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JPRS: 5183

CSO : R-75-N/J

SELECTED TRANSLATIONS OF
ABSTRACTS IN REFERATIVNYY ZHURNAL - BIOLOGIYA, No. 6, 1959

This report consists of complete translations of the Russian-language abstracts of articles, which were originally published in the Sino-Soviet bloc and in Yugoslavia.

The Soviet subject classification system used in the original Russian language abstracts has been followed in this publication.

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DTIC QUALITY INSPECTED 3

Country : USSR
Category : Soil Science. General. J

Abs Jour : RZhBiol., No 6, 1959, No 24568

Author : Yastrebov, M. T.
Inst : Academy of Sciences USSR,
Title : Natural Radioactivity of the Zonal Soils in
the European Part of USSR,
Orig Pub : Dokl. AN SSSR, 1958, 119, No 3, 586-589

Abstract : Determination results of the over-all natural radioactivity of the zone soils (NRZS), located along the meridian from Moscow to the Krimean southern shores are reported (June-July 1955). According to the absolute sizes of the over-all NRZS, the investigated soils are arranged in the following order: peaty-podzol, heavy chernozem, light chernozem, brown forest on scaly schists. In the appea-

Card : 1/2

Country : USSR
Category : Soil Science. General. J

Abs Jour : RZhBiol., No 6, 1969, 24569

Author :
Inst :
Title :

Orig Pub :

Abstract : rance of the over-all NRZS, water and to some extent cosmic factors have great significance.
-- P. V. Shramko

Card : 2/2

Country : USSR
Category : Soil Science. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24569
Author : Tur, P. Z.
Inst : L'gov Experimentally Selective Station.
Title : The Effect of Perennial Grasses on Soil Fertility Changes.
Orig. Pub. : Byul. nauchno-tekhn. inform. L'govsk. opytno-selekts. st., 1958, vyp. 1, 39-43
Abstract : In Kurskaya Oblast the effect of the grass mixture - clover plus alfalfa plus fescue - on the fertility of the chernozem soil has been studied from the year 1948. The grass harvest in the first year of its use was 40-45 and in the second year 50-55 c/ha. More than two-thirds of the entire quantity of roots is found in the upper 10 cm layer of the soil. The grasses
Card : 1/2

Country : USSR
Category : Soil Science. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24569
Author :
Inst :
Title :
Orig Pub :
Abstract : improve the physical properties of the soil. Content of the biologically active organic substance in the soil is visibly increased.
-- A. M. Smirnov

Card : 2/2

Country : CZECHOSLOVAKIA
Category : Soil Science. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24572
Author : Tjaglo, G.
Inst : Czechoslovakian Academy of Agricultural Science.
Title : A New Method for the Obtaining of Soil Mono-
liths.
Orig Pub : Sbor Ceskosl. akad. zemed. ved. Rada-Rostl.
vyroba, 1956, 29, No 3, 203-212

Abstract : A device is described, by means of which a thin layer of soil is cut off under laboratory conditions from a soil monolith (measuring 25 x 25 x 105 cm). In a special frame the soil specimen is treated at average humidity with colorless nitrocellulose lacquer. The latter solidifies the soil, preserving the natural color of the soil horizons. The

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Country : CZECHOSLOVAKIA
Category : Soil Science. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24572
Author :
Inst :
Title :
Orig Pub :

Abstract : soil monolith, obtained in this manner, is kept under glass for a long time.

Card : 2/2

Country : USSR
Category : Soil Science. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24573
Author : Uspanov, U. U.
Inst : Institute of Soil Science AS KazSSR.
Title : Works of the Institute of Soil Science AS Kaz-
SSR in the Regions of Virgin and Waste Lands.
Orig Pub : Tr. In-ta pochvoved. AN KazSSR, 1957, 7,
3-6
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. General. J
Abs Jour : RZhBiol., No 6, 1959, 34574
Author : Fat'yanov, A. S.
Inst : Gor'kov State Pedagogical Institute.
Title : Importance of the Economic Activity of Man in
the Development of the Northern Forest-and-
Steppe Soil Cover.
Orig Pub : Uch. zap. Gor'kovsk. gos. ped. in-t, 1958,
20, 34-58
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. General. J
Abs Jour : RZhBiol., No 6, 1959, 24577
Author : Semchenkov, G. Ya.
Inst : Belotserkov' Agricultural Institute.
Title : Properties and Fertility of the River Ros'
Water-Meadow Soils.
Orig. Pub : Nauchn. zap. Belotserkovsk. s.-kh. in-t,
1958, 5, 211-219
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24581
Author : Labenets, Ye. M.
Inst : Soil Science Institute AS USSR.
Title : Mineralogical Composition of Fractions Larger
than 0,001 mm in Soils of the Central Part of
Kizyl-Arvat Foot-of-the-Mountain Plain.
Orig. Pub. : Tr. Pochv. in-ta AN SSSR, 1958, 53, 39-50
Abstract : A mineralogical composition of fractions larger
than 0,001 mm of takyrs soil, of alluvial periodically-inundated soil, primitive sierozem and
of laomy soils from temporary river beds is
submitted. Investigations were conducted with
the assistance of a polarizing microscope and

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Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24581

Author :
Inst :
Title :

Orig Pub :

Abstract : immersed liquids. The basic components of the mineralogical composition of the fractions are quartz, feldspar (principally, albite and microcline) and mica; the accessory minerals are hornblende, epidote, chlorite, cyocite, pyroxene and in smaller quantities titanite, granite, circoe and rutile. Usually there are

Card : 2/5

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24581

Author :
Inst :
Title :

Orig Pub :

Abstract : present transparent ore minerals. With the decrease of the fractions' sizes, the mica content is increased and the contents of quartz and feldspar are decreased. For the takyr soil, feeble signs of biochemical weathering of minerals and a slight rolling capacity of the grains are noted. In alluvial

Card : 3/5

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24581

Author :
Inst :
Title :

Orig Pub :

Abstract : soils, considerable contents of mica and feldspar are noted, as well as cyosite. In primitive sierozem, the quantity of quartz increases. Appearance of sericitized and modified minerals are observed. The mineralogical composition of loamy soils is distinguished by an increase of the mica content. Data of

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Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24581

Author :
Inst :
Title :

Orig Pub :

Abstract : the total chemical analyses of the fractions, obtained from takyrs soils, are submitted. An increase of Mg content in the finer fractions and their impoverishment of Ca is noted. --
N. I. Bazilevich

Card : 5/5

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, 24582

Author : Gorbunov, N. I.
Inst : Soil Institute AS USSR.
Title : Mineralogical Composition and Properties of Suspended Matter in the Amu-Dar'ya and Kura Rivers.
Orig Pub : Tr. Pochv. in-ta AN SSSR, 1958, 53, 51-53

Abstract : Suspended matter of the Kura River and its tributaries is richer in silt fractions (45.5-57.9 percent) than the suspended matter of the Amu-Dar'ya River. Study of the mineralogical composition of the suspended matter's silt fractions was conducted by thermal, rentgenographic methods and occasio-

Card : 1/4

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils.

