ENGLISH

新世纪农业科学专业英语

农学英语

English Course for Agronomy

李庆章/总主审　胡家英/总主编
郭丽华　李卓夫　李德义/编

哈尔滨工程大学出版社
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内容简介

本书共计18课，从植物组成开始，逐渐过渡到多项农业技术及当今主要农业发展趋势。每课包括Part A与Part B两部分，是农业高等院校的专业英语教材，也可供相关科技人员和管理者作专业阅读使用。

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总 序

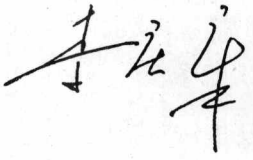
国家教育部1999年9月颁发的现行《大学英语教学大纲(修订本)》(以下简称《大纲》)规定:大学英语教学分为基础阶段(大学一、二年级)和应用提高阶段(大学三、四年级)。基础阶段的教学分为六级,或称大学英语一至六级(College English Bands 1 – 6,简称 CEB1 – 6)。应用提高阶段的教学要求包括专业英语(Subject – Based English,简称 SBE)和高级英语(Advanced English,简称 AE)两部分。学生在完成基础阶段的学习任务即达到四级或六级后,都必须修读专业英语。已达到六级要求且学有余力的学生,除修读专业英语外,还可以选修高级英语课程。《大纲》不仅对专业英语的重要性,而且对专业英语的词汇和读、听、说、写、译的能力都做了明确说明。

按照《大纲》要求,本套教材在选材时,既注重专业英语的文体特征,又避免使用科普文章。本书教材的75%左右为专业基础内容,25%左右为专业前沿文献,一般从专业英语期刊中选取。主要因为学生在两年基础阶段的学习后,虽然专业基础知识已经建立,但对专业前沿内容尚知之不多。选取期刊上的内容,目的在于让学生深入了解专业英语文体特征和专业文献阅读方法,用英语来学习专业知识,同时也是向双语教学的过渡。

专业英语与公共英语中的日常英语和文学英语并无本质区别,只是文体(genre)不同。专业英语并无独立的语言系统,虽然专业英语中有大量的专业名词和术语,但是它的基本词汇都来自公共英语。除此之外,专业英语的语法有其自身特性和语法现象,但语法结构都仍遵循公共英语的一般规则,并无自己的独立语法。由此可见,公共英语是专业英语的基础,二者相互关联而具有显著的共通性。在编写这套教材时,我们采用专业教师和英语教师结合。专业教师负责文献取材,英语教师负责练习编排,文献翻译由专业教师和英语教师共同负责。既注重语言文字的流畅,又注重内容术语的准确。

本套教材是学生完成英语从基础学习过渡到实际应用的有效教材。通过教学,从英语文献阅读、英语资料翻译到英文摘要写作,系统科学地培养学生的英语应用能力,也为日后双语教学的逐步开展铺路搭桥。

是为之序。



* 李庆章,1953年生,博士,生物化学教授,博士研究生导师,东北农业大学校长。

2007年2月

前言

在国际学术交流日益频繁，用英语撰写科技论文与文摘的要求日益迫切的今天，提高大学生专业英语水平的要求必须提到议事日程上来。经过两年基础英语学习之后，在掌握一定程度的英语语言知识与技能的基础上，再进行专业英语方面的训练，尽可能摆脱中国式英语表达的尴尬局面，促使学生把时间与注意力放在那些对科技信息有效交流的语言特征上，我们特组织专家编写了这本《农学英语》。

本书是农业院校或职业技术学院专业英语教材，也可适用于农业科技工作者作为专业阅读材料。课文内容按从基础到应用的递进形式安排，体现了从植物组成到多项农业技术及当今主要农业发展的趋势，既可帮助学生学习农业科技英语的表述方式，又可扩展学生的知识面，对于农业发展主流技术与特点有所了解。各篇课文文风不同，语言流畅优美，有很强的可读性。在结构的安排上，力求将知识性与趣味性结合起来，部分课文配有插图，尽量达到令人耳目一新的效果。

本书共分 18 课。每课包含 Part A 与 Part B 两部分。Part A 为精读内容，并配有帮助理解的注释与练习。Part B 为泛读内容，用于扩大学生的专业词汇与知识面。书后附有每课 Part A 课文的译文及 Part A 与 Part B 的练习答案，供学生作翻译与阅读练习时参考。

