulleys	Engineering on the Farm: Stewart Page 466 Farm Gas Engines & Tractors: Jones Pages 239-241 Mechanical Training: Boss, Dent & White Chapter VI
3. Gearing	Engineering on the Farm: Stewart Pages 471-473 Farm Gas Engines & Tractors: Jones Pages 242-244 Mechanical Training: Boss, Dent & White Pages 121-124 The Gasoline Engine on the Farm: Putnam Chapter XX
4. Bearings	Mechanical Training: Boss, Dent & White Chapter XI Engineering on the Farm: Stewart Pages 463-465, 474 Farm Mechanics: Crawshaw & Lehmann Pages 321-323 Farm Gas Engines & Tractors: Jones Pages 231, 246-248 Trade Literature
5. Ropes	Farm Motors: Potter Pages 284-286 Farm Mechanics: Crawshaw & Lehmann Chapter XXXVI

POWER MACHINERY

Topics

References

Engineering on the Farm: Stewart
Pages 57-61, 28-34

The Gasoline Engine on the Farm: Putnam
Page 345

Gas Engines

6. Gas Engine Cycle Study Farm Gas Engines & Tractors: Jones
Chapter IV

Farm Motors: Potter
Chapter VI

Gas Engines Principles: Whitman
Pages 8-11

Farm Gas Engines: Hirshfeld & Ulbricht
Chapter V

Gas, Gasoline & Oil Engines: Rathbun
Page 12, Chapter II

The Story of the Engine: Decker
Chapter VIII

7. Stationary Engine
Study

Farm Gas Engines & Tractors: Jones
Chapter III

Farm Motors: Potter
Page 6

Farm Gas Engines: Hirshfeld & Ulbricht
Chapter III

8. Engine Dismantling &
Assembly

Trade Literature on Engine Studied

Auto & Gas Engine Encyclopedia: Dyke

Farm Motors: Potter

Farm Gas Engines & Tractors: Jones

9. Elementary Ignition

Farm Gas Engines & Tractors: Jones
Chapters IX, XII, XIII, XIV, XV

Farm Motors: Potter
Pages 91-94

Farm Gas Engines: Hirshfeld & Ulbricht
Pages 80-95

10. Low Tension Magnets

Farm Gas Engines & Tractors: Jones
Pages 131-135, 156-168

POWER MACHINERY

Topics	References
	Farm Gas Engines: Hirshfeld & Ulbright Pages 90-95
	Gas Engine Principles: Whitman Chapters VII, VIII
11. High Tension Magnetos	Farm Gas Engines & Tractors: Jones Pages 169-177
	Farm Motors: Potter Pages 100-103
	Farm Gas Engines: Hirshfeld & Ulbright Pages 95-105
	Gas Engine Principles: Whitman Chapter IX
12. Valve & Spark Timing	Farm Gas Engines & Tractors: Jones Chapter VI
	Farm Gas Engines: Hirshfeld & Ulbright Pages 104-108
	Farm Motors: Potter Pages 101, 67-70
13. Engine Operation & Adjustment	Trade Literature on Engine Studied
	Auto & Gas Engine Encyclopedia: Dyke
14. Horse Power Determination	Farm Gas Engines & Tractors: Jones Chapter XVIII
	Farm Motors: Potter Page 10
	Farm Gas Engines: Hirshfeld & Ulbright Chapter VII
15. Fuel Economy Tests	Farm Gas Engines & Tractors: Jones Pages 215-220
16. Engine Troubles	Farm Gas Engines & Tractors: Jones Chapter XIX
	Farm Motors: Potter Pages 117-119
	The Gasoline Engine on the Farm: Putnam Chapter VIII
	Farm Gas Engines: Brate Chapter XVII

