

Hobbs

NORTH CAROLINA AGRICULTURAL EXTENSION SERVICE  
ANNUAL REPORT

AMA MARKETING AND UTILIZATION PROJECT IV  
Title of Project

Forestry - Wood Products Section  
Section

1964  
Annual Year

Name and Title of Worker	Percentage of Time Devoted to Entire Project by Each Worker
<u>W. E. Keppler, Jr.</u> Project Leader	95 % Jan.-Aug.
<u>L. H. Hobbs</u>	100 %
<u>W. T. Huxster, Jr.</u>	100 %
<u>D. Lester Holley</u>	100 % Sept.-Dec.
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %

Signed \_\_\_\_\_  
Project Leader

Date Submitted Jan. 15, 1965

ANNUAL REPORT FOR 1964  
WOOD PRODUCTS EXTENSION SECTION  
FORESTRY EXTENSION DEPARTMENT  
NORTH CAROLINA AGRICULTURAL EXTENSION SERVICE

The Marketing and Utilization of Agricultural Products - Forestry

SUMMARY

This report covers the activities of all Section personnel, whether employed on a full-time or part-time basis. In total, the man-power available amounted to approximately three full-time specialists. The breakdown of gross time devoted to the Section's program is as follows:

William T. Huxster, Jr.	: 100% for full year
L. H. Hobbs	: 100% for full year
D. Lester Holley	: 100% Sept. through Dec.
William E. Keppler, Jr.	: 95% Jan. through Aug.

During the period January through August, Mr. Keppler devoted 5% of his time to activities of the School of Forestry. From September through December 80% of his efforts were given to the execution of contractual work with the Federal Extension Service.

The Section's activities in respect to the problem areas defined in the 1964-1965 Plan of Work were distributed as shown below.

Table 1. Breakdown of Section Program Activities

Program Problem Areas	Approx. Percentage Distribution of Work devoted to Problem Areas by Specialists				
	Hobbs	Huxster	Holley	Keppler	Average
1. Lack of Short-Run Managerial Skills	10	40	40	30	30
2. Lack of Long-Run Entrepreneurial Skills	10	15	40	20	21
3. Need for Consumer and User Information	40	5	3	10	14
4. Need for Better Understanding of Market Structure	15	10	0	10	9
5. Lack of Knowledge of Marketing Technology	20	25	0	22	17
6. Misc.; Coordination with other groups; Admin.; Special Problems	5	5	17	8	9

During 1964 the Section replied to 562 requests for technical assistance and information and of this number of requests, 220 required visits to firms. Mr. Hobbs made 119 plant calls, Mr. Huxster made 51, Mr. Holley made 17 and Mr. Keppler made 33.

The specialists conducted or participated in 66 meetings, seminars, short courses and seminars attended by 1374 persons. The section personnel distributed 2398 publications relating to program subject matter during the year.

As in previous years the section continues its close cooperation with Dr. Peter J. Dyson, of the School of Forestry faculty. Dr. Dyson's contributions to the section in the area of economic analysis has been notable and much appreciated.

#### INTERNAL OPERATING PROBLEMS

Problems in this category which deserve attention are:

1. How to realistically accomplish the assigning of priorities to problem areas and allocate disciplines to maximize the teaching effectiveness of the Section - In short to avoid fragmentation of activities and improve upon the team approach.
2. How to enhance the Section's role of "Vital Link" between industry needs and research efforts. The School of Forestry research projects do not generally dovetail with current industry problems.

3. How to improve the "Team Approach" between the Section's work and other extension departments when and where additional disciplines are required to meet a teaching need.
4. How to better coordinate the marketing activities of the Wood Products Section and the production activities of the Forest Management Section on industry problems of mutual interest to both sections.
5. How to decrease the backlog of commitments and fragmentation of the Section's efforts by judiciously screening out miscellaneous activities which do not relate to marketing and utilization areas.

#### PROGRAM ACCOMPLISHMENTS

The statistics previously presented imply the impracticality of recounting all of the activities of the Wood Products Extension Section. Thus, the narrative section of this report will cite special illustrative examples of Extension's efforts towards answering the main problem areas outlined in the Plan of Work.

During the past year the Section has endeavored to

carefully restrict activities which might be interpreted as purely trouble shooting situations and has in good measure been successful. This tact has not been detrimental to establishing and continuing a strong rapport and close working relationships with key industry personnel.

