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EFFECT OF IRRIGATION ON INTERCROPPING SYSTEMS OF WHEAT (TRITICUM AESTIVUM L.) WITH PEA (PISUM SATIVUM L)
(ВПЛИВ ЗРОШЕННЯ НА СИСТЕМИ ПІДСІВУ ПШЕНИЦІ (TRITICUM AESTIVUM L) З ГОРОХОМ (PISUM SATIVUM L)

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Підсів є давньою та загальновживаною сільськогосподарською практикою і передбачають вирощування двох або більше сільськогосподарських культур одночасно на одній і тій же ділянці землі, які можуть покращити урожайність, використання екологічних ресурсів, якість продукції та стан ґрунту. Метою цього дослідження було вивчення впливу доступності води пшенично-горохових підсівних культур з використанням агротехнічних та фізіологічних характеристик.

Ключові слова: *урожай зерна, компоненти врожайності, коефіцієнт земельного еквівалента, суміш, сорт.*

Intercropping is an old and commonly used agricultural practice and involves the cultivation of two or more crops in the same area of land at the same time and may improve yield, the use of the environmental resources, product quality, and soil health. The objective of the present study was to study the effect of water availability of wheat-pea intercrops using agronomic and physiological characteristics.

Keywords: *grain yield, yield components, land equivalent ratio, mixture, cultivar.*

Over the last decade, there has been considerable interest in the low-input agricultural systems across the world and especially in Europe. This is because modern agriculture with the extensive use of agrochemicals, monocultures, and mechanization led to oversimplification of the agricultural systems and to a significant loss of biodiversity. Therefore, it is important to increase the farm biodiversity through agricultural practices that promote the ecosystem services and maintain soil fertility, controlling pests and promote sustainability. The farm biodiversity can be increased using crop rotation, cover crops, intercropping, and agroforestry [1,2].

Water stress is very important for agricultural crops and affects the yield and product quality in many areas and especially in the Mediterranean region. Moreover, climate change will affect

water availability and will be a limiting factor for many countries the following years. Therefore, it is important to use water resources more efficiently which will help us to preserve the valuable water resources. One of the ways to conserve water is by using the appropriate cropping system and also appropriate crop species and cultivars, which have low requirements for water [3]. A cropping system that has been reported that increases soil water conservation is intercropping [3,4,5].

The monocrop of the pea cultivar Isard was significantly affected by the irrigation treatments as the grain yield was reduced by 34% under water stress conditions compared with the irrigated treatment. Similarly, both mixtures of Isard, e.g., Yecora E-Isard and Elissavet-Isard were yielded lower by 42 and 28%, respectively, under water stress compared with the irrigation. In contrast, Olympos monocrop, as well as the mixtures of Olympos with both wheat cultivars were not affected by the water stress conditions, as the reduction of grain yield was not statistically significant.

The number of pods per plant was also affected by the irrigation treatment and also by the mixtures. Isard showed a significant increase with irrigation in monocrops and its intercrops, as it was 29, 30, and 31% at the monocrop, Elissavet-Isard and Yecora E-Isard intercrops, respectively. In contrast the number of pods for Olympos was reduced with irrigation and it was not affected by intercropping. Similar trend to that of the number of pods per plant was also observed for the length of pods, as there was 11 to 14% increase at the Isard monocrop, and its intercrops, under irrigation. On the other hand, the number of grains per pod was not significantly affected by the irrigation treatment.

Pea-wheat intercropping was used across the world for forage and grain production. In the present study we showed that intercropping can be affected by water availability and also by the selection of the appropriate cultivar which can affect the productivity of the intercropping system and also WUE. The grain yield was higher in Isard-Yecora E and Isard-Elissavet irrigated intercrops compared with the monocrops and other intercrops. Under rainfed conditions, both wheat cultivars, Olympos pea and their intercrops indicated high adaptation capacity to less water availability, whereas Isard and its intercrops performed better under irrigation.

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MANAGEMENT - THE BASIS OF GOVERNANCE
(МЕНЕДЖМЕНТ – ОСНОВА УПРАВЛІННЯ)

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Наш світ іде поруч з часом, а тому кожного дня з'являється щось нове, так виникла необхідність передання власником певних повноважень дорученій особі, з метою досягнення поставленої мети. Прийняття ефективних рішень потребує пошуку та аналізу різної інформації наприклад, слабкі та сильні сторони конкурентів у бізнесі чи спроможність компанії займати головні позиції, для цього й існує загальне поняття менеджмент.

Ключові слова: *менеджмент, менеджер, управління, організація, бізнес, вплив, ефективність, декодування, контроль.*

Our world goes hand in hand with time, so something new appears every day, so there is a need to transfer certain powers from the owner to the person in charge, in order to achieve this goal. Making effective decisions requires finding and analyzing various information, such as the strengths and weaknesses of competitors in the business or the company's ability to occupy key positions, and for this there is a general concept of management.

Keywords: *management, organization, business, influence, efficiency, decoding, control.*

Management is often interpreted as principles, methods, functions, tools for managing people, institutions, companies or organizations for a specific purpose.

From different angles, from a functional point of view, management is a process of planning, organizing, motivating, controlling and regulating, designed to ensure the formation and