UỶ BAN NHÂN DÂN TỈNH ĐỒNG THÁP
TRƯỜNG CAO ĐẲNG CỘNG ĐỒNG ĐỒNG THÁP

GIÁO TRÌNH

MÔN HỌC: ANH VĂN CHUYÊN NGÀNH – BVTV
NGÀNH, NGHỀ: BẢO VỆ THỰC VẬT
TRÌNH ĐỘ: CAO ĐẲNG

(Ban hành kèm theo Quyết định Số:..../QĐ-CĐCĐ-ĐT ngày… tháng… năm 2021 của Hiệu trưởng Trường Cao đẳng Cộng đồng Đồng Tháp)

Đồng Tháp, năm 2017

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PREFACE

English for Plant Protection is a new educational for Plant Protection professionals who want to improve their English knowledge in a plant protection context.

The course addresses popular topics related to plant protection in Mekong Delta such as rice, vegetables, chemicles for fruit trees, roses, and nutrient deficiencies.

The course is organized into 5 units, each part in a unit includes 2 main parts as follow:

- *Part 1: Content*
- *Part 2: Exercises*

The course provides some following features:

- *A variety of realistic reading passages*
- *Glossary of terms and phrases*
- *Reading comprehension exercises*

Đồng Tháp, ngày 10 tháng 5 năm 2017
Chủ biên
Trầm Thị Ngọc Hương

CONTENT

Page

GIÁO TRÌNH MÔN HỌC

Tên môn học: ANH VĂN CHUYÊN NGÀNH - BVTV

Mã môn học: CNN451

Thời gian thực hiện môn học: 30 giờ (Lý thuyết: 27 giờ; Thực hành, thí nghiệm, thảo luận, bài tập: 0 giờ; Kiểm tra thường xuyên, định kỳ: 1 giờ; ôn thi: 1 giờ; Thi/kiểm tra kết thúc môn học: 1 giờ)

Vị trí, tính chất, ý nghĩa và vai trò của môn học:

- Vị trí: Môn học tiếng Anh chuyên ngành Bảo vệ thực vật thuộc nhóm các môn học chuyên môn được bố trí giảng dạy sau khi đã học xong các môn học đại cương như là pháp luật, chính trị, tin học, giáo dục thể chất, giáo dục quốc phòng, tiếng Anh 1-2-3.

- Tính chất: Nhằm trang bị cho sinh viên những kỹ năng tiếng Anh và kiến thức về từ vựng cơ bản cho cây trồng nông nghiệp, cách chăm sóc, bảo vệ cây trồng, và một số bệnh đặc trưng ở cây. Môn học còn giúp người học có thể tham khảo tài liệu hoặc các sách Anh văn chuyên ngành, làm nền tảng để người học có thể tự học tiếng Anh chuyên ngành ở cấp độ cao hơn.

- Ý nghĩa và vai trò của môn học: môn học tiếng Anh chuyên ngành Bảo vệ thực vật là một môn học có ý nghĩa quan trọng của 2 ngành Bảo vệ thực vật và ngành Khoa học cây trồng và có nó có vai trò hỗ trợ cho học sinh, sinh viên có được kiến thức kỹ thuật trong tiếng Anh về trồng trọt và bảo vệ thực vật.

Mục tiêu của môn học

- Về Kiến thức:

+ Nâng cao từ vựng cơ bản về thực vật nông nghiệp, cách chăm sóc và bảo vệ thực vật, tránh một số bệnh đặc trưng của thực vật.

- Kỹ năng:

+ Sử dụng các cấu trúc từ vựng, các điểm ngữ pháp đã học để miêu tả về thực vật.

+ Thảo luận viết và nói về các cách bảo vệ thực vật bằng tiếng Anh một cách đơn giản.

- Về năng lực tự chủ và trách nhiệm:

+ Có ý thức tích cực, chủ động trong quá trình học tập.

+ Trung thực trong kiểm tra và thi.