The use of problem studies within firms for the purpose of establishing result demonstrations continues to be a proven and valuable extension technique with wood processing firms. However, the necessity for seeking better means of incorporating these projects into a more formalized educational program is evident. As work progresses the Section must devote more attention to developing more group educational functions and the attendant teaching aids and methods.

PROBLEM AREA 1 Lack of Managerial Skills to Make Short-run Adjustments in Operations

Applications of Work Measurements, Production Scheduling, Inventory Control, Product Pricing and Improvement of Communications were taught to managerial and sales personnel. In plant studies, conferences and critiques were held. This activity resulted in improved operations and will increase returns by \$30,000 per year. Specialist: Huxster.

Teaching planing mill personnel how to collect and use production cost data to develop marginality criteria. This information enabled sales personnel to make better pricing and distribution decisions increasing returns \$15,000 per year. Specialist: Huxster.

Provide assembly firms with information on palletizing pulpwood and assisting firms through direct consultation to develop production coefficients on "pre-hauling" tree length logging and tractor skidding. Instructed how to use information obtained to make better decisions and modify harvesting systems. The potential savings upon installation of improved harvesting systems in North Carolina is 3.8 million dollars. Specialist: Huxster.

Develop a result demonstration from a problem study and analysis with three firms relating to proper log making methods. This demonstration of techniques was incorporated into short courses. The benefits to the cooperating firms is estimated at \$30,000 annual savings. Specialists: Holley and Huxster.

Develop problem study, key man critiques and group meetings employing systems analysis. This result demonstration was in part incorporated into short course

subject matter. The cooperating firm will realize an estimated annual savings of \$28,000 when all recommendations are carried out. Specialist: Holley.

Write and produce a 30 minute color-sound training film on the subject of Systems Analysis in Sawmills. Specialists: Huxster working with Dr. Dyson and Keppler assisting.

Conduct a short course for forty pulpwood dealers in cooperation with the American Pulpwood Association. Latest research and equipment usage in logging was taught. Specialist: Huxster.

Management training sessions conducted for managers of hardwood and softwood lumber manufacturing firms. Subject matter taught included principles and technology in the manufacture and distribution of wood products to the building construction and furniture industries. Specialist: Hobbs.

In cooperation with Eastern North Carolina Lumber Manufacturers Association conducted a training meeting for industry personnel. Subject matter taught included principles of improving lumber merchandising and distribution. Specialist: Hobbs.



Conduct a problem study with a firm to devise an inventory control system which permits the acceptance of highly mixed orders on a profitable basis. Specialist: Hobbs.

Conduct a case study and result demonstration with a lumber manufacturing firm in Robeson County. Teaching methods included conferences with management, critiques with key personnel and incorporation of information into a short course. Potential savings through improved operational efficiency of the firm are estimated at \$45,000 per year. Specialist: Holley.

Conduct demonstration of the application of U. S. Forest Service log grade research to a management decision situation involving maximizing production v.s. maximizing grade recovery. Specialists: Holley and Huxster.

By use of in-plants studies, employ Operations Research techniques to develop an inventory decision model. Prepare a publication and visual aids on subject matter. Gave instruction to industry personnel. Application in one test firm implied a \$1,500 annual cost savings. Specialist: Keppler.

Undertake, with the cooperation of six firms, preliminary studies to develop a method for evaluating the productive capacity of circular sawmill headrigs. Application of data pertinent to establishing production standards and measuring sawyer efficiency. Published and distributed a report; developed visual aids and presented information in short course form. Specialist: Keppler assisted by graduate student.

Adapt School of Forestry research in Rough Mill Yield Studies for use by the furniture industry. Project involved preparation of instruction manual and visual aids. Conducted training seminars and in-plant tests. General use of information and techniques of application would result in several million dollars annual raw materials costs to North Carolina furniture industry. Specialist: Keppler.

PROBLEM AREA #2 Lack of Long-Run Entrepreneurial Skills

Teach pulp and paper company procurement personnel how to apply location theory methods and principals to the establishment of pulpwood purchasing stations. The teaching methods included critiques, conferences, visual presentations

and on-the-ground consultation. Resulting operational changes reduced procurement costs by an estimated \$75,000 annually. Specialist: Huxster.