Abs Jour : RZhBiol., No 6, 1959, No 24582

Author :
Inst :
Title :

Orig Pub :

Abstract : nally with the aid of an electronic microscope. Beydellite and hydromica were identified in the suspensions; beydellite predominates in the suspensions of the Kura River, and hydromica in Amu-Dar'ya. The exchange capacity of a fraction less than 0.001 mm, from the Kura's suspended matter constituted more than

Card : 2/4

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24582

Author :
Inst :
Title :

Orig Pub :

Abstract : 46 milliequivalents, that of Amu-Dar'ya did not exceed 36 milliequivalents; the maximal hydroscopicity amounted to 20-23 percent and about 18 percent, respectively. The silt fraction of Kura's suspended matter was somewhat richer in R_2O_3 and poorer in SiO_2 than Amu-Dar'ya's suspensions. The ratio² of $SiO_2 : R_2O_3$ was larger than 3 and smaller than 3, respecti-

Card : 3/4

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24582

Author :
Inst :
Title :

Orig Pub :

Abstract : vely. The differences of the mineralogical composition and physico-chemical and physical properties condition the different effect of irrigating waters on the properties of the soils. -- N. I. Basilevich

Card : 4/4

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24583

Author : Yariлова, Ye. A.

Inst : Soil Institute AS USSR.

Title : Mineralogical Characteristics of Solonetz Soils in the Chernozem Zone.

Orig Pub : Tr. Pochv. in-ta AN SSSR, 1958, 53, 131-142

Abstract : By the micromorphological method with the aid of microscopic sections under a microscope and by the method of mineralogical analysis in immersion liquids, two solonetz soils in the chernozem zone, representing successive stages of the solonetz developmental process in chernozem soil, were studied. The development of the solonetz process over the

Card : 1/4

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24583

Author :

Inst :

Title :

Orig Pub :

Abstract : chernozem soil brought about important changes of the mineralogical composition in 50 years. Gypsum and tenardite appeared; the soil became enriched with Ca in the microcrystalline form due to the migration of the solutions to the surface horizons. The formation of iron-manganese-humus concretions

Card : 2/4

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils.

Abs Jour : RZhBiol., No 6, 1959, No 24583

Author :
Inst :
Title :

Orig Pub :

Abstract : takes place with greater intensity, thanks to the periodic advent of anaerobic conditions; a dispersion of the minerals is observed, particularly of crystalline quartz; there appeared the absent-in-the-chernozem mobile colloid-morphic argillaceous mineral. According to its properties and chemical composition, the latter is closely related to ferrous beydellite. The

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Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24583

Author :
Inst :
Title :

Orig Pub :

Abstract : migration of this mineral from the upper horizons to the alluvial ones are noted. The migration is accomplished, it seems, in complex with fulvic acids and mobile humous acids. Specific secondary argillaceous minerals, inherent to the solonetz-soil formation only, were not found. -- N. I. Bazilevich

Card : 4/4

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24586
Author : Nikol'skiy, N. N.
Inst : Moscow Agricultural Academy imeni K. A. Timiryazev.
Title : The Effect of Hydroxide Solutions of Mono- and Bivalent Minerals on the Water Resistance of the Chernozem's Soil Aggregates.
Orig Pub : Dokl. Mosk. s.-kh. akad. im. K. A. Timiryazeva, 1957, vyp. 31, 228-234
Abstract : The effect of the hydroxide solutions of Na, K, Ca, Mg and Ba on the structure stability of the chernozem virgin lands in Kamen Steppe was compared. The soils were from under the forest and from old arable lands. The effect of alkaline and acid solutions from a pH higher
Card : 1/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24586
Author :
Inst :
Title :
Orig Pub :
Abstract : than 12 to a pH of 2 during 24 hours did not display a more destructive action on the water-resistant soil aggregates than the action of distilled water; experiments with KOH and NaOH were the exception. Solutions of Ba and K hydroxydes produced a higher content of water-resistant aggregates than did experiments with water. The Mg hydroxyde solution did not differ
Card : 2/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24586
Author :
Inst :
Title :
Orig Pub :
Abstract : from water in its effect, and NaOH and KOH solutions decreased the content of water-resistant aggregates in the soil. The resistance of the aggregates in the soil is decreased with the increase of the concentration of NaOH solutions. -- M. L. Yaroshenko
Card : 3/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24590
Author : Danilin, A. I.
Inst : Scientific Research Institute of Hydrometeorological Apparatus Construction.
Title : The Ohmic Method of Measuring Soil Humidity with the Application of Carbon Electrodes in Glass Fibers.
Orig Pub : Tr. N.-i, in-ta gidrometeprol. priborostr., 1957, vyp. 5, 52-78
Abstract : Simple and cheap producers of soil humidity (carbon and gypsum) were developed, which make it possible to measure soil humidity ranging from field-water capacity to the atmospheric dry state. Intermediate media - glass fibers,
Card : 1/2

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24590

Author :
Inst :
Title :

Orig Pub :

Abstract : gypsum or river sand - are used to improve refinement of the work. Satisfactorily accurate data are obtained with the application of a megohm meter of the M-1101 type. Bibliography of 12 titles. -- I. G. Tayurupa

Card : 2/2

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils.

Abs Jour : RZhBiol., No 6, 1959, No 24591

Author : Vladychenskiy, S. A.
Inst : -
Title : A Few Remarks about the Problem of Water-Regime Types.

Orig Pub : Pochvovedeniye, 1958, No. 6, 118-119

Abstract : Refinement and classification of the water-regime types, developed by A. A. Rode, is proposed. Particularly, it is proposed to differentiate the stagnant type of the water regime for bog and boggy soils, the water-meadow type of the water regime and the water-regime type of sands and sand soils. -- S. A. Vladychenskiy

Card : 1/1

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24593
Author : Konstantinov, A. R.; Molchanov, A. L.
Inst : Kazakhstan Scientific Research Hydrometeorological Institute.
Title : Evaluation of Evaporation Changes and Water Balance of the Soils in the Steppe and Forest-and-Steppe Zones of the USSR European Territory under the Influence of Agricultural and Forest Amelioration Measures.
Orig Pub : Tr. Kazakhsk. n.-i. gidrometeorol. in-ta, 1957, vyp. 8, 64-93
Abstract : In the past, during unscientific agriculture, about 86 percent (353 mm) was consumed by evaporation from the total amount of precipitation for these territories, 11 percent (46 mm) was
Card : 1/2

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24593
Author :
Inst :
Title :
Orig Pub :
Abstract : used up for surface drainage and 3 percent (14 mm) flowed underground. Approximate computations of the water balance for the next decades were presented. -- S. A. Nikitin
Card : 2/2