POWER MACHINERY

Topics	References
17. Magneto Timing on Stationary Engines	Farm Gas Engines & Tractors: Jones Pages 167-182
(a) Low Tension Magnetos	Farm Gas Engines: Hirshfeld & Ulbright Pages 104-108
	Farm Motors: Potter Pages 92-100
	Gas, Gasoline & Oil Engines: Rathbun Pages 221-227
(b) High Tension Magnetos	Farm Gas Engines & Tractors: Jones Pages 169-174
	Farm Gas Engines: Hirshfeld & Ulbright Pages 108-111
	Farm Motors: Potter Pages 100-103
	Gas, Gasoline & Oil Engines: Rathbun Pages 227-240
	Farm Gas Engines: Brate Pages 185-187
18. Fuels: Value, Kinds & Adaptability	Farm Gas Engines & Tractors: Jones Chapter VII
	Farm Motors: Potter Pages 71-76
	Farm Gas Engines: Hirshfeld & Ulbright Chapter II
	Farm Gas Engines: Brate Chapter IV
	Gas, Gasoline & Oil Engines: Rathbun Chapter III
19. Lubrication	Farm Gas Engines & Tractors: Jones Chapter XVII
	Farm Motors: Potter Pages 104-106
	The Story of Petroleum: Standard Oil Co.
	Engineering Experiment Station Report 1925 Gov't. Printing Office, Washington, D. C.

POWER MACHINERY

Topics	References
20. Magneto Repair	Trade Literature on Magneto Repaired Farm Gas Engines & Tractors: Jones Pages 167-174 Farm Gas Engines: Hirshfeld & Ulbright Pages 104-111 Farm Motors: Potter Pages 92-103 Gas, Gasoline & Oil Engines: Rathbun Farm Gas Engines: Brate Pages 185-187
21. Gas Engine Repair	Trade Literature on Engine Repaired Farm Gas Engines & Tractors: Jones Auto & Gas Engine Encyclopedia: Dyke
Tractors	
22. Tractor Study	Trade Literature on Tractors Studied Auto & Gas Engine Encyclopedia: Dyke Tractor Field Book: Farm Implement News
23. Tractor Operation & Adjustment	Trade Literature
24. Tractor Repair Check Up	Trade Literature and Parts Catalog Auto & Gas Engine Encyclopedia: Dykes
25. Magneto Timing on Tractors	Farm Gas Engines & Tractors: Jones Pages 172-174 Farm Motors: Potter Pages 100-102 Farm Gas Engines: Brate Gas, Gasoline & Oil Engines: Rathbun Pages 253-258
26. Tractor Repair	Trade Literature Parts Catalogs Auto & Gas Engine Encyclopedia: Dykes

POWER MACHINERY

Topics	References
27. Nebraska Tractor Tests Data	Tractor Field Book: Farm Implement News
28. Steel Lugged Wheels VS Air Tired Wheels	Agricultural Engineering Vol. 15, No. 2 February 1934

POWER MACHINERY

BIBLIOGRAPHY*

- | | | |
|--|--|--------|
| 1. Engineering on the Farm | John T. Stewart
Rand McNally & Co. | \$2.25 |
| 2. Farm Gas Engines & Tractors | F. C. Jones
McGraw-Hill Book Co. | 3.75 |
| 3. Farm Mechanics | Crawshaw & Lehmann
Manual Arts Press | 2.00 |
| 4. Mechanical Training | Boss, Dent & White
Bruce Publishing Co. | 3.00 |
| 5. The Gasoline Engine on the Farm | Putnam
M. W. Henley & Co. | 2.25 |
| 6. Farm Motors | A. A. Potter
McGraw-Hill Book Co. | 2.00 |
| 7. Gas Engine Principles | H. B. Whitman
D. Appleton & Co. | 1.80 |
| 8. Farm Gas Engines | Hirshfeld & Elbright
John Wiley & Sons | 2.00 |
| 9. Auto & Gas Engine Encyclopedia | Dyke
Dyke Publishing Co. | 6.00 |
| 10. Gas, Gasoline & Oil Engines | Rathbun
Stanton & Van Vliet Co. | 2.00 |
| 11. Farm Gas Engines | Brate
The Gas Engine Publishing Co. | 1.75 |
| 12. The Story of Petroleum | Standard Oil Co. | Free |
| 13. Engineering Experiment Station Report 1925 | Annapolis, Md.
Government Printing Office
Washington, D. C. | |
| 14. Tractor Field Book | Farm Implement News | .75 |
| 15. Agricultural Engineering Volume 15 No. 2 | American Society of Agricultural Engineers
St. Joseph, Michigan | |

* For particulars see general bibliography.