本书承蒙东北农业大学马凤鸣教授审稿，在此谨表深深的谢意。由于编者水平有限，书中难免有疏漏不妥之处，希望读者多提宝贵意见，以便再版时修订。

郭丽华

Preface

With the ever-increasing and frequent academic contact with other countries in the world, English level for the college studens is improving to meet the need for them to write academic papers and digests in English at the present time. After two-year general English study, on the basis of grasping English language skill to some degree, and assisted by the further practice in scientific stuely by using English, the students are supposed to get rid of the awful situation of expressing their ideas in Chinese-English. To urge them to concentrate time and attention on the language features which can make the communication concerning scientific information effective, we arrange the professionals to compile the book—English Course for Agronomy.

The book is the teaching material for scientific English of the agricultural universities and institutes, and also can be used as reading materials for agricultural mechanics. The contents are arranged from basic materials to applied knowledge, from the basic components of plant to diverse agricultural technologies, even the current main trends for agriculture. It can expand the students' knowledge and make them know something about the key technologies and features in agriculture as well as help the students learn the useful expressions of scientific English for agronomy. Each unit has different styles, with frequent and beautiful language and higher edibility. In the arrangement of structure, we aim to combine knowledge with interest and also attribute illustrations to some of units and make them get the pleasant satisfaction.

This book consists of 18 units, each of which contains two parts: Part A and Part B. Part A is for the intensive reading, with notes and exercises to understand the text. Part B is for the extensive reading, with the aim to enlarge the students' vocabulary and knowledge. The translations to the articles in Part A and keys to exercises in Part B are appended after the units so that the students can refer to when they do translation and exercises.

We are deeply grateful to Ma Fengming, professor of North-east Agricultural University for his going over the draft. With the limited level of the compilers, the reader can easily find the flaws in the book. Devoutly we wish the reader to put forward their precious proposals and kind corrections so that it will make us easier to correct them in the second edition.

Lihua Guo

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Unit 1

Part A

Plants

The Root

Plants grow rooted in the soil.[1] If you grasp a plant and pull it, the roots may not come out of the soil easily. The top part of the plant may break off, leaving the roots in the soil.[2] You may have to pull very hard indeed to uproot the whole plant. Gardeners know this, so when they are weeding they fork over the ground to loosen the roots of the weeds before trying to remove the weed plants.[3]

The roots keep the plant firmly fixed in the soil. They also support the stem of the plant so that the leaves can receive the light of the sun. The roots may be white or brown in colour. The water that the plant needs from the soil is absorbed by the roots.

The Shoot

The shoot grows above the ground in the light. On the stems there are buds. These buds may produce flowers, or make leaves. These buds usually occur just above the place, called the axil, where a leaf joins the stem.[4]

There is one bud at the end of the stem. This bud is where the stem gets longer, so it is here that growth occurs.[5] There are also a number of side buds in the axil of the leaf. These buds will sometimes also grow, giving the plant a bushy shape.

The Leaf

Leaves are usually green. If you see a grass leaf you know that it comes from a grass plant. You know what an oak leaf looks like. You know a clover leaf when you see one. All the leaves that grow on a certain type of plant have the same sort of shape. If you look at a leaf you will see that it is often thin and flat. The edge of the leaf may be smooth or may be toothed like a saw.[6] The edge of the oak leaf is toothed, but the teeth are large and blunt. Leaves like the oak and the apple are called simple leaves.[7] The strawberry and clover leaves are so deeply cut that each leaf looks as if it is three leaves. These leaves are called compound leaves. The parts of the leaf are called leaflets. There is only a bud at the base of the leaf stalk. All leaves have a bud in the axil where they join the stem.

Running down the center of each leaf is a thick ridge.[8] This is the main vein. These smaller veins may branch again to form even smaller veins. Veins are harder than the rest of the leaf blade and they form the skeleton of the leaf. They carry food and water between the leaf and the stem. When the leaf falls off the plant, the thin blade will rot quickly, but the veins will often survive for a longer time. You may find leaf skeletons under hedges.

The leaves of the grasses grow from their base so they get longer all the time. This is why the grass has to be cut during the summer. In the grasses the veins are nearly parallel. However in

many plants the veins form a net.

If you cut a leaf of a net-veined plant, it will not grow again. It will remain the shape you have cut it, until it falls off the plant.

