

Ministry of Higher Education and Scientific research



**Department of Forestry**

**College of Agricultural Engineering Sciences**

**Salahaddin University-Erbil**

**Subject: Non-Wood Forest Products- Theory**

**Course Book: Fourth Stage**

**Lecturer's name (Theory): Assist. Prof. Dr. Sherzad Omar Hamad**

**Academic Year: Spring Semester 2023-2024**

**Course Book**

<b>1. Course name</b>	<b>Non-Wood Forest Products- Theory</b>
<b>2. Lecturer in charge</b>	<b>Assist. Prof. Dr. Sherzad Omar Hamad</b>
<b>3. Department/ College</b>	<b>Forestry / Agricultural Engineering Sciences</b>
<b>4. Contact</b>	<b>E-mail: <a href="mailto:sherzadomer@gmail.com">sherzadomer@gmail.com</a> E-mail: <a href="mailto:sherzad.hamad@su.edu.krd">sherzad.hamad@su.edu.krd</a></b>
<b>5. Time (in hours) per week</b>	<b>Theoretical: 3</b>
<b>6. Office hours</b>	<b>Sunday to Wednesday or make appointment</b>
<b>7. Course code</b>	
<b>8. Teacher's academic profile</b>	<b>I completed my B.Sc. in Salahaddin University – Agriculture college – Plant Production Department in 2005. I got M.Sc. in Salahaddin University – Agriculture college – Forestry and Horticulture department in 2010 and my specialize is Silviculture. I completed my PhD. in Universiti Putra Malaysia in 2017. Currently, I am working as Lecturer in Forestry Department - Agriculture college, Salahaddin University.</b>
<b>9. Keywords</b>	<b>Non-Wood Forest Products, Non-Timber Forest Products, Plant Medicine</b>

## **10. Course overview:**

For most of recorded history, people have valued forests not for wood, but for other products. Ancient writings from China, Egypt and India record a wide variety of uses for forest plants, and compilations of botanical knowledge from Western Asia were prized by the ancient Greeks. Whereas wood products have become major international commodities in modern times, Non-wood Forest Products (NWFPs) rank among the oldest traded commodities. Through the experience of forest communities, forestry professionals have recently rediscovered the great importance of NWFPs (ranging from food, fruits and fibres, dye stuffs, flavours and medicines) for meeting people's needs. In recent years, a growing body of scientific research has suggested that, given certain basic conditions, NWFPs can help communities to meet their needs without destroying the forest resource.

NWFP include medicinal and aromatic plants, herbs and spices, gums, resins, tannins, fibres, mushrooms, honey, fruits and nuts for nutrition, fodder for animals as well as wildlife products. There are also other very important services provided by the forests in the region. Protection of soil and water resources is a primary function of forests and wood plantations.

## **11. Course objective:**

1. Introduce students to the principal types of non-wood forest product and, their appearance and function.
2. Enable students to identify the functions of non -wood in the economic process.
3. Students have to get information about the structure of the part of non- wood forest product and, its major chemical constituent, and importance's uses in medicine and health.
4. Students should be able to explain and interpret non-wood forest product interaction in terms of well-establish concepts and describe some factors related.
5. Students should be able to describe and explain the properties of non-wood in terms with basic structure and the practical constituents of their uses properties.

## 12. Student's obligation

Students will be asked to prepare research papers on selective topics. There will be classroom discussions and the lecture will give enough background to evaluate problems sets, and different issues discussed throughout the course. To get the best of the course, it is suggested that students attend classes as much as possible, read the required lectures, teacher's notes regularly as all of them are foundations for the course. Try as much as possible to participate in classroom discussions, preparing the assignments given in the course. Using quiz, exams.

In conclusion, the student must attend the classes and prepare themselves for the test, assignment reports, and quizzes.

## 13. Forms of teaching

Different forms of teaching will be used to reach the objectives of the course: 'power point presentations for the head titles, definitions and summary of the lecture; the students can get a copy of a lecture; the white board also be used to clear the figures and meaning of words; to more clear the lectures some animations and videos will be shown.

## 14. Assessment scheme

Grading: This subject includes theoretical and practical parts

	First exam	Second exam	Quiz, activity and report	Annual average	Final exam	Total
Theoretical part	15	15	10	40	60	100

**15. Student learning outcome:**

The students will get the scientific information about all aspects of NWFPs.

The student also can enhance their knowledge about important, structure, functions and types of NWFPs. The above information helps the students to be able to identify all products come from forest resources except of timber and know their uses and benefits in human lives.