LAND DEVELOPMENT

Explosives

Topics	References
1. Kinds of Explosives	Engineering on the Farm: Stewart Pages 173-178 Blasters' Handbook: La Motte Pages 1-25 Explosives in Agriculture Page 30
2. Handling & Storing Explosives	Engineering on the Farm: Stewart Page 178 Blasters' Handbook: La Motte Pages 17-23, 26-32, 222 Explosives in Agriculture Page 29
3. The Charge	Engineering on the Farm: Stewart Pages 178-188 Blasters' Handbook: La Motte Pages 34-105
4. Blasting Stumps & Trees	Engineering on the Farm: Stewart Pages 183-188 Blasters' Handbook: La Motte Pages 127-130 1932 Explosives in Agriculture Pages 23-43
5. Boulder Blasting	Engineering on the Farm: Stewart Pages 190-191 Blasters' Handbook: La Motte Pages 130-132 Explosives in Agriculture Pages 62-67
6. Ditch Blasting	Engineering on the Farm: Stewart Page 192 Blaster's Handbook: La Motte Pages 143-152 Explosives in Agriculture Pages 46-60
7. Tree Planting & Rejuvenation	Engineering on the Farm: Stewart Page 191

LAND DEVELOPMENT

Topics

References

Blasters' Handbook: La Motte
Pages 133-135

Drainage

- | | |
|---|---|
| 1. A Study of Fundamental Drainage Principles | <p>Textbook of Fundamental Drainage: Jeffery Pages 21-57</p> <p>Land Drainage & Flood Control: Etcheverry Chapters II, III</p> <p>Land Drainage & Reclamation: Ayers & Scoates Chapter XI</p> <p>Tile Drainage: King</p> |
| 2. Simple Leveling & Note Keeping | <p>Land Drainage & Reclamation: Ayers & Scoates Chapter II, V Pages 63-77</p> <p>Farm Structures: Jones Chapter II</p> |
| 3. Designing a Main Line Tile Drain | <p>Land Drainage & Reclamation: Ayers & Scoates Chapter XII</p> <p>Land Drainage & Flood Control: Etcheverry Chapters IV, VIII</p> |
| 4. Planning a Field Layout | <p>Land Drainage & Reclamation: Ayers & Scoates Chapters XIII, XIV</p> <p>Tile Drainage: King Chapters XI, XIV</p> |
| 5. Planning Your Own Drainage Problem | <p>Same as above</p> <p>U.S.D.A. Farmer's Bulletin No. 524</p> <p>M.S.C. Special Bulletin No. 75</p> <p>Laws Relating to Construction of Drains Bul. 32 State of Michigan Commissioner of Agriculture</p> <p>University of Minnesota: Bul. 217</p> <p>University of Minnesota: Bul. 216</p> |

LAND DEVELOPMENT

Irrigation

Topics	References
1. A Study of Fundamental Principles of Irrigation	Land Drainage: Jeffery Pages 21-25 Use of Water for Irrigation: Fortier Pages 21-27 Principles of Irrigation Engineering: Newell & Murphy Ch. I, 11 Irrigation Principles & Practices: Israelson Ch. I, XVII Irrigation by Overhead Sprinkling: Pages 2-16, 34-37 Porous Hose Irrigation: Ext. Bul. 133 Pages 2-13 M.S.C.
2. Determination of Pipe Line	Porous Hose Irrigation: Ext. Bul. 133 Pages 14-21 M.S.C. Bulletin No. 30: Deming Pump Co. Union Engineering Hand Book
3. Determination of Pump & Power Requirements	Porous Hose Irrigation: Ext. Bul. 133 M.S.C. Bulletin No. 30: Deming Pump Co. Pages 146-154 Union Engineering Hand Book Pages 126-152
4. Planning a Five Acre Irrigation Layout for Porous Hose	Porous Hose Irrigation: Ext. Bul. 133 M.S.C. Characteristic Pump Curves: Union Steam Pump Co. Bulletin No. 30: Deming Pump Co.
5. Planning a One Acre Overhead Irrigation System	Irrigation Principles & Practices: Israelson Page 115 Spray Irrigation: Bul. No. 495, U.S.D.A. Rain for the Asking: Skinner Irrigation Co. Irrigation by Overhead Sprinkling Ext. Cir. No. 4 California