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24595
Author : Bazilevskaya, Ye. S.
Inst : -
Title : Characteristics of the Filtration Properties of Soils and Suspended Matter in the Amu-Dar'ya River.
Orig Pub : Pochvovedeniye, 1958, No. 4, 102-107
Abstract : With the help of Russell's apparatus (improved by Gotikov), the water permeability of soils in the agriculture-irrigated alluvia and suspended material, collected in Chimbay Oasis (delta of Amu-Dar'ya), was determined. The investigation was conducted on fractions of 0.1-0.01 mm, 0.005-0.01, 0.001-0.005 and
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Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24595
Author :
Inst :
Title :
Orig Pub :
Abstract : smaller than 0.001 mm, obtained from soils and suspensions, in their mixtures and specimens on the whole. Filtration speed was determined through layers of 5-10 mm. The filtration speed decreased with the increase of soil dispersion: a fraction of 0.001-0.005 mm has a filtration capacity of 15 ml in 1 hour, and a fraction of less than 0.001 mm has a filtration capacity
Card : 2/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24595

Author :
Inst :
Title :

Orig Pub :

Abstract : of 1.2 ml at the layer's thickness of 5 mm. With the increase of the number of layers, their thickness and percolation time of water through the soil, a decrease of the filtration speed is observed. Bibliography of 18 titles. -- N. G. Minashina

Card : 3/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24598

Author : Chernov, V. A.
Inst : Academy of Sciences USSR.
Title : Concerning the Dependence between the Total Exchangeable Cations and the Content of Particles of Less than a Micron in Podzol Soils.

Orig Pub : Dokl. AN SSSR, 1958, 119, No 5, 1017-1019

Abstract : Using the soils of Kaliningradskaya Oblast as an example, it was demonstrated that a close dependence between the sum of absorbed bases and the content in soil specimens of particles, less than 1 μ , may serve as a method for diagnosis of soil-formation rocks.

Card : 1/1

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24599
Author : Dzhavadyan, T.
Inst : -
Title : Securing the Soils of Karabakh Steppe with Nutrient Elements.
Orig Pub : Sotz. s. kh. Azerbaydzhana, 1957, No. 6, 28-30
Abstract : Meadow soils, located in Karabakh Steppe (Azerbaydzhana), contain 213.4-246.7 t/ha of organic substances and up to 15.3 of total N, 7.9 t of total P and 5.5 t of exchangeable K. The gray-brown soils contain, respectively, 75.8-84.4, 6.8-12.4, 7.1; of total K 44-53.3 t/ha. In comparison with meadow soils, they contain five times more of easily hydro-
Card : 1/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24599
Author :
Inst :
Title :
Orig Pub :
Abstract : lyzable N. The sierozems are poor in total N (5.6 t/ha), but contain sufficient reserves of easily-hydrolyzable N. Reserves of assimilated phosphoric acid are not large (0.077 t/ha). According to reserves of total K, they exceed all other soils, but in comparison with exchangeable K, they occupy last place. These
Card : 2/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, 24599

Author :
Inst :
Title :

Orig Pub :

Abstract : soils require organic substances for their enrichment. -- E. A. Nikitin

Card : 3/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24601

Author : Koren'kov, D. A.
Inst : -
Title : Determination of Ammonia and Nitrates in Soil (Method of Microdiffusion in the Modification of Bremner and Shaw).

Orig Pub : Udobreniye i urozhay, 1958, No. 8, 57-58

Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24602

Author : Aderikhin, P. G.

Inst : -

Title : Absorption of Phosphate Ions by Soils and Plants.

Orig Pub : Pochvovedeniye, 1957, No. 5, 84-89

Abstract : Under field experiments of 1950-1955, on clayey alkaline chernozem of the Voronezh University Botanical Garden, 90 kg of P_2O_5 (in the form of P_2S_5), 60 kg of N (in the form of $(NH_4)_2SO_4$) and 60 kg of K_2O (in the form of KCl) were introduced in the ground to a depth of 5-8 cm. The count of the phosphates was conducted according to the plan of F. V.

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Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24602

Author :

Inst :

Title :

Orig Pub :

Abstract : Chirikov. The introduced P_2S_5 was rapidly absorbed by the soil, principally in its arable horizon with transition into compounds soluble in acetic acid and then into compounds soluble in 0.5 n. HCl. After preliminary (annually, up to 6 years) treatment by the phosphates, the P_2O_5 absorption by the soil perceptibly diminished. The introduction of N and K did not

Card : 2/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24602

Author :
Inst :
Title :

Orig Pub :

Abstract : affect the P_2O_5 content in the soil. The maximum absorption of P by spring wheat and corn was observed at the beginning of development; the minimum, at the end. -- B. Ye. Kravtsova

Card : 3/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24605

Author : Kardinalovs'ka, R. I.
Inst : -
Title : Determination of Absorbed Potassium in Soils with the Aid of Sodium Tetraphenylborate.
Orig Pub : Byul. nauchn. inform. po zemlerobstvu, 1958, No. 3, 64-66

Abstract : Results are submitted for the content determination of absorbed potassium in the soils with the aid of sodium tetraphenylborate, hydrochloric acid and the cobalt nitrite method (Milne Modification). A wide application at the massive analyses of the soils is recommended - the method of determination with the aid of

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Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24605
Author :
Inst :
Title :
Orig Pub :
Abstract : sodium tetrapsenylborate. This method may be used to obtain rapidly data of adequate accuracy (± 2 percent). -- P. V. Shramko

Card : 2/2

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24606
Author : Zyrin, N. G.; Orlov, D. S.
Inst : Moscow University.
Title : Determination Methods of the Activity of Sodium Ions in Soils and Soil Solutions.
Orig Pub : Vest. Mosk. un-ta, Ser. biol. pochvoved., geol., geogr., 1958, No. 1, 71-80
Abstract : The activity of sodium ions in soils and soil solutions may be determined by a special glass electrode with Na-function with the aid of a lamp potentiometer. The magnitude of activity is closely connected with the genetic peculiarities of certain soils and may serve as a method for an approximate diagnosis of solonetz and saline soils. For these purposes, it

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Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24606

Author :
Inst :
Title :

Orig Pub :

Abstract : is recommended to utilize the pNa index (the negative logarithm of the Na-ions' activity). This same method is also useful in determining the concentration of sodium ions in saline extracts from the soils under conditions of the application of 0.4 m CaCl₂. -- D. S. Orlov

Card : 2/2

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24607

Author : Kopteva, Z. F.
Inst : Timiryazev Agricultural Academy.
Title : Concerning the Study of Sesquioxides' Seasonal Dynamics in Peaty-Podzol Soils.
Orig Pub : Izv. Timiryazovsk. s.-kh. akad., 1958, No1 1, 217-220

Abstract : A method for determining mobile forms of sesquioxides is briefly described. This method permits one to analyze Fe Ferrous or ferric), Al and Mn. The method may be utilized under field conditions when working with wet soil specimens. -- A. M. Smirnov

Card : 1/1

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24608

Author : Tsyurupa, I. G.
Inst : Soil Institute AS USSR.
Title : Effect of the Crystallization Degree of Iron Compounds on Their Solubility.