Direct consultation with firm engaged in sawmilling, planing mill and chipping operations to develop long range plans for the orderly consolidation of manufacturing facilities to eliminate inefficiencies. Changes will result in annual savings of \$20,000. Specialist: Hobbs.

Render assistance to owner of small wood specialties firm in eastern North Carolina. Project involved the preparation of plant layout that could be expanded at a minimum cost as the firm's business increases. Specialist: Hobbs.

Direct assistance to investor who had more money than know-how seeking to establish a lumber manufacturing facility in the Leaksville area. Specialist laid out a program of self education to include plant visitations, local market and resource study and technical readings. The novice did not pursue plans and undoubtedly saved 15-20 thousand dollars. Specialist: Keppler.

Participate in Hardwood Plywood Trade Association meeting to motivate industry to engage in employee training and recruitment of specialized managerial talent. Followed up with consultation with young people as to opportunities available and requirements for technical competence.

Specialists: Keppler and Huxster.

Cooperate with Dr. Dyson and Selected Wood Products processing firms in supervised student summer employment program. The program is aimed at developing a pool of technically trained and experienced talent for managerial positions, and to motivate industry through demonstration to its stake in building management talents and making opportunities available. Specialist: Huxster.

Develop a three dimensional scale model of a sawmill plant layout with interchangeable components and equipment to be used in teaching plant layout. All types of layouts and levels of capital investments can be represented and analyzed with this model. It has been used in short courses and as a guide to two firms planning \$700,000 in investments. Specialist: Huxster.

Consulted with firm managers on long-range facility modernization plans representing increased capitalization of \$200,000 and increased annual returns of \$60,000.

Specialist: Huxster.

In cooperation with the Paper Institute Management Association, conducted a seminar in Cost Reduction Programs for middle management of 20 pulp and paper mills.

Specialist: Keppler.

Supply market demand and quality control information to assist manufacturer of pulp drying equipment design new drying system. Specialist: Keppler

Provide the Industry Division of the North Carolina Department of Conservation with resource, location and marketing data required to facilitate the establishment of new 2 million dollar furniture plant. Specialist: Keppler.

Assist the School of Forestry faculty with curriculum problems centering on the incorporation of conceptual and analytical methodology to courses in wood operations and processing. Specialists: Keppler and Huxster.

Cooperate with Dept. of Wood Science and Technology in special reference to improving the summer wood products laboratory practicum for students. Specialist: Huxster.

Assist the manufacturer of plywood processing equipment and systems by supplying technical information relating to gluing, wood quality and resources as affecting Southern Pine Plywood production. Specialist: Keppler.

PROBLEM AREA #3 Need for Consumer and User Information

Used T.V. media to familiarize consumers with the technology involved in the manufacture of quality North Carolina Lumber Products. Specialist: Huxster.

Furnish to popular reading publications statistical information concerning the economic importance of the N. C. Furniture Industry. Specialist: Huxster.

Prepare a set of color slides on the economic importance of the forest and wood products industries in North Carolina. Specialist: Keppler.

Prepare a T.V. series to inform the consumer on research into consumer attitudes about wood. Particular emphasis was given to correcting misconceptions about attributes and limitations of using wood. Specialist: Keppler.

In cooperation with Home Demonstration Agents presented information on wood species, grain effects, quality of furniture construction and cost-value considerations. Specialist: Keppler.

Working with Poultry Specialist and County Agent to provide broiler grower firm with information on availability of planer mill shavings for chicken litter. Specialists prepared report covering supply sources. The increased demand for chicken litter will mean approximately \$24,000 in increased annual returns to the lumber industry. Specialists: Huxster and Holley.

Assist in planning training sessions for retail lumber sales personnel to improve marketing skills and sales through a better knowledge and application of wood technology. Specialist: Hobbs.

Coordinate meetings between the producers of lumber and public and private groups concerned with designing wood structures and specifying and purchasing wood products. Activity resulted in the rewriting of N. C. State Purchasing Specifications and the writing of new specifications where they were non-existent. Specialist acted as technical advisor to the N. C. Division of Purchases and Contracts in relation to specifications for wood products. Specialist: Hobbs.