Pollination

The flower has a special purpose. It enables the plant to reproduce itself.[9] In the process of sexual reproduction the special male sex cells have to be carried to the female sex cells so that they can join together to form a new plant.[10] The sex cells are called gametes and when they join, they form an embryo, which is a very young organism. This process of joining is called fertilization. In animals the male carries his gametes to the female but this is not possible in plants as they cannot move.

The Pollen Grain

Sexual reproduction varies in different plants. Some produce both male and female gametes in their flowers. Other plants, such as the holly and willow, have plants that are either male or female. These can only make male or female gametes. This is why some holly bushes never carry berries.[11]

The male gametes are carried in pollen grains. Before seeds can be produced the pollen grain must carry the male gamete to the female part of the flower.[12] Then the male gamete can fertilize the female gamete. During the journey the male gamete would quickly dry out and die if it was not protected by the covering of the pollen grain.[13]

The Flower

The male part of the flower is called the stamen. This consists of a thin stalk, called the filament, with a hollow anther at the top.[14] The pollen grains are made in the anther which burst open when it is ripe to release the pollen.

The female part of the flower is the carpel which contains one or more female gametes.[15] There are no openings in the wall of the carpel. The top of the carpel is sticky and is called the stigma. The pollen grains land on the stigma. The stigma is often on a stalk called the style.[16]

Type of Pollination

The process of transferring pollen grains from the male stamens to the female carpels is called pollination. There are two main types of pollination:

1. Self-pollination. This happens when the pollen is transferred from the anthers to the stigmas of the same flower. Many flowers avoid this happening because the anthers ripen at a different time from the carpels.

2. Cross-pollination. This occurs when the pollen of one plant is transferred to the stigma of another plant. There are two ways in which this can happen:

a. The pollen may be carried by animals such as insects, birds, or spiders.

b. The pollen may be carried by the wind.

Animal Pollination

The most common animals that pollinate flowers are insects. They are attracted to the flowers

by their brightly-coloured petals and by their scent. Many flowers produce nectar. This is a sugary substance that the insects eat. The nectar is usually at the base of the flower and the insect has to push past the stamens to reach it. As it does this some of the pollen will fall on the insect's body. Some will also fall on the stigma of the same flower. As the insect moves from flower to flower the pollen may be carried to the stigma of another flower. This will result in cross-pollination occurring. [17]

Pollen grains are rich in protein and are used by insects as food. [18] Hive bees have special hind legs to carry the pollen back to their hive. They store the pollen as bee bread and feed it to their queen and babies.

Wind-Pollination

This occurs when the pollen is carried by the wind to the stigmas of other flowers. Flowers that are wind-pollinated are often small and green. The anthers are on long drooping filaments so that they hang out of the flower. [19] The styles are also long and the stigma is feathery, to catch the pollen as it floats on the wind. [20] The pollen itself is either very small or has special wings to help it float on the air.

Technical Terms

root [ru:t] *vt.* 扎根,生根 *n.* 根
uproot [ʌp'ru:t] *vt.* 连根拔起
gardener ['gɑ:dnə] *n.* 园林工人,园丁
weed [wi:d] *v.* 除草
fork [fɔ:k] *vt.* 耙, 叉起
loosen [lu:sn] *vt.* 弄松,使松开
stem [stem] *n.* 茎
absorb [əb'sɔ:b] *vt.* 吸收
shoot [ʃu:t] *n.* 条,枝,枝条,苗
bud [bʌd] *n.* 芽
axil ['æksil] *n.* 腋
bushy ['buʃi] *adj.* 灌木状的
clover [kləuvə] *n.* 三叶草(Trifolium)
toothed [tu:θt] *adj.* 有齿的,锯齿状的
blunt [blʌnt] *adj.* 钝的
strawberry ['strɔ:bəri] *n.* 草莓(Fragaria)
leaflet ['li:flit] *n.* 小叶
ridge [ridʒ] *n.* 脊
vein [vein] *n.* 叶脉
blade [bleid] *n.* 叶片
skeleton ['skelitən] *n.* 骨架,(叶片的)脉络,筋
hedge [hedʒ] *n.* 树篱
parallel ['pærəlel] *adj.* 平行的
net [net] *n.* 网, 网状物
pollinate ['pɔlineit] *vi.* 传粉,授粉
pollination *n.* 传粉,授粉
reproduce [ˌri:prə'dju:s] *vt.* ,*vi.* 生殖,繁殖
reproduction *n.* 生殖,繁殖
sexual [seksjuəl] *adj.* 有性的,性的
sex [seks] *n.* 性
male [meil] *n.* 雄性
female ['fi:meil] *n.* 雌性
gamete [gə'mi:t] *n.* 配子
embryo ['embriəu] *n.* 胚
fertilization [fə:tiˌlai'zeiʃən] *n.* 授粉
fertilize ['fə:tilaiz] *vt.* 授粉,受精
pollen ['pɔlin] *n.* 花粉粒