LAND DEVELOPMENT

Topics	References
6. Planning Your Own Irrigation System	Porous Hose Irrigation: Ext. Bul. 135 M.S.C. Bulletin No. 30: Doming Pump Co. Union Engineering Hand Book Irrigation by Overhead Sprinkling Ext. Cir. No. 4 California Irrigation Principles & Practices Israelson Principles of Irrigation Engineering: Newell & Murphy Use of Water for Irrigation: Fortier Land Drainage: Jeffery

LAND DEVELOPMENT

Farmstead Layouts

Topics	References
1. Principles of Farmstead Layout	Farm Management: Warren Chapter XIV Engineering on the Farm: Stewart Chapter XVI Elements of Farm Practice: Wilson Chapter XXII Farm Buildings: Foster & Carter Chapter II Ag. Eng. Dept. Series Publication 7-760
2. Design or Rearrangement of Farmstead Layout	Farm Management: Warren Engineering on the Farm: Stewart Elements of Farm Practice: Wilson Ag. Eng. Dept. Series Publication 7-760
3. Walks & Drives	Surroundings of the Farm House Vol. IV No. 6 Cornell Reading Course Planning and Planting the Indiana Farmstead: Extension Bulletin No. 178 Purdue University Beautifying Farm House Grounds Reg. Bul. No. 231 I.S.C. Beautifying the Farmstead U.S.D.A. Farmers Bulletin No. 1087
4. Fences & Fencing	Farm Management: Warren Chapter III Engineering on the Farm: Stewart Chapter III Elements of Farm Practice: Wilson Pages 214, 225, 265-271 Profitable Farming Methods: Key- stone Steel & Wire Co. Farming for Greater Profits: Red Top Steel Post Co.
5. Simple Land Measurements	Farm Structures: Jones Chapters II, III

LAND DEVELOPMENT

Topics

References

Engineering on the Farm: Stewart
Chapter II

LAND DEVELOPMENT

BIBLIOGRAPHY*

- | | | |
|--|-----------------|--------|
| 1. Engineering on the Farm
Rand McNally & Co. | Stewart | \$2.25 |
| 2. Blasters' Handbook
E. J. DuPont, DeRemours, & Co., Inc. | La Motte | 1.00 |
| 3. Textbook on Fundamental Drainage
The Macmillan Co. | Jeffery | |
| 4. Land Drainage & Flood Control
McGraw-Hill Book Co. | Etcheverry | |
| 5. Land Drainage & Reclamation
McGraw-Hill Book Co. | Ayers & Scoates | |
| 6. Tile Drainage
Hazen City Brick & Tile Co. | King | .50 |
| 7. Farm Structures
E. R. Jones, Madison, Wis | E. R. Jones | .75 |
| 8. Use of Water for Irrigation
McGraw-Hill Book Co. | Fortier | 1.00 |
| 9. Principles of Irrigation Engineering
McGraw-Hill Book Co. | Newell & Murphy | |
| 10. Irrigation Principles & Practices
John Wiley & Sons | Israelson | |
| 11. Explosives in Agriculture
Institute of Makers of Explosives | | |

Bulletins

1. U.S.D.A. Farmers Bulletin No. 524
2. M.S.C. Special Bulletin No. 75
3. Laws Relating to Construction of Drains: State of Michigan
Bul. 32 Commissioner of Agriculture
4. University of Minnesota Bul. 217
5. University of Minnesota Bul. 216
6. Irrigation by Overhead Sprinkling Ext. Cir. No. 4 California
7. Porous Hose Irrigation M.S.C. Ext. Bul. No. 133
8. Spray Irrigation U.S.D.A. Bul. No. 495

* For particulars see general bibliography.

LAND DEVELOPMENT

BIBLIOGRAPHY

Special Trade Literature

1. Bulletin No. 30 Deming Pump Co.
2. Union Engineering Handbook
3. Characteristic Pump Curves Union Steam Pump Co.
4. Plan for the Asking Skinner Irrigation Co.

ADDITIONAL BIBLIOGRAPHY

1. Farm Management: Warren
2. Elements of Farm Practice: Wilson
3. Farm Buildings: Foster & Carter
4. Cornell Reading Course: Vol. IV, No. 6
5. Extension Bulletin No. 173: Purdue University
6. Regular Bulletin No. 221: Michigan State College
7. Farmers Bulletin No. 1097: U. S. D. A.
8. Profitable Farming Methods: Keystone Steel & Wire Co.
9. Farming for Greater Profits: Red Top Steel Post Co.