III. NỘI DUNG MÔN HỌC

Số TT	Tên chương, mục	Thời gian (giờ)			
		Tổng số	Lý thuyết	Thực hành, thảo luận, bài tập	Kiểm tra
1	**UNIT 1: RICE** 1. Introduction 1.1. General information	6	6	0	0

	1.2. Rice farming 2. Diseases in rice plant 2.1. Yellow dwarf disease 2.2. Ragged stunt disease				
2	**UNIT 2: VEGETABLES** 1. Soil preparation for growing vegetables 1.1. Overview 1.2. Improvement 2. Minimizing diseases in vegetable garden 2.1. Choosing resistant or tolerant varieties 2.2. Using treated seed 2.3. Free-of-disease seeds, transplants, and propagating.	5	5	0	
3	**UNIT 3: CHEMICALS FOR FRUIT TREES** 1. Overview 2. Chemicals for fruit trees 2.1. Fertilizers 2.2. Bactericides 2.3. Fungicides 2.4. Pesticides 3. Environmental effects of herbicide use	7	7	0	0
4	**Kiểm tra**	1			1
5	UNIT 4: ROSES 1. Insect pests for roses 1.1. Aphids 1.2. Japanese beetles 1.3. Leaf cutter bees 2. Diseases in roses 2.1. Blackspot 2.2. Powdery mildew 2.3. Bostrytis blight	4	4	0	0

6	UNIT 5 : NUTRIENT DEFICIENCIES 1. Conception of nutrient deficiencies 2. Nutrient deficiencies 2.1. Nitrogen deficiency 2.2. Potassium deficiency 2.3. Phosphorus deficiency 2.4. Magnesium deficiency 2.5. Manganese and iron deficiency	5	5	0	
	Ôn thi	1			1
	Thi kết thúc môn	1			1
	TỔNG CỘNG	**30**	**27**	**0**	**3**

UNIT 1

RICE

MH35-01

Introduction

On a global basis, rice ranks second only to wheat in terms of area harvested, but in terms of its importance as a food crop, rice provides more calories per hectare than any other cereal food grain.

Objectives:

By the end of the lesson, learners are able to:

+ Enhance reading skills through exercises of comprehension .
+ Understand meanings of new words and use in proper contexts.

1. Introduction

1.1. General Information

Scientific name: Oryza sativa L.

Rice belongs to the Graminae grass family. On a global basis, rice ranks second only to wheat in terms of area harvested, but in terms of its importance as a food crop, rice provides more calories per hectare than any other cereal food grain.

Figure 1.1. Paddy seeds

(Photo: Internet source)

Rice grows best in warm temperatures with plentiful moisture from rainfall or irrigation, and is most frequently grown in valley and river deltas. The plant is an annual, from 2 to 6 ft (61–183 cm) tall, with a round, jointed stem; long, pointed leaves; and edible seeds borne in a dense head on separate stalks. Wild rice is obtained from a different grass plant.

1.2. Rice farming

Figure 1.2. Plowing

Figure 1.3. Harvest

(Photo: Internet source)

A typical method for casting flooded field rice growing is as follows:

Land preparation	A leveled, flat landbed is surrounded by side earth walls, for water control. Then, the surrounded field is flooded until the water level is approximately 1-2 cm high and allowed to sit for a

	few days. The source of water could come from natural rainfall, cannels, or a well.
Seed preparation	Separate from the prepared ricefield, paddy seeds are soaked overnight. The next morning, the seeds are drained and allowed to rest for a few days. The seed will sprout. (Seed preparation and land preparation may be done at the same time.)
Plowing	After the prepared land has been allowed to sit for a few days, it is now ready for plowing. Farmers could plow the ricefield either by using modern machinary or using animal labor (i.e. water buffaloes). Plowing is necessary to eliminate weed that could grow overnight in the flooded field, without using chemicals. Moreover, plowing also signifies the beginning of the rice growing cycle.
Casting	Immediately after plowing, rice sprouts are transferred to the plowed field. This transferring method is called casting. In Thailand, hand casting by an experienced farmer is preferred, in order to produce even rows of casting.
Resting	After casting, rice sprouts will mature to young plants in a few days. Water is then drained into the field until its level reaches that of the lowest leaves on the rice plant; however, the water level must not exceed 2-3 cm high. For the next 1-2 months, rice plants will be left to grow into paddy and turn lightbrown in color. In the mean time, the rice field remains constantly flooded.
Draining	

	Once the rice paddy turns light brown, water is drained, and the field is left to dry.
Harvest	After the drained field is completely dry, and the plant turns to hay color, the paddy is harvested either by a sickle or a machine.