holly [ˈhɔli] *n.* 冬青
willow [ˈwiləu] *n.* 柳
bush [buʃ] *n.* 灌木
grain [grein] *n.* 粒,颗粒
stamen [ˈsteimen] *n.* 雄蕊
filament [ˈfiləmənt] *n.* 花丝
anther [ˈænθel] *n.* 花药
carpel [ˈkaːpel] *n.* 心皮
sticky [ˈstiki] *adj.* 粘性的
stigma (**pl. stigmas or stigmata**) [ˈstigmə] *n.* 柱头
style [stail] *n.* 花柱
ripen [ˈraipən] *vt.* , *vi.* 成熟
insect [ˈinsekt] *n.* 昆虫
spider [ˈspaidə] *n.* 蜘蛛
petal [ˈpetəl] *n.* 花瓣
scent [sent] *n.* 香味
nectar [ˈnektə] *n.* 花蜜
sugary [ˈʃugəri] *adj.* 含糖的,甜的
protein [ˈprəutein] *n.* 蛋白质
hive [haiv] *n.* 蜂房
hind [haind] *adj.* 后部的
queen [kwiːn] *n.* 蜂王
droop [druːp] *vi.* ,*vt* 下垂
feathery [ˈfeðəri] *adj.* 羽毛状的
float [fləut] *vi.* 飘浮
fork over the ground 耙地
side bud 侧芽
edge of the leaf 叶缘
simple leaf 单叶
leaf stalk 叶柄
main vein 主脉,主叶脉
leaf blade 叶片

Notes to the Text

1. Plants grow rooted in the soil. 植物在土壤里扎根生长。
Rooted 是过去分词,在本句中既说明生长的方式,有状语的作用,又描述植物本身,起表语的作用。
2. The top part of the plant may break off, leaving the roots in the soil.
植物的上部可能折断,把根部留在土中。现在分词 leaving the root in the soil 表示伴随情况。
3. Gardeners know this, so when they are weeding they fork over the ground to loosen the roots of the weeds before trying to remove the weed plants.
园林工人懂得这一点,因此,在除草时,先耙一下地,把杂草的根部弄松,然后再除杂草。
4. These buds usually occur just above the place, called the axil, where a leaf joins the stem.
叶与茎连接处叫叶腋,这些芽一般长在紧靠叶腋的上方。
5. This bud is where the stem gets longer, so it is here that growth occurs.
这个芽(指顶芽)是茎向上伸长的地方,因此生长就发生在这里。
6. The edge of the leaf may be smooth or may be toothed like a saw.
叶缘既可是全缘的,也可以是锯齿状。
7. The strawberry and clover leaves are so deeply cut that each leaf looks as if it is three leaves.
草莓和三叶草的叶片都有很深的齿裂,每个叶片看上去象三片叶子一样。
as if 所引出的从句中动词本应用虚拟语气,但在现代英语中,尤其是在 looks as if 和 seems

as if 后往往用陈述语气。

8. Running down the center of each leaf is a thick ridge.
一条粗叶脉贯穿叶片的中部。
注意本句是倒装语序,强调 the center of each leaf 部分。

9. It enables the plant to reproduce itself.
花使植物能殖后代。itself 是动词 reproduce 的宾语。

10. In the process of sexual reproduction the special male sex cells have to be carried to the female sex cells so that they can join together to form a new plant.
在有性繁殖过程中,必须把专门的雄性生殖细胞送到雌性生殖细胞那里,使两者得以结合,形成新的植物。

11. This is why some holly bushes never carry berries.
这就是有些冬青树从不结果的原因。

12. Before seeds can be produced the pollen grain must carry the male gamete to the female part of the flower.
花粉粒必须把雄配子送到花的雌性部分,种子才能生成。