ELECTRICITY ON THE FARM

Topics	References
1. Electrical Terms & Units	C.R.E.A. Bul. Vol. V. No. 1 Pages 73-74 M.S.C. Club Bul. No. 25 Pages 5-6 Elementary Electricity: Slack Chapter I Your High School text in Physics
2. How to Choose the Proper Type of Wiring	C.R.E.A. Bul. Vol. V, No. 1 Pages 59-67 Wiring Simplified: Richter Page 10, Chapter IV National Electrical Code: Underwriters Laboratories 207 E. Ohio St. Chicago, Illinois
3. Entrance Service Switch & 110-220 V. 3 Wire System	C.R.E.A. Bul. Vol. V, No. 1 Pages 38-46 Wiring Simplified: Richter Chapter IV National Electrical Code
4. How to Plan the Farm Wiring Layout	C.R.E.A. Bul. Vol. V, No. 1 Pages 3,4,53,56 M.S.C. Ext. Bul. No. 72 C.R.E.A. Bul. Vol. VII, No. 1
5. Wiring the Farm Home	C.R.E.A. Bul. Vol. V, No. 1 Pages 4-13 M.S.C. Ext. Bul. No. 72 Wiring Simplified: Richter Chapters VI to X
6. Wiring the Outbuildings	C.R.E.A. Bul. Vol. V, No. 1 Pages 13-18 Wiring Simplified: Richter Chapters VI-X M.S.C. Ext. Bul. No. 72

ELECTRICITY ON THE FARM

Topics	References
7. Wiring with Armored Cable	C.R.E.A. Bul. Vol. V, No. 1 Wiring Simplified: Richter Chapter VI
8. Wiring with Knob & Tube System	C.R.E.A. Bul. Vol. V, No. 1. Wiring Simplified: Richter Chapter VII
9. Wiring with Conduit	Wiring Simplified: Richter Chapter IX, page 70 C.R.E.A. Bul. Vol. V, No. 1 Pages 61-63
10. Wiring Specifications & Bills of Material	M.S.C. Ext. Bul. No. 72 Catalog of Materials C.R.E.A. Bul. Vol. V, No. 1 National Electrical Code
11. How to Make Splices	C.R.E.A. Bul. Vol. V, No. 1 Page 30 Wiring Simplified: Richter Pages 12-14 M.S.C. Club. Bul. No. 25 Pages 6-11
12. How to Solder End Lugs	C.R.E.A. Bul. Vol. V, No. 1 Page 30 M.S.C. Club Bul. No. 25
13. How to Repair Extension Cords	M.S.C. Club Bul. No. 25 Pages 11-12 Wiring Simplified: Richter Pages 60 C.R.E.A. Bul. Vol. V, No. 1 Page 31
14. How to Install Junction Boxes	M.S.C. Club Bul. No. 25 Page 18 Wiring Simplified: Richter Pages 26-30 C.R.E.A. Bul. Vol. V, No. 1 Page 72

ELECTRICITY ON THE FARM

Topics	References
15. How to Connect a Distribution Cabinet for 110-220 V. Circuit	C.R.E.A. Bul. Vol. V, No. 1 Pages 49, 56, 51, 59, 61
16. How to Install 2-3 & 4 Pt. Switches	M.S.C. Club Bul. No. 25 Pages 12-14 C.R.E.A. Bul. Vol. V, No. 1
17. How to Determine the Correct Size of Wire or Fuse	M.S.C. Ext. Bul. No. 72 C.R.E.A. Bul. Vol. V, No. 1 Page 39 Wiring Simplified: Richter Chapters III, XIV
18. Types of Motors for Farm Use	Electric Motor Work: Willoughby Pages 68-70 Elementary Electricity: Slack Pages 208-211 Journal of American Society of Ag. Eng. Vol. 13, No. 4, April 1932
19. The Use of Electric Motors on the Farm	C.R.E.A. Bul. Vol. VII No. 1 C.R.E.A. Bul. Vol. IV No. 1 Master Motor Data Book Electric Motor Work: Willoughby M.S.C. Ext. Buls. Nos. 69, 87, 88, 129
20. How to Use Information on the Name Plate of a Motor	Master Motor Data Book Electric Motor Work: Willoughby
21. How to Locate Trouble	C.R.E.A. Bul. Vol. 1 No. 1 Pages 20-32, 74-75
22. Safety Practice While Doing Repair Work	C.R.E.A. Bul. Vol. V No. 1 Elementary Electricity: Slack Pages 269-271
23. How to Read a Motor	The Farm Book of the Detroit Edison Co. Page 37
24. Hanging Your Lighting Fixtures	Wiring Simplified: Richter Chapter X