Orig Pub : Tr. Pochv. in-ta AN SSSR, 1958, 53, 113-130

Abstract : The quantity of abstracted Fe, diluted by acids, gives an idea of the crystallization degree of its compounds in soils. Natural compounds of Fe, depending upon their solubility in mineral acids, are subdivided into several groups: (1) stable minerals of the Fe oxide and hydroxide groups (incapable of serving as

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Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24608

Author :
Inst :
Title :

Orig Pub :

Abstract : a source of free Fe accumulation in soils); (2) comparatively stable secondary formations (limonite, bauxite) - the clayey minerals, ferri-halloysite, nontronite - belong to this group; (3) soluble clayey minerals (for instance, biotite) and secondary soil formations (the latter are capable of serving as a source of free Fe accumulation in the soil). It is indicated that

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Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24608
Author :
Inst :
Title :
Orig Pub :
Abstract : at a prolonged action of acid solutions (particularly, under reducing conditions), Fe is extracted even from the most stable minerals. The action of Tamm's reaction on various Fe compounds is determined, on the whole, not by the crystallization degree, but by the composition of these compounds. Thus, Tamm's reagent extracts comparatively a great deal of Fe
Card : 3/4

Country : USSR
Category : Soil Science, Physical and Chemical Properties of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24608
Author :
Inst :
Title :
Orig Pub :
Abstract : from the alluvial horizons of podzol soils, but has almost no action on the amorphous Fe hydroxide. H₂S acts less energetically on Fe compounds than 1 n. H₂SO₄. -- N. I. Bazilevich
Card : 4/4

Country : USSR
 Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24611

Author : Batalin, A. Kh.; Bogdanova, Ye. S.; Popova, A. A.; Sadovskaya, L. V.; Filimonova, Z. G.; Khmelevskaya, N. A.; Shtark, P. A.

Inst : All-Union Chemical Society imeni D. I. Mendeleev

Title : The Contents of Boron, Cobalt, Copper, Molybdenum, Nickel, Manganese and Fluorine in Certain Soils of the Sorochinskiy Rayon in Chkalovskaya Oblast.

Orig Pub : Vest. Chkalovskogo obl. otd. Vses. khim. o-va im. D. I. Mendeleeva, 1957, vyp. 7, 7-9

Abstract : Determination of the microelements was conducted in the arable and subarable horizons of chernozem soils under different cultivations.

Card : 1/3

Country : USSR
 Category : Soil Science. Physical and Chemical Properties of Soils.

Abs Jour : RZhBiol., No 6, 1959, No 24611

Author :
 Inst :
 Title :

Orig Pub :

Abstract : Analyses were conducted according to the methods of the Institute of Geochemistry and Analytical Chemistry AS USSR. The contents of the microelements fluctuate percentagewise: B, 0.000053-0.0017; Co, 0.000045-0.00045; Cu, 0.0002-0.011; Mo, 0.00011-0.036; Ni, 0.0000018-0.00064; Mn, 0.0027-0.067; F, 0.0013-0.061. The quantity of the microelements in the inve-

Card : 2/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24611

Author :
Inst :
Title :

Orig Pub :

Abstract : stigated soils corresponds to their average content in the chernozem soils of the USSR.
-- M. N. Kudryavtsev

Card : 3/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24612

Author : Gol'tman, A. D.; Gurevich, V. G.
Inst : Khar'kov Pharmaceutical Institute.
Title : Determination of Water-Soluble Compounds of Boron in Soils.

Abstract : Technique of B extraction from the soil: 5 g of atmosphere-dry soil is placed into a glass flask of 25 ml, adding 10 ml of distilled water. The flask is immersed in water, heated to 55° for 30 minutes, mixing its contents every 5 minutes. In 20 minutes after the end of heating, the liquid is filtered through a glass with porous or saltless filter. In the aliquot portion, the B content is determined by the curcumin method by means of a filter

Card : 1/2

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24612

Author :
Inst :
Title :

Orig Pub :

Abstract : photometer. Experimental results on the study of the interfering effect of substances, extracted together with B by the water from the soil, are presented. A correction coefficient for the calculation of these substances is submitted.

Card : 2/2

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24613

Author : Malyaga, D. P.
Inst : -
Title : An Experiment in Biologic-Geochemical Prospecting for Molybdenum in Armenia.

Orig Pub : Geokhimiya, 1958, No. 3, 248-266

Abstract : The distribution of Mo in soils and plants of the Kadzharan mountain region in Armenia was studied. Copper-molybdenum deposits may be made visible by the dispersion sureols of the ore elements. In the deposit regions, the Mo content in oils, water and plants exceeds by hundreds of times its usual content in the bio-

Card : 1/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24613

Author :
Inst :
Title :

Orig Pub :

Abstract : sphere. A definite correlation between the Mo and Cu contents in rocks (ores) and their contents in soils and plants is established. The submitted charts of Mo isoconcentration in soils and plants permits to map the dispersion aureole in the district of the Okhcha River's left bank. Mining prospecting operations in the region's abnormality uncovered two large ore zones, rich

Card : 2/3

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24613

Author :
Inst :
Title :

Orig Pub :

Abstract : in Cu and Mo. The task was fulfilled in the Institute of Geochemistry and Analytical Chemistry AS USSR. Bibliography of 25 titles.
— Yu. I. Dobritskaya

Card : 3/3

Country : USSR
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24614
Author : Suslova, Ye. V.
Inst : Northern Osetin Agricultural Institute.
Title : Organic Substances of Chestnut Soils in the
Eastern Pre-Caucasus.
Orig Pub : Tr. Severo-Osetinsk. s.-kh. in-sta, 1956, 17,
55-64
Abstract : Certain physico-chemical properties of the
Eastern Pre-Caucasian soils are briefly exam-
ined. The nature of free and mobile humic
acids in the chestnut soils and Pre-Caucasian
chernozems is similar. The free and mobile hu-
mic acids in light-chestnut soils are less re-
sistant to the coagulating action of CaCl_2 ,
and their optical denseness is higher than the
chestnut soils', thus bearing witness to the
Card : 1/2

Country : USSR
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24614
Author :
Inst :
Title :
Orig Pub :
Abstract : great complexity of the molecules in the free
and mobile acids of the described light-chest-
nut soils. -- S. A. Nikitin

Card : 2/2

Country : USSR
Category : Soil Science. Biology of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24617

Author : Galstyan, A. Sh.
Inst : Academy of Sciences ArmSSR.
Title : Study of the Comparative Activity of Catalase in Some Types of Armenian Soils. Communication I.