13. During the jouney the male gamete would quickly dry out and die if it was not protected by the covering of the pollen grain.
在传粉的过程中,如果没有花粉粒外皮的保护,雄配子很快就会失去水分而死亡。
注:虚拟条件句 if it was not protected 中的 was 应为 were ,这种用 was 代替 were 的现象在现代英语中较为常见。

14. This consists of a thin stalk, called the filament, with a hollow anther at the top.
雄蕊由一根称为花丝的细柄构成,花丝顶部为中空的花药。

15. The female part of the flower is the carpel which contains one or more female gametes.
花的雌性部分是包含一个或数个配子的心皮。

16. The stigma is often on a stalk called the style.
柱头往往长在称为花柱的小柄上。

17. This will result in cross-pollination occurring.
这样就实现了异花传粉。

18. Pollen grains are rich in protein and are used by insects as food.
花粉粒含有丰富的蛋白质,昆虫用其作为食物。

19. The anthers are on long drooping filaments so that they hang out of the flower.
花药生长在下垂的长花丝上,伸出到花的外面。

20. The styles are also long and the stigma is feathery, to catch the pollen as it floats on the wind.
花柱也很长,柱头呈羽毛状,便于接受在风中飘浮的花粉。

Study Questions and Exercises

I. Answer the following questions according to the text you learned:

1) How many parts does the plant consist of? What are they?

2) How many types of pollination does the passage describe?

3) Could you explain the function of the root?

4) What is the function of the leaves?

5) Which type of pollination do holly and willow belong to respectively?

6) What attracts the insects to pollinate the plants?

7) What is the characteristic of wind-pollination anther and the carpel?

Ⅱ. Give a brief summary about plant.

Ⅲ. Fill in the blanks with appropriate words according to the first letters given:

1) The top part of the plant may break off, l _____ the roots in the soil.

2) The roots keep the plant firmly f _____ in the soil.

3) These buds usually occur just above the place, called the a _____ where a leaf joins the stem.

4) All the l _____ that grow on a certain type of plant have the same sort of shape.

5) P _____ t _____ is usually done by wind or insects.

6) Seeds cannot be produced until the f _____ has been pollinated.

7) Flowers with stamens and no c _____ p _____ are called male flowers.

8) The stamens are found near the center of the flower and each one consists of a f _____ m _____ and an a _____ t _____.

9) Many flowers produce a sugary substance called n _____.

10) F _____ z _____ occurs when male gametes and female gametes join together.

Ⅳ. Translate the following into Chinese:

Pollination may take place in various ways. Pollen may be carried from the anther of a flower to the stigma of the same flower or to the stigma of another flower of the same plant. This is called self-pollination. Certain kinds of plants, including peas, cotton and wheat, are well adapted to self-pollination. They do not seem to suffer from this inbreeding (近亲繁殖). However, there are often definite advantages in cross-pollination—that is , the transfer of pollen to the stigma of flowers on other plants. Generally speaking, plants that have been cross-pollinated are more vigorous and grow better. If self-pollination occurs in plants whose flowers are normally cross-pollinated, a poor fruit crop or seed crop may result.

Cross-pollination is often brought about by insects, which look for nectar or pollen or both in a flower. In doing so, they become dusted with pollen grains. When they visit other flowers, some of the pollen is brushed off onto the stigmas of these flowers. This arrangement is mutually beneficial to flowers and insects: the flowers are pollinated, and the insects obtain food.

Part B

WHEAT-Triticum Spp.
(Gramineae-Triticinae)

Description

Wheat, a cereal grass of the Gramineae (Poaceae) family and of the genus Triticum and its edible grain, is the world's largest cereal-grass crop. Historians believe it has been growing since Paleolithic times and cultivated for at least 6,000 years. Its status as a staple is second only to rice. One reason for its popularity is that, unlike other cereals, wheat contains a high amount of gluten, the protein that provides the elasticity necessary for excellent bread making. Although over 30,000 varieties of wheat exist, the two major types are bread wheat and durum wheat. Hard wheat is high in protein (10 to 17 percent) and yields a flour rich in gluten, making it particularly suitable for yeast breads. The low-protein (6 to 10 percent) softer type yields a flour lower in gluten and, therefore, better suited for tender baked goods, such as biscuits, pastries, and cakes. T. durum wheat, although high in gluten, is not good for baking. Instead, it is often ground into semolina, the basis for excellent pasta, such as spaghetti and macaroni.