ELECTRICITY ON THE FARM

Topics

25. Grounding

References

Wiring Simplified: Richter
Chapter XIC.R.E.A. Bul. Vol. V No. 1
Pages 68-73

ELECTRICITY ON THE FARM

BIBLIOGRAPHY*

Committee on the Relations of Electricity to Agriculture:

C.R.E.A. Bulletin Vol. I No. 1

C.R.E.A. Bulletin Vol. V No. 1

C.R.E.A. Bulletin Vol. VII No. 1

1120 Garland Bldg., Chicago, Illinois

Elementary Electricity: Slack \$2.00
McGraw-Hill Book Co.

Electric Motor Work: Willoughby 1.85
Manual Arts Press

Wiring Simplified: Richter .25
Montgomery Ward & Co.

National Electrical Code
Underwriters Laboratories
207 East Ohio St., Chicago, Illinois

Master Motor Data Book
Master Electric Co., Dayton, Ohio

The Farm Book: Detroit Edison Co.

Club Bulletin No. 25: Michigan State College
East Lansing, Michigan

Extension Bulletin No. 72: Michigan State College

* For particulars see general bibliography.

V. SUGGESTIONS FOR FURTHER STUDY

A. The present status of hydro-electric power for farm use and the position of Michigan in the development of rural electrification suggest the value of a special study of this phase of agricultural engineering to aid in its further development in farm use

B. The latest development in irrigation is the "porous hose" system which was developed at the Michigan State College. To date, there has been little done to establish the relations of rate of flow with weight of hose material and pressure. An experimental study to establish reliable ratios would be of practical value.

BIBLIOGRAPHY, GENERAL¹.

Books

1. *Agricultural Mechanics Smith, Robert H.
1933 Lippincott Pub. Co., 1249 S. Wabash Ave. Chicago
2. *Agricultural Machinery Davidson, J. Brownlee
1931 John Wiley & Sons, N. Y.
3. *Agricultural Surveying & Drainage Scoates, Daniels
1928 College Station, Texas
4. American Sewerage Practice Metcalf, Leonard & Eddy,
1928 McGraw-Hill Book Co., N. Y. Harrison P.
5. Architects & Builders Handbook Kidder, Frank H.
1931 John Wiley & Sons, N. Y.
6. *Automobile & Gasoline Engine
 Encyclopedia Dyke, A. L.
1934 Dyke Publishing Co., St. Louis, Mo.
7. *Blasters Handbook Islette, Arthur
1932 Du Pont & Co., Wilmington, Del.
8. Building Construction Huntington, Whitney C.
1929 John Wiley & Sons, N. Y.
9. Carpentry, Practical Radford, William A.
1907 Radford Architectural Co., Chicago
10. Centrifugal Pumps & Suction
 Dredges Sargeant, E. W.
1916 Chas. Griffin Co., London
11. Concrete Construction for Rural
 Communities Sexton, Roy A.
1916 McGraw-Hill Book Co., N. Y.
12. Concrete, Plain & Reinforced Taylor, F. W. & Thompson,
1925 John Wiley & Sons, N. Y. S. E.
13. *Concrete Practice Heel, George A. & Pulver,
1926 McGraw-Hill Book Co., N. Y. Harry M.
14. Concrete Work Hatt, William K. & Voss
1921 John Wiley & Sons, N. Y. Walter C.
15. Concrete Worker Reference Book Houghton, A. A.
1911 W. W. Henley Pub. Co., N. Y.

* The texts starred make the Minimum Reference List.