Table 1.1: A typical method for casting flooded field rice growing

❖ **Exercises:**

Task 1: Read part 1.1 and decide whether the statements are T (True) or F (False).

1. ____ Plowing is also a non-chemical way to eliminate weed.
2. ____ Land preparation and casting may be done at the same time.
3. ____ Draining water is done because the field needs to be dried for harvest.
4. ____ Side earth walls surrounding a leveled, flat landbed are used for walking around.
5. ____ After casting, water level reaches the leaves on the rice plant, but not exceed 2-3 cm high.
6. ____ The paddy is harvested by a sickle or a combine harvester.
7. ____ It is not necessary to make seed sprout in modern casting method today.
8. ____ Farmers can disorder the typical method for rice growing.
9. ____ Paddy seeds are inedible.
10. ____ Rice is one of important food crops in the world.

Task 2: Fill in the blanks with words/phrases in the box.

water control	edible	casting	pointed
harvest	water	temperature	
calories	water buffaloes	terraced field	
hand casting	growing cycle		

1. The rice plant is about 61cm tall, with a round, jointed stem; long, _____ leaves; and _____ seed.

2. _____ is one of natural factors that almost presents in seven steps of rice farming.

3. Side earth walls are used for _____.

4. The time for farmers' resting is after _____.

5. Rice provides more _____ per ha than any other cereal food grain.

6. That the rice paddy turns light brown is the time of _____ preparation.

7. Landbed can be plowed by modern machinary or using animal labor like _____.

8. In mountain region, farmers grow the paddy in _____.

9. Plowing also signifies the beginning of the rice _____.

10. In Thailand, _____ by an experienced farmer is preferred.

1.3. Diseases in rice plant

Yellow dwarf disease

- **Symptoms**

Figure 1.4. Symptoms of rice plants inflected yellow dwarf disease

(Photo: Internet source - bannhanong.vn)

- The disease is characterized by general chlorosis, with pronounced stunting and profused tillering.

- The chlorotic leaves are uniformly pale-green or pale-yellow. Discoloration first appears on the emerging young leaves and then chlorosis on all the succeeding leaves.
- Plants infected early may die prematurely. Those which survive until maturity produce only either no panicle at all or a few small panicles with unfilled grains.
- Plants infected in the late growing stage may show chlorotic branches arising from upper nodes or small chlorotic tillers in the stubble, or no other symptom except distortion of panicles, or characteristic chlorosis tillering on the ratoon grown on the cut stubbles.
- This disease is caused by phytoplasmas and these are generally observed in phloem tubes of yellow dwarf infected rice plants.

➢ **Identification pathogen**

- The Mycoplasma Like Organism is transmitted by *Nephotettix virescens* and *N. nigropictus* with a latent period of 25-30 days.
- It survives on several grass weeds.

➢ **Management strategies**

- Deep ploughing during summer and burning of stubbles.
- Rice varieties are resistant to the disease.
- Avoiding early-planted rice will prevent an increase in vector density and proportion of infected vectors.
- Planting fallow rice fields with non-vector hosts, ploughing fallow paddy fields, and late-planting, synchronous planting, or avoiding an overlap of early-and late-planted rice crops.

Figure 1.5. Deep ploughing to control disease pathogen

(Photo: Internet source)

❖ **Exercises**

Task 1: Read part 1.2.1 and complete the following blanks.

1/ Symptoms of yellow dwarf disease on the young leaves are _____ and on the succeeding leaves are _____ .

2/ Cause of this disease is _____ .

3/ The period which plants are inflected is _____.

4/ Pathogen survives on some _____.

5/ Beside using resistant rice, for soil, _____ is also one of management strategies.

Task 2: Refer part 1.2.1 and translate into Vietnamese.

1. Burning of stubbles and deep ploughing are the ways to limit the disease.

…….

…….

2. The latent duration pathogen may be 25-30 days. It also survives on several grass weeds.

…….

…….

3. The emerging young leaves first appears discoloration, and then chlorosis starts on all the succeeding leaves.

…….

…….

4. The disease causes distortion of panicles, or characteristic chlorosis tillering on the ratoon grown on the cut stubbles.