In the United States, wheat is also classified according to the time of year it is sown-namely, spring wheat (sown in the spring) and winter wheat (sown in the fall). The unprocessed wheat kernel, commonly known as a wheat berry, is made up of three major portions—bran, germ, and endosperm. Wheat bran, the rough outer covering, has little nutritional value, but plenty of fiber. During milling, the bran is removed from the kernel. It is sold separately and used to add flavor and fiber to baked goods. Wheat germ, essentially the embryo of the berry, is a concentrated source of vitamins, minerals, and protein. It has a nutty flavor and is very oily, which causes it to turn rancid quickly. People use wheat germ which is sold in both toasted and natural forms, to add nutrition to food. Wheat germ oil, an extraction of the germ, is strongly flavored and expensive. The wheat endosperm, which makes up the majority of the kernel, is full of starch, protein, niacin, and iron. It is the primary source of many wheat flours. In addition to flour, wheat is available in several other forms, including wheat berries, cracked wheat, and bulghur wheat. Wheat berries are whole, unprocessed kernels, whereas cracked wheat is the whole berry broken into coarse, medium, and fine fragments. Both are sold in health-food stores and may be cooked as cereal, or in pilafs, breads, or other dishes.

Statistics

Global production of wheat is now approaching 600 million tons, with international trade approximately 100 million tons annually. Wheat is Asia's second most important staple and has been growing much faster than rice. It now makes up 19.2 percent of total calorie supply. Asia is the leader in all three growth parameters-area, output, and yield. In 1992 – 1994, Asia accounted

for 67 percent of the developing world's production (39 percent in China), 19 percent West Asia-North Africa, 7 percent in Latin American and the Caribbean, and less than 1 percent in Sub-Saharan Africa.

Wheat now provides one-fifth (1992) of total developing country food supply, up from 15 percent in the early 1970s. In 1992 - 1994, developing countries accounted for 45 percent of world wheat production (551 million tons) and 46 percent of world wheat area (219 million ha.). For the developing regions as a whole, the annual demand for wheat is projected to grow at 3 percent over the coming decade. Demand will rise particularly rapidly in Sub-Saharan Africa, at 5.1 percent per annum, and at 2.9 percent in other regions.

Wheat is the main staple crop in the Middle East and North Africa (MENA) region, which is also the leading per-capita producer of wheat. The MENA region consumed 160 percent of the wheat it produces, indicating the continuing need for heavy imports. Wheat covers an exceptionally high 44.3 percent of the region's total food supply. Durum wheat accounts for 5 percent of developing country wheat production, and 80 percent of it is grown in the MENA region.

Wheat is becoming increasingly popular in Africa, with output up two-thirds in the past 20 years, because of rising yields (63 percent). With an average 95.1 percent yield increase in all developing regions (1970/1974 - 1990/1994), wheat was the best performer among the food crops reviewed. It also was the only crop the yield increases of which closely matched the quantitative demand growth (97.3 percent) over the same period. However, the wheat area harvested expanded by 17 percent over the period; thus, indicating that wheat output exceeded quantitative demand by a considerable margin, bringing down prices and substituting wheat for other staples.

How Wheat is Used

The greatest portion of the wheat flour produced is used for breadmaking. Wheats grown in dry climates are generally hard types and are best suited for this activity. The softer wheats of the humid areas produces flour suitable for cakes, crackers, cookies, pastries, and household flours. Durum wheat semolina is used for making pastas, or alimentary pastas. Although most wheat is grown for human food, industry uses small quantities to produce starch, paste, malt, dextrose, gluten, alcohol, and other products. Inferior and surplus wheats and various milling byproducts are used for livestock feeds.

Nutritional Information

Wheat grain, a major source of energy in human diet, is higher in protein content than almost all other cereals. On an average the kernel contains 12 percent water, 70 percent carbohydrates, 12 percent protein, 2 percent fat, 1.8 percent minerals, and 2.2 percent crude fibers. Thiamine, riboflavin, niacin, and small amounts of vitamin A are also present. A pound of wheat contains about 1,500 calories. In West Asia/North Africa, as well as Central Asia, it contributes more calories to diets than all other cereals combined.