1. Arranged according to titles.

16. Construction & Repair for the Farm
1923 Houghton, Mifflin Co., N. Y. Struck, F. T.
17. Dairy Engineering
1925 John Wiley & Sons, N. Y. Bowen, John T.
18. Drainage & Flood Protection, Land
1931 McGraw Hill Book Co., N. Y. Etcheverry, Bernard A.
19. Drainage & Flood Control, Engineering
1925 McGraw Hill Book Co., N. Y. Pickels, George W.
20. *Drainage, Textbook of Land
1916 Macmillan, N. Y. Jeffery, Joseph A.
21. Electricity & Agriculture
1926 G. Putnam's Sons, N. Y. Tripp, Guy E.
22. *Electric Motor Work
1930 Manual Arts Pub. Co., Peoria, Ill. Willoughby, George A.
23. Elements of Electricity
1931 McGraw-Hill Book Co., N. Y. Slack, Edgar P.
24. Elements of Farm Practice
1917 Webb Pub. Co., St. Paul Wilson, A. D. & E. W.
25. Engine, The Story of
1920 Scribners N. Y. Decker, Wilbur F.
26. Engineering Drawing
1928 John Wiley & Sons, N. Y. Jordon, H. H. & Hoelscher, R. P.
27. *Engineering on the Farm
1923 Rand McNally & Co., Chic. Stewart, John T.
28. *Equipment of the Farm & Farmstead
1917 McGraw-Hill Book Co., N. Y. Ramsower, Harry C.
29. Estimating Building Costs
1923 McGraw-Hill Book Co., N. Y. Dingman, Charles F.
30. Farm Building
1922 John Wiley & Sons, N. Y. Foster, W. A. & Carter, D. G.
31. *Farmer's Shop Book
1924 Bruce Publication Co., Milwaukee, Wis. Roehl, Louis M.
32. Farm Gas Engines
1913 John Wiley & Sons, N. Y. Hirshfeld, F. C. & Ulbricht, T. C.
33. Farm Gas Engines
1912 Gas Engine Pub. Co., Cincinnati, Ohio Brate, H. R.
34. *Farm Gas Engines & Tractors
1932 McGraw-Hill Book Co. New York Jones, Fred R.

35. Farm Machinery Stone, Archie A.
1928 J. Wiley & Sons, N. Y.
36. Farm Machinery, Operation & Care & Repair of
1934 J. Deere Farm Machry. Co., Moline, Ill.
37. Farm Machinery & Equipment Smith, Harris P
1929 McGraw Hill Book Co. N. Y.
38. Farm Management Warren, G. F.
1924 Macmillan Co. N. Y.
39. Farm Mechanics Crawshaw, Fred D. &
1922 Manual Arts Press, Lehmann, C. W.
Peoria, Ill.
40. Farm Mechanics Field, A. H. & Olson, R. W.
1928 Century, N. Y. Nylin, V. E.
41. Farm Motors Potter, Andrey A.
1913 McGraw Hill Co.
42. *Farm Structures Jones, Edward Richard
1933 College of Agriculture, Madison, Wis.
43. Fitting Farm Tools Roehl, Louis M.
1930 Bruce Pub. Co., 2642 University Ave., St. Paul
44. Gas Engine Principles Whitman, Roger B.
1912 D. Appleton & Co., N. Y.
45. Gas, Gasoline & Oil Engines Rathbun, John B.
1919 Stanton & Van Vliet Co., Chicago
46. Gasoline Engine on the Farm Putnam, Xeno W.
1913 N. W. Henley & Co., N. Y.
47. *Harness Repairing Roehl, Louis M.
1921 Bruce Pub. Co., Milwaukee
48. Heating & Ventilating Brabbee, C. W.
1927 McGraw Hill Book Co., N. Y.
49. Heating & Ventilating Engineers Guide
1934 American Society & Heating & Ventilating Engineers
51 Madison Ave., N. Y.
50. House Wiring Willoughby, George A.
1925 J. Wiley & Sons
51. Irrigation & Drainage King, F. H.
1899 Macmillan Co., N. Y.
52. Irrigation Principles & Practices Israelson, Orson W.
1932 J. Wiley & Sons