Orig Pub : Dokl. AN ArmSSR, 1956, 23, No. 2, 61-65

Abstract : Carbonate, chestnut and brown soils possess the greatest catalase capacity to decompose H_2O_2 . Lixiviated chernozem is characterized by the least catalase activity. This soil, at the reciprocal action with H_2O_2 , in the first minute produces only 4.1 cm^3 of O_2 , but the carbonated chestnut soil produces 15.4 cm^3 . The high catalase activity in the latter

Card : 1/3

Country : USSR
Category : Soil Science. Biology of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24617

Author :
Inst :
Title :

Orig Pub :

Abstract : soils, apparently, finds itself in conformity with more intensive microbiological activity. The catalase activity in all soils appears weaker at the beginning of spring, increases in summer and then once again diminishes. The catalase activity along the soil profiles from top to bottom decreases. After sterilization of the soils, liberation of oxygen from them is lowered. Decomposition of H_2O_2 possesses not only

Card : 2/3

Country : USSR
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No. 24617
Author :
Inst :
Title :
Orig Pub :
Abstract : a biological character, but inorganic catalyzers also participate in this process. -- S. A. Nikitin

Card : 3/3

Country : USSR
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24620
Author : Burangulova, M. N.; Solov'yeva, Ye. P.; Starikova, Ye. I.
Inst : -
Title : Biological Properties of Certain Soils Beyond the Ural Mountains.
Orig Pub : V sb.: Vopr. proizvodit. ispol'zovaniya prirod. resursov Bashkirsk. Zaural'ya, Ufa, 1957, 15-21
Abstract : Soils of the regions beyond the Ural mountains, especially non-arable soils, are distinguished by a considerable reserve of humus and total P. Biological activity of the soils perceptably is reduced from the south to the north. Aerobic processes prevail in all the investigated soils

Card : 1/2

Country : USSR
Category : Soil Science. Biology of Soils.

Abs Jour : RZhBiol., No 6, 1959, No 24620

Author :
Inst :
Title :

Orig Pub :

Abstract : (except the virgin lands). Nitrogen-fixation bacteria multiply more favorably under leguminous perennial grasses. Their greatest number is noted on lixiviated, podzol and rich chernozem. Cellulose-destroying bacteria and ammonia producing organisms are widely represented in lixiviated and podzol chernozems. In all soils, the amount of nitrogen-producing organisms is insignificant. -- G. N. Nesterova

Card : 2/2

Country : USSR
Category : Soil Science. Biology of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24624

Author : Samoylov, I. I.
Inst : Academy of Sciences USSR.
Title : Microbiology and Problems of Soil Treatment.
(Conference of Microbiologists in Leningrad, 5-10 February 1958.)

Orig Pub : Vestn. AN SSSR, 1958, No. 6, 114-115

Abstract : No abstract.

Card : 1/1

Country : POLAND
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, 24625
Author : Golebiowska, J.
Inst : -
Title : Application of Lockhead's Method for the
Investigation of the Distributed-in-Soil
Microorganisms, Causing Transformation of
Phosphorus.
Orig Pub : Acta microbiol. polon., 1957, 6, No. 1, 17-27
Abstract : With the aid of Lockhead's method (Soil Sci.,
1943, 55, 185; Canad. J. Res., 1938, 166,
152) the distribution in soils (sand, sandy
loam, loess) and in the rhizosphere (oat,
lupine, potato) of microorganisms, causing
the transformation of various P compounds,
was studied. The effect of the soil types and
Card : 1/2

Country : POLAND
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24625
Author :
Inst :
Title :
Orig Pub :
Abstract : developmental stages of plants on the num-
bers of the investigated microorganisms was
demonstrated. -- M. I. Nakhimovskaya
Card : 2/2

Country : BULGARIA
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24627
Author : Dinchev, D.
Inst : Ministry of Agriculture and Forestry.
Title : Reaction between Superphosphates and Soil
Bacteria.
Orig Pub : Nauchni tr. M-vo zemed. i gorite. Ser. ra-
steniyev'datvo, 1957, 2, No. 4, 21-34
Abstract : The effect of powderlike and granulated (mi-
neral and with organic substances) superphos-
phates on the soil microflora and the migra-
tion of the dissolved phosphoric acid from
the granules has been investigated in typical
chernozem, "tar-chernozem," gray forest soil
and lixiviated brown forest soil. A consid-
erable increase in the amount of microorganisms
is observed in all soils around the granules:
Card : 1/6

Country : BULGARIA
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, 24627
Author :
Inst :
Title :
Orig Pub :
Abstract : at the same time, the amount of microorganisms
is greater around the mineral granules than
around the organic-mineral ones. For example,
in the gray forest soil, the amount of micro-
organisms around the granules in a layer of
0-3 cm is greater by four times in the first
instance and by 2.5 times in the second in-
stance than in soil without the granules. In
other soils (typical and lixiviated), a small
Card : 2/6

Country : BULGARIA
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24627
Author :
Inst :
Title :
Orig Pub :
Abstract : increase takes place. Mineral granules produce a stronger but shorter stimulating effect than organic-mineral granules; the powderlike superphosphate stimulates microflora development in a lesser degree than the granulated superphosphate. Phosphoric acid passes from the granules into the soil in a greater amount from the mineral granules than from the organic-mineral ones. Thus, in gray forest
Card : 3/6

Country : BULGARIA
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24627
Author :
Inst :
Title :
Orig Pub :
Abstract : soil after 20 days around the mineral granule in a layer of 0.3 cm, there is 2.5 times more dissolved phosphoric acid and 7.6 times more around the organic-mineral granules than in soil under control. Farther movement of the phosphoric acid into the soil depends on the physical properties of the soil. The granulated superphosphate changes the qualitative composition of bacteria in the soil.
Card : 4/6

Country : BULGARIA
Category : Soil Science. Biology of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24627

Author :
Inst :
Title :

Orig Pub :

Abstract : Fluorescent bacteria are found in the immediate vicinity of the granules; they constitute 86-90 percent of the total number of bacteria, growing on "MPA" medium. The observable increase in the harvest of the oats' green mass, at the treatment with superphosphates, the author explains, is due not only to the improvement of supplying the plants with phosphoric compounds, but also to the

Card : 5/6

Country : BULGARIA
Category : Soil Science. Biology of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24627

Author :
Inst :
Title :

Orig Pub :

Abstract : development of fluorescent bacteria, which are useful for plants. -- V. V. Mikhaleva

Card : 6/6

Country : USSR
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24628
Author : Muromtsev, G. S.
Inst : "
Title : Concerning the Products of the Soil-Microorganisms' Activity in the Mobilization of P₂O₅ Phosphorites.
Orig Pub : Agrobiologiya, 1957, No. 11, 96-103
Abstract : The solution of Ca phosphates by soil bacteria in connection with a change of the pH medium and the reproduction intensity of the microbe culture was investigated by the author in a semisynthetic glucose-aspartic medium with 0.02 corn extract and with fluoapatite as a source of P. A direct dependence between the change of the pH medium and the
Card : 1/4

Country : USSR
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24628
Author :
Inst :
Title :
Orig Pub :
Abstract : intensity of the fluoapatite solution was not noticed: bacteria, related to *Bacterium herbicola* (2a and 2b), liberated 2.79-1.70 gamma/ml of P₂O₅, the pH medium attaining 4.15-3.95 at 6.3 under control; *Mycobacterium cyaneum* (19 a) attained 2.095 gamma/ml at the pH of 6.6; the culture of 3a attained 0.825 gamma/ml at the pH of 8.05, and the culture, related to *Ps radiobacter*, 0.195 gamma/ml at the pH of 6.65.
Card : 2/4