**16. Course Reading List and References:**

**Al-Nouri, N.** 2000. A survey of medicinal plants and their traditional uses in Iraq. *Pharmaceutical Biology*. 2000, vol. 38, no. 1.

**Arab Net Home page.** 2001. Iraq flora and fauna. Internet: [http://www.arab.net/iraq/geography/iq\\_florafaua.html](http://www.arab.net/iraq/geography/iq_florafaua.html), viewed on June 10, 2001.

**Bradbear, N.** 1996. Zooming in on Iraq. *Beekeeping & Development* 39: 8

**EL-Shehawy, M. A.** 1998. *The Future of Bees and Honey Production in Arab Countries*. Internet: [http://www.beekeeping.com/index\\_us.htm](http://www.beekeeping.com/index_us.htm), viewed on June 10, 2001.

**FAO.** 1994. Tropical palm. Non-wood forest products 10.

**Glaïim, M K.** 1992. First record of *Apis florea* in Iraq. *Beekeeping & Development* 24: 3

**Iraqioasis Home.** 2001. Internet: <http://www.iraqioasis.com/p1.htm>, viewed on June 12, 2001.

**Twaij, A. and Al-Jebbory, A.** 1985. Screening of Iraqi medicine plants for diuretic activity. *India J. Pharmac.* 1985, vol. 73.

**DARWESH, D. T. D.** 2017. Plant Biodiversity and Ethnobotanical Properties of Various Plants in Choman (Erbil-Iraq). M.Sc. Thesis, Kahraman maraş Sütçü İmam University, Graduate School of Natural and Applied Sciences University, Kahramanmaraş, Turkey: 130 pp.

<b>17. The Topics:</b>		<b>Lecturer's name</b>
First week	Introduction, Definitions, characteristics, importance and classification of Non-wood forest products	<b>Dr. Sherzad Omar Hamad</b> <b>(2 hrs)</b>
Second week	Non-wood forest products in the world and in KURDISTAN	
Third week	Usages of Non-Wood Forest Products 1- Food A- Walnuts ( <i>Juglans regia</i> ) B- <i>Ziziphus sp</i>	
Fourth week	Usages of Non-Wood Forest Products 1- Food C- <i>Pistacia atlantica</i> D- <i>Crataegus sp.</i> (Hawthorn berries)	
Fifth week	The First Examination.	
Sixth week	Usages of Non-Wood Forest Products (Continue) 2- Exuded Products A- Gums and Resins: B- Caoutchouc and gutta-percha C- Sugary sap	
Seventh week	Usages of Non-Wood Forest Products (Continue) 3- Biochemicals The most common biochemical components that derived from forest trees  A- Bark Extract from Willow Tree ( <i>Salix sp.</i> )	

Eighth week	<p>Usages of Non-Wood Forest Products (Continue)</p> <p>2- Biochemicals (Continue)</p> <p>A- Bark Extract from Willow Tree (<i>Salix</i> sp.)</p> <p><b>How to Use Willow Bark as Medicine</b></p> <p><b>Natural Rooting Hormone from Willow Water</b></p>	
Ninth week	<p>Usages of Non-Wood Forest Products (Continue)</p> <p>3- Biochemicals (Continue)</p> <p><b>B- Tans</b></p> <p><b>C- Dyes</b></p> <p><b>D- Cedar-oil</b></p>	
Tenth week	The Second Examination.	
Eleventh week	<p>Usages of Non-Wood Forest Products (Continue)</p> <p>4- <b>Forage</b></p> <p><b>5- Ornamentals</b></p>	
Twelfth week	<p>Usages of Non-Wood Forest Products (Continue)</p> <p>6- <b>Honey and Wax:</b></p> <p>7- <b>Cork</b></p>	
Thirteenth week	<p>Usages of Non-Wood Forest Products (Continue)</p> <p>8- <b>Mushrooms</b></p>	
Fourteenth week	<p>Usages of Non-Wood Forest Products (Continue)</p> <p>9- Grasses, <b>Bamboos and Canes</b></p>	

<b>Examinations:</b>		
<b>In regard to this subject the type of exam will be as follow:</b>		
<b>1- Definitions:</b>		
<b>2- Multiple Choose:</b>		
<b>3- Use true or false for each sentence and correct false statement:</b>		
<b>4- Fill the following blanks with the correct word:</b>		
<b>5- Numerous these followings:</b>		
<b>6- Explain briefly:</b>		
<b>7- give the reasons of these followings:</b>		
<b>20. Extra notes:</b>		
<b>21. Peer review</b>		