53. Land Drainage & Flood Control Etcheverry, Bernard A.
1931 McGraw Hill Book Co., N. Y.
54. Land Drainage & Reclamation Ayers, C. C. & Scoates,
1925 McGraw Hill Book Co., N. Y. Daniels
55. *Light Frame House Construction
1930 U.S.D.C. Washington, D. C.
56. Log Cabin, The Real Aldrich, Chilson D.
1928 Macmillan Co., N. Y.
57. Lumber & Its Uses Kellogg, Royal G.
1931 Scientific Book Corp., 15 W. 26th St., N. Y.
58. *Mechanical Training Boss, W., Dent, J. G. &
1931 Bruce Pub. Co., St. Paul White, H. B.
59. Modern Frame Structures Johnson, J. B., Bryan, C. W.
1926 J. Wiley & Sons, N. Y. & Turnaaur, F. E.
60. Plumbing Babbitt, Harold E.
1928 McGraw Hill Book Co., N. Y.
61. Practical Farm Drainage Elliott, C. G.
1908 J. Wiley & Sons, N. Y.
62. Preservation of Structural Weiss, Howard F.
Timbers
1914 McGraw Hill Book Co., N. Y.
63. Principles of Irrigation Engineering Newell, F. H. & Murphy,
1913 McGraw Hill Book Co., N. Y. D. W.
64. Principles of Farm Mechanics Sharp, M. A. & Sharp, W. M.
1930 J. Wiley & Sons, N. Y.
65. Ready Written Specifications Holland, L. B. & Parker, E.
1926 J. Wiley & Sons, N. Y.
66. Sewage Disposal Fuller, George W.
1912 McGraw Hill Book Co., N. Y.
67. Shelters, Shacks & Shanties Beard, D. C.
1914 Scribners, N. Y.
68. Storage Batteries Vinal, George Wood
1924 J. Wiley & Sons, N. Y.
69. Surveying, Elementary Breed, Charles F. &
1923 J. Wiley & Sons, N. Y. Hosmer, George L.
70. Text Book on Fundamental Drainage Jeffery, Joseph A.
1916 Macmillan Co., N. Y.
71. Tractor Field Book
1934 Farm Implement News, Chicago

72. Use of Water in Irrigation Fortier, Samuel
1915 McGraw Hill Book Co., N. Y.
73. Ventilation King, F. H.
1908 B. F. King, Madison, Wis.
74. *Wiring Simplifies Richter, H. P.
1933 Montgomery Ward & Co., Chicago
75. Water Supply for the Farm, Domestic Fuller, Myron L.
J. Wiley & Sons, N. Y.
76. Wood Construction U.S.D.C. Committee
1929 McGraw-Hill Book Co., N. Y.

Bulletins

1. California
Extension Circular No. 4 Irrigation by Overhead Sprinkling
2. Cornell University, Ithaca, N. Y.
No. 57 Soldering
72 Transmission of Power by Pulleys, Belts & Shafts
85 The Gas Engine on the Farm
108 The Farm Shop & Tool Equipment
130 Harness Repairing
3. Dominion of Canada, Dept. of Agriculture
No. 78 Ventilation of Farm Buildings
83 The Combine in Western Canada
4. Georgia State College of Agriculture
No. 91 A Homemade Trapnest
93 Portable Brooder & Growing House
96 (Cir.) Unit System Laying House
115 Poultry Feed Hoppers
120 The Georgia Poultry House
21 Poster: Build Gambrel Roof Barns
5. Illinois Agricultural College
Experiment Station Cir. 316; Combines in Illinois
6. Iowa State College Ames
No. 106 Why Ventilate Farm Buildings
304 What Determines Life of Prepared Roll Roofings
322 Harvesting Alfalfa with a Pick Up Raler
7. Illinois, University of Urbana
Cir. 303 Water & Plumbing Systems for Farm Homes
8. Kentucky, University of College of Agriculture
Cir. No. 124 Woodworking Merit Course
9. Michigan, State of
Commissioner of Agriculture Bul. 32
10. Michigan State College East Lansing
Quarterly Bul. Vol. 17, No. 1: Asphalt Concrete for Floor Construction
Quarterly Bul. Feb. 1928
4-H Club Bul. No. 25 Farm Electricity
" " " " 26 Wood Identification for 4-H Clubs
Extension Bul. No. 72 Wiring the Farmstead
113 Michigan Septic Tank
133 Porous Hose Irrigation
134 Binder & Knotter Head Troubles
Ag. Eng. Dept. Series 7-760 Farm, Field & Farmstead Layouts

Ag. Eng. Dept. Series 1-3135 Repair & Adjustments
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