Country : USSR
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24628
Author :
Inst :
Title :
Orig Pub :
Abstract : The author, on the basis of literary data, explains the P mobilization from the phosphates by the formation of dissociated-with-difficulty organometallic complexes at the reciprocal action of the microorganisms' activity and the phosphates. Confirming this, a direct connection between the magnitude of the biomass accumulation and the quantity of the mobilized P (especially, the cultures of 2a and 19a) is
Card : 3/4

Country : USSR
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24628
Author :
Inst :
Title :
Orig Pub :
Abstract : noted. At the same time, the dissolved P almost completely attached itself to the bodies of the bacteria. On this basis, the author deduces that the biological mobilization of phosphorus is not always accompanied by a simultaneous increase in the quantity of free phosphorus in the medium. -- V. V. Mikhaleva
Card : 4/4

Country : USSR
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24629
Author : Krasil'nikov, N. A.; Kotelev, V. V.; Sabel'-
nikova, V. I.; Sergeyeva, N. V.
Inst * Moldavian Branch of AS USSR.
Title : The Effect of Soil Bacteria on the Assimila-
tion by Plants of Phosphorus from Tricalcium
Phosphate.
Orig Pub : Izv. Mold. fil. AN SSSR, 1957, No. 9, (42),
127-133
Abstract : Barley, in sand cultivation with $\text{Ca}_3(\text{PO}_4)_2$
marked with P^{32} as a source of phosphorus, was
grown under sterile conditions with the addi-
tion of bacteria cultures, which were isolated
from the Moldavian soil and which decompose
tricalcium phosphate. Bacterization increa-
sed P assimilation by the plants and their con-
Card : 1/2

Country : USSR
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24629
Author :
Inst :
Title :
Orig Pub :
Abstract : tent of water-soluble, protein and lipoidal
P. Bacterization affected the qualitative com-
position and quantity of amino acids (they
were analyzed chromatographically in an alco-
holic extraction of the plants) and also in-
creased the assimilation of P by barley in
the soil culture. -- T. M. Bushuyeva
Card : 2/2

Country : CZECHOSLOVAKIA
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24630
Author : Ridky, K.
Inst : Czechoslovakian Academy of Agriculture.
Title : The Role Played by Microbes in Plant Nutrition.
Orig Pub : Sbor. Ceskosl. akad. zemed. vet. Rostl. vy-
roba, 1956, 29, No. 9-10, 813-840
Abstract : Data on the quantity dynamics of different groups of microorganisms under the conditions of grassfield crop rotations in connection with their harvest are presented. It was demonstrated, in particular, that the number of microbe mineralizers of the oil organic substances under grass mixtures find themselves in reverse relation to the plant harvests on these fields; this is noted es-
Card : 1/2

Country : CZECHOSLOVAKIA
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24630
Author :
Inst :
Title :
Orig Pub :
Abstract : pecially in the period preceding the gathering of the harvest. -- From the author's summary
Card : 2/2

Country : USSR
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24631
Author : Krasil'nikov, N. A.
Inst : -
Title : Concerning the Importance of Soil Microorga-
nisms in Plant Nutrition (According to Mate-
rials of Soviet Microbiologists for the Past
40 Years).
Orig Pub : Mikrobiologiya, 1957, 26, No. 6, 659-672
Abstract : Review. Bibliography of 46 titles.

Card : 1/1

Country : USSR
Category : Soil Science. Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24632
Author : Rubenchik, L. I.
Inst : -
Title : Relations between Microorganisms and the
Higher Plants.
Orig Pub : Mikrobiol. zh., 1957, 19, No. 3, 14-21
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science, Biology of Soils. J
Abs Jour : RZhBiol., No 6, 1959, No 24633
Author : Kalnin'sh, A. D.
Inst : Institute of Microbiology AS LatvSSR.
Title : State of Investigations in the Region of
Soil Microbiology in the Latvian SSR.
Orig Pub : Tr. In-ta mikrobiol. AN LatvSSR, 1958, vyp.
7, 5-10
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Fertilizers. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24634
Author : Ogg, U. G.
Inst : -
Title : The Application of Fertilizers in England.
Orig Pub : Vestn. s.-kh. nauki, 1958, No. 2, 127-130
Abstract : For the period of the years 1913-1916, the consumption of mineral fertilizers in Great Britain was greatly increased: N, 10 times; P₂O₅, twice, and K₂O, 13 times. In 1956, 4 million tons of fertilizers were applied to the soil. More than 20 kg of N and K₂O and 36 kg of P₂O₅ are introduced per one ha of the land's cultivated area. The greatest quantity of the mineral fertilizers is applied

Card : 1/4

Country : USSR
Category : Soil Science. Fertilizers. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24634
Author :
Inst :
Title :
Orig Pub :

Abstract : under potatoes and sugar beets. Perennial grasses (meadow and pasture) are fertilized inadequately, and in the majority of the regions of the land are not fertilized at all. At the present time, about 50 percent of phosphoric fertilizers are applied in the form of the trivalent P_2O_5 ; 25 percent, in the form of Thomas slag; 10 percent, in the form of phosphoric meal. Among the nitrogen fertilizers

Card : 2/4

Country : USSR
Category : Soil Science. Fertilizers. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24634
Author :
Inst :
Title :

Abstract : the following are widely used: $NaNO_3$, $NaNO_2$ + $CaCO_3$ (calcium ammonium nitrate), NH_4NO_3 , $(NH_4)_2PO_4$ and nitrophosphate. 60 percent of fertilizers are manufactured in Great Britain in the form of compounds. 90 percent of the compound and 50 percent of all fertilizers are manufactured in the form of granules. The tendency to increase the manufacture of concentrated fertilizers is characteristic. The most effective method of introducing P and K under grain, vegetables and

Card : 3/4

Country : USSR
Category : Soil Science. Fertilizers. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24634
Author :
Inst :
Title :
Orig Pub :
Abstract : green peas is of local importance. For potatoes and sugar beets, this method of P and K application is of no significance. -- O. P. Medvedeva

Card : 4/4

Country : USSR
Category : Soil Science. Fertilizers. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24636
Author : Vil'dflush, R. T.
Inst : Belorussian Agricultural Academy.
Title : Investigations of Agricultural Chemistry and Application of Fertilizers in the Belorussian Agricultural Academy.
Orig Pub : Tr. Belcrussk. s.-kh. akademii, 1957, 26, No. 2, 29-42
Abstract : A review of the tasks of the chair of agriculture in BSKhA from 1919. Bibliography of 50 titles.