Developed news releases and seven T.V. programs to educate public about the economic advantages of purchasing and using specified grades of wood products, and provide information concerning new and improved wood products.

Specialist: Hobbs.

Cooperated with Agricultural Engineering Department with respect to the availability and suitability of certain species of woods for specific uses. Specialist: Hobbs.

Specialist serves as technical advisor to North Carolina Wood Preservers Advisory Council whose object is consumer education and providing marketing information and assistance to the wood preserving industry.

Specialist: Hobbs.

Specialist provided technical assistance to the North Carolina Building Code Council. This activity has resulted in improved code practices and the formulation of a private residential code which offers greater security and economic benefits to the home buyer. At the same time this activity has helped to expand the use of wood in residential and commercial structures. Specialist: Hobbs.



PROBLEM AREA #4 Need for Better Understanding of the  
Market Structure.

Provide enterprise feasibility data and methods of developing analytical models to county personnel and other specialists. Publication and visuals were developed and information has been used in short course presentations. Specialist: Keppler.

Supply research information on the application of mathematical programming applications to assembly, processing and distribution of wood products by marketing firms. Specialist: Keppler.

Cooperate with personnel of the Tennessee Valley Authority relative to an economic study of wood products industry opportunities in the French Broad Basin of North Carolina. Specialists: Keppler and Huxster.

Cooperate with School of Forestry Researchers for determining the feasibility of log and tree concentration yards in North Carolina. Specialists: Huxster and Keppler.

Establish a result demonstration involving a problem study in a firm. Existing records were analyzed for the purpose of predicting sales and sales trends. Specialist: Huxster.

Participate in a case study of a diversified firm employing an interdisciplinary team approach to problem solving. The study involved a management audit, financial audit and operations analysis of several product-line divisions. The study results prompted reconsideration of a hasty investment of 2 million dollars in the expansion of present product-lines and new products. Management was influenced to undertake more detailed studies of expansion plans and to thoroughly explore alternative investment opportunities before making final decisions. Specialists: Huxster and Keppler.

Continue activities with a progressive lumber manufacturing firm leading to a result demonstration of the successful and orderly transition from primary to secondary conversion processing. Assist firm with plant layout, yield studies, and costing systems. Specialist: Huxster.

PROBLEM AREA #5 Lack of Knowledge of Marketing Technology.

Cooperated with the Wood Science and Technology Dept. in conducting in-plant studies to evaluate the effects of the required use of 1/36 inch black walnut veneers by the

furniture industry. Study results were presented at Department of Commerce Commercial Standards hearings. Industry was using 1/28 inch veneers and new government regulations required the use of 1/36 inch thicknesses. A compromise was effected at 1/32 inch effecting a 15% resource savings. Results of study pointed up the need for development of better sanding systems and quality control techniques. Specialist. Huxster.

In-plant assistance was given to a furniture manufacturing firm suffering a 14% rejection of case goods doors. Specialists pinpointed the problem to abnormal tension wood in mahogany lumber. Recommendations for inspection were made to eliminate the loss. Specialists: Keppler and Huxster.

Specialist rendered inplant assistance to furniture manufacturer experiencing sunken joints in case tops. Specialist made recommendations for improved dry kiln facilities to relieve the problems and these are included in the firms improvement plans. Specialist: Huxster.

Continuation of cooperation with the Southeastern Dry Kiln Club serving as technical advisor to program development and research projects. The organization serves as a medium in which dry kiln operators throughout N. C. can meet and solve common problems. Specialist: Huxster.

Cooperate with personnel of the U. S. Forest Service, Southeastern Experiment Station in planning and conducting a pine log grade and lumber yield study. Specialists: Holley and Huxster.

#6 OTHER SELECTED MISCELLANEOUS ACTIVITIES

Assist Forest Management Section with Farm stumpage and timber sales problems.

Assist in program for visiting Canadian Wood Products Industry Personnel.

Render assistance to Wood Products Specialists in five states with program orientation and development.

Assist School of Forestry at University of Florida with curriculum revision.

Serve as consultant to Mississippi Extension Forester on development of new Wood Products Marketing and Utilization Program.

Conduct Operations Analysis Workshop for Mississippi  
lumbermen.

Assist with training of Peace Corp Contingent destined  
for Chile.

Assist Forest Management Section with arrangements for  
hardwood log grading short course.