…….

…….

2. Ragged stunt disease

Disease name: Rice ragged stunt virus (RRSV)

2.1. Symptoms

Figure 1.6. Symptoms of inflected leaves

(Photo: Internet source)

- Stunting during early growth stages of the crop.
- Infected plants severely stunted during early growth stages of the crop.
- Leaves are short and dark green with serrated edges.
- Leaf blades are twisted at the apex or base, which result in the spiral shape of the leaves.
- Leaf edges are uneven and the twisting give the leaves a ragged appearance.
- Ragged portions of the leaves are yellow to yellow-brown.
- Vein swellings develop on the leaf blades and sheaths.
- Swellings are pale yellow or white to dark brown.
- Flag leaves twisted, malformed, and shortened at booting stage.

- Flowering is delayed.
- Incomplete panicle emergence.
- Nodal branches produced at upper nodes.
- Partially exserted panicles and unfilled grains.

2.2. Factors favoring development disease

- Presence of the vector and the host.
- Tillering, reproductive, and maturity growth stages of the rice plant.

Figure 1.7. Shapes of inflected paddy panicles
(Photo: Internet source)

2.3. Causes

The infection and the vector density are very high in tropical regions where rice is planted year-round.

The presence of the vector and the host continuously support the development of infection or pathogen.

2.4. Management principles

There are no specific control measures for the ragged virus disease except for the use of resistant varieties because some rice varieties are resistant to the brown planthopper, to the virus, and to both.

- Cultivars resistant to the vector have low disease incidence.
- Practice synchronized planting.
- Plow infected stubbles under the field after harvest to reduce the virus source.

❖ **Exercises**

Task 1: Read part 1.2.2 and answer the following questions.

1/ What parts of rice plant have got symptoms of diseases?

……..

2/ What part of rice plant has the most distinct appearance of symptoms?

……..

3/ How are parts of leaves inflected?

……..

4/ List forms and shapes of inflected leaves.

……..

5/ Is the early growth stage of crop attacked by the disease?

……..

6/ Where are the places of very high inflection?

……..

7/ Apart from using resistant varieties, what is being used in temperate countries to reduce disease incidence?

……..

Task 2: Refer part 1.2.2 and translate into English.

1. Nơi phồng to của gân lá có màu vàng nhạt, trắng hoặc nâu sậm.

…….

2. Mầm bệnh dễ lây lan ở những nơi mà cây lúa được trồng quanh năm.

…….

3. Sử dụng giống kháng bệnh cũng góp phần ngăn ngừa và làm giảm được bệnh.

…….

4. Triệu chứng của bệnh biểu hiện qua sự thay đổi màu sắc, hình dạng trên các bộ phận của lá như phiến lá, mép lá và gân lá.

…….

UNIT 2

VEGETABLES

MH35-02

Introduction

Improving the soil used to grow vegetables is one of the best ways to see bigger plants, more produce and fewer problems.

Objectives:

By the end of the lesson, learners are able to:

+ Enhance reading skills through exercises of comprehension such as skimming for main ideas, categorizing words with their meanings.
+ Understand meanings of new words and use in proper contexts.

1. Soil preparation for growing vegetables

1.1. Overview

Improving the soil used to grow vegetables is one of the best ways to see bigger plants, more produce and fewer problems. In general, garden soil should be loamy (or sandy and loamy), with plenty of organic matter. Soil should be tailored to meet the needs of specific vegetables whenever possible to improve your results. For example, tomatoes require plenty of organic matter and acidic soil where carrots cannot tolerate the same acidity and prefer a loose soil without stones or clumps.

Figure 2.1. Farmers are preparing soil for growing vegetables

(Photo: Ngo Diu)

1.2. Improvement

Step 1

Loosen the soil by tilling or digging and turning. Roots will be able to more easily penetrate soil that has been broken apart. This process also helps create pockets of air to supply oxygen that roots need to thrive. Heavy clay soil compacts, holding too much water, preventing air from getting to roots and roots from being able to develop well.

Step 2

Improve drainage. According to Mississippi State University, heavy soils like clay don't drain well, while sandy soil may drain too quickly. In very poor soils or areas with drainage trouble that resists repair, raised beds may be a better way to garden.