Card : 1/1

Country : USSR
Category : Soil Science. Fertilizers. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24637
Author : Turchin, F. V.
Inst : -
Title : Concerning the Perspective Requirements of
USSR Agriculture in Mineral Fertilizers and
in Their Expedient Assortment.
Orig Pub : Udobreniye i urozhay, 1958, No. 8, 7-12
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Fertilizers. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24640
Author : Berezova, Ye. F.
Inst : -
Title : The Mutual Bond between Plants and the Micro-
flora of Their Root System.
Orig Pub : Agrobiologiya, 1956, No. 6, 22-28
Abstract : A positive role played by the denitrifica-
tion organisms on the growth and develop-
ment of plants is indicated. A correct com-
bination of agricultural engineering with
the conditions of plant nutrition is necessary.
Otherwise the saprophytic forms of microorga-
nisms (B. macerans) may acquire properties
which would be pathogenic for plants. -- G. N.
Nesterova

Card : 1/1

Country : USSR
Category : Soil Science. Fertilizers. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24641
Author : Lupinovich, I. S.; Golub, T. F.; Vavula,
F. P.
Inst : Academy of Sciences BSSR.
Title : Concerning the Effect of Fertilizers on the
Fertility of Peat-Boggy Soils.
Orig Pub : Vestsi AN BSSR. Ser. biyal. n., 1956, No. 3,
5-14
Abstract : The joint application of lime, manure and
kainite on the peat-boggy soils of the low-
land type of the Minsk Bog Experimental Sta-
tion (1950-1953) caused considerable increase
in the soil of the quantity of ammonia-fixa-
tion bacteria, nitrification organisms, acti-
nomycetes and spore-forming microorganisms. Mi-
neralization processes of the organic residues
Card : 1/2

Country : USSR
Category : Soil Science. Fertilizers. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24641
Author :
Inst :
Title :
Orig Pub :
Abstract : were intensified in the soil. The potato har-
vest in fertilized regions reached 173 percent
in comparison with the harvest on plots under
control. -- B. Kh. Sukhareva
Card : 2/2

Country : USSR
Category : Soil Science. Fertilizers. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24642
Author : Magnitskiy, K. P.
Inst : -
Title : Evaluation of Plant Nutrition According to
Their External Appearance.
Orig Pub : Priroda, 1956, No. 7, 61-64

Abstract : Plant indicators may be utilized to expose those regions and districts that suffer from a deficiency or an excess of macro- and micro-elements. As indicators of N deficiency may serve white-head cabbage and cauliflower; of P deficiency - turnip (*Brassica campestris rapifera*) and the turnip kind (*Brassica napus rapifera*); of K deficiency - potato, beet, bean, alfalfa; of Mg deficiency - potato,

Card : 1/2

Country : USSR
Category : Soil Science. Fertilizers. General. J
Author :
Inst :
Title :
Orig Pub :

Abstract : apple, black raspberry; of B deficiency - sunflower, sugar beet, apple; of Mn deficiency - oat, beet, potato, cabbage; of Cu deficiency - oat, wheat, barley, pear; of Zn deficiency - bean, soya, corn, apple, pear, citrous fruits; of Mo deficiency - cauliflower, lettuce, leguminous grasses, citrus fruits. -- I. K. Fortunatov

Card : 2/2

Country : USSR
Category : Soil Science. Fertilizers. General. J
Abs Jour : RZhBiol., No 6, 1959, No 24643
Author : Shmelev, V.; Sitnyanskiy, V.
Inst : Voronezh State Pedagogical Institute.
Title : The Analysis of the Soils' Acidity and of the
Fertilizers' System in the Under-Patronage
Collective Farm "Stalin Put'" in Gremyachen-
skiy Rayon of Voronezhskaya Oblast.
Orig Pub : Sb. stud. rabot. Voronezhsk. gos. ped. in-t,
1957, vyp. 2, 33-36
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Fertilizers. Mineral Ferti-
lizers. J
Abs Jour : RZhBiol., No 6, 1959, No 24647
Author : Tulin, A. S.
Inst : Krymskaya Oblast State Agricultural Experi-
mental Station.
Title : Tumulus Ashes as a Fertilizer.
Orig Pub : Tr. Krymsk. obl. gos. s.-kh. opytn. st., 1956,
2, 17-25
Abstract : Tumulus ashes, huge deposits of which were
formed in antiquity in various parts of the
Crimean steppes from the remains of steppe
plants, grain straws and dung, contain 2.1-
3.5 percent of K_2O and 1.0-1.5 percent of
 P_2O_5 . For the Crimean soils, reacting negati-
vely to K, it is only a phosphorus fertilizer

Card : 1/2

Country : USSR
Category : Soil Science. Fertilizers. Mineral Fertilizers. J

Abs Jour : RZhBiol., No 6, 1959, No 24647

Author :
Inst :
Title :

Orig Pub :

Abstract : and the dose should not exceed 1.5 t/ha.
The total harvest increment of the most important crop-rotation cultivation - corn, winter wheat and winter barley - in one year consisted of 3.5 c of seed and 7.5 c of straw or 7.2 c of fodder units from one acre. --
N. N. Sokolov

Card : 2/2

Country : USSR
Category : Soil Science. Fertilizers. Mineral Fertilizers. J

Abs Jour : RZhBiol., No 6, 1959, No 24648

Author : Zemite, A.
Inst : -
Title : Soil Requirements of the Livanskiy Rayon (LatvSSR) in Calcium Fertilizers.
Orig Pub : Pochva i urozhay. Riga, 1956, 5, 61-66

Abstract : No abstract.

Card : 1/1

Country : HUNGARY
Category : Soil Science. Fertilizers. Organic Fertilizers. J

Abs Jour : RZhBiol., No 6, 1959, No 24652

Author : Fekete, B.; Hargitai, I.; Mayerne-Kiss, T.

Inst : -

Title : Some Data on the Appraisal of the Most Important Organic Fertilizers.

Orig Pub : Agrakem. ea talaj, 1957, 6, No. 4, 337-344

Abstract : Comparative laboratory and field investigations of the more important kinds of organic fertilizers showed that the best proved to be: granulated biocompost (an organic substance mixed with excrements enriched with NPK) among the commercial fertilizers; indorcompost among the composts; and among the earth-manure mixtures, a mixture in relation of 1 : 4 from

Card : 1/2

Country : HUNGARY
Category : Soil Science. Fertilizers. Organic Fertilizers. J

Abs Jour : RZhBiol., No 6, 1959, No 24652

Author :

Inst :

Title :

Orig Pub :

Abstract : different kinds of manure - a manure, the storage of which was accomplished under concrete shields, according to the method of Kalbay. The properties of humus extraction from various fertilizers were studied by the intensity of absorbed light. On the basis of these investigations, the stability number of humus fertilizers and of composts, and the stability

Card : 2/3

Country : HUNGARY
Category : Soil Science. Fertilizers. Organic Fertilizers. J

Abs Jour : RZhBiol., No 6, 1959, No 24652

Author :
Inst :
Title :

Orig Pub :

Abstract : coefficient, the magnitude of which is proportional to the quantity of the humic stable components, were calculated. -- O. P. Medvedeva

Card : 3/3

Country : USSR
Category : Soil Science. Fertilizers. Organic Fertilizers. J

Abs Jour : RZhBiol., No 6, 1959, No 24654

Author : Musich, N. I.
Inst : Yakutsk Branch AS USSR.
Title : Concerning the Application of Organic Mineral Mixtures in Central Yakutia.

Orig Pub : Dokl. na 8-y nauchn. sessii (Yakutskiy fil. AN SSSR). Botan., pochvoved. zool., zootekhnika. Yakutsk, 1957 (1958), 67-75

Abstract : In small-plot experiments with winter rye in Yakutia, the effectiveness of 5 t/ha of humus, 5 t/ha of compost, a mixture of humus with manure liquor and 5c/ha of ashes and mixtures of organic fertilizers with ashes were compared. At the application of the fertilizers before sowing, ashes proved to be more effective than

Card : 1/4

Country : USSR
Category : Soil Science. Fertilizers. Organic Fertilizers. J

Abs Jour : RZhBiol., No 6, 1959, No 24654

Author :
Inst :
Title :

Orig Pub :

Abstract : organic fertilizers, but mixtures produced the best results. The greatest significance for the increase of crops was the growing winter-resistance of the plants at the introduction of ashes. At the introduction of fertilizers under additional forage in autumn, the effectiveness of all fertilizers was decreased considerably, and the application of

Card : 2/4

Country : USSR
Category : Soil Science. Fertilizers. Organic Fertilizers. J

Abs Jour : RZhBiol., No 6, 1959, No 24654

Author :
Inst :
Title :

Orig Pub :

Abstract : ashes gave a smaller increment than the application of organic fertilizers. The vernal additional forage was even less effective. In the experiment with corn on unfertilized ground, 89.8 c/ha of the greens were obtained; the haphazard application of 40 t/ha of manure increased the harvest to 197.7 c/ha, whereas the best variant of the organic-mineral mixture at the

Card : 3/4

Country : USSR
Category : Soil Science. Fertilizers. Organic Fertilizers. J

Abs Jour : RZhBiol., No 6, 1959, No 24654

Author :
Inst :
Title :

Orig Pub :

Abstract : introduction into holes produced only 128.8
c/ha. -- Z. I. Zhurbitskiy

Card : 4/4

Country : USSR
Category : Soil Science. Fertilizers. Organic Fertilizers. J

Abs Jour : RZhBiol., No 6, 1959, No 24657

Author : Boyarcovich, N. M.
Inst : Alma-Ata Selection Station.
Title : Fenugreek in the Fertilization of Vegetables.

Orig Pub : Udobreniye i urozhay, 1958, No. 5, 22-25

Abstract : According to experimental results in the Alma-Ata Selection Station, fenugreek *Trigonella* or fenugreek *Trigonella foenum graecum* L. in the fertilization of vegetables secured a high increment in the crops of potatoes and winter wheat. In the south, under conditions of irrigation agriculture and unsupported "bogaras"

Card : 1/2

Country : USSR
Category : Soil Science. Fertilizers. Organic Fertilizers. J

Abs Jour : RZhBiol., No 6, 1959, No 24657

Author :
Inst :
Title :

Orig Pub :

Abstract : [a designation for crops cultivation in Central Asia without artificial irrigation],
ir deserves a wide industrial check-up. ---
N. N. Sokolov

Card : 2/2

Country : USSR
Category : Soil Science. Fertilizers. Organic Fertilizers. J

Abs Jour : RZhBiol., No 6, 1959, No 24658

Author : Nikolayev, M. V.
Inst : -
Title : Installation and Exploitation of the Irrigation of Fields in the German Democratic Republic.

Orig Pub : Udobreniye i urozhay, 1958, No. 6, 57-61

Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Fertilizers. Organic Fertilizers. J
Abs Jour : RZhBiol., No 6, 1959, No 24659
Author : Tikhomirova, L. D.; Rozhkovskaya, A. A.
Inst : Far Eastern Scientific-Research Institute of
Agriculture.
Title : Application of Peat as a Fertilizer.
Orig Pub : Byul. nauchno-tekhn. inform. Dal'nevost. n.-i.
in-ta s.-kh., 1958, No. 5, 28-31
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Fertilizers. Organic Fertilizers. J
Abs Jour : RZhBiol., No 6, 1959, No 24660
Author : Khristeva, L. A.
Inst : Khar'kov University.
Title : Carbonaceous Shale as One of the Possible
Prospects of Raw Material for the Production
of Humic Fertilizers.
Orig Pub : Sb.: Guminovyye udobreniya. Khar'kov, Khar'kovsk. un-t., 1957, 29-38
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Fertilizers. Organic Fertilizers. J
Abs Jour : RZhBiol., No 6, 1959, No 24662
Author : Ovechkin, T. V.; Bitnyy, L. A.
Inst : -
Title : Results of the Application of Organic Mineral Mixtures on the Collective Farm "Testament of V. I. Lenin."
Orig Pub : Agrobiologiya, 1958, No. 4, 91-93
Abstract : No abstract.

Card : 1/1

Country : USSR
Category ; Soil Science. Fertilizers. Organic Fertilizers. J
Abs Jour : RZhBiol., No 6, 1959, No 24663
Author : Zhenatov, A. P.; Rokhtanen, L. S.
Inst : -
Title : Concerning the Economic Effectiveness of the Utilization of Peat as a Fertilizer.
Orig Pub : Udobreniye i urozhay, 1958, No. 8, 44-46
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Cultivation. Improvement. Erosion. J
Abs Jour : RZhBiol., No 6, 1959, No 24665
Author : Ivanov, P. K.; Balandina, Ye. I.
Inst : -
Title : Deep Plowing in the Southern Chernozems of the Regions beyond the Volga.
Orig Pub : S. kh. Zavolzh'ya, 1958, No. 8, 28-30
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Cultivation. Improvement. Erosion. J
Abs Jour : RZhBiol., No 6, 1959, No 24666
Author : Pestova, M. N.; Kuppo, V. K.
Inst : Scientific-Research Institute of Vegetable Economy.
Title : A System of Soil Cultivation in Vegetable-Grassfield Crop Rotation.
Orig Pub : Byul. nauchno-tekhn. inform. N.-i. in-ta ovoshchn. kh-va, 1958, No. 4, 40-43
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J
Abs Jour : RZhBiol., No 6, 1959, No 24667
Author : Sidorov, M. I.; Van'kovich, G. N.
Inst : -
Title : Study of the Results in Methods of Basic Soil
Cultivation in Moldavia.
Orig Pub : Zemledeliye, 1958, No. 9, 64-70
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J
Abs Jour : RZhBiol., No 6, 1959, No 24668
Author : Yarovenko, V. V.; Kammodov, V. V.; Suchalkina,
M. I.
Title : Preparation of the Soil on Inclined Surfaces
during Meadow Cultivation.
Orig Pub : Zemledeliye, 1958, No. 9, 59-63
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J
Abs Jour : RZhBiol., No 6, 1959, No 24699
Author : Sobolev, S. S.
Inst : -
Title : Methods of Soil Cultivation in Regions of
Water and Wind Erosion.
Orig Pub : Zemledeliye, 1958, No. 8, 3-8
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J
Abs Jour : RZhBiol., No 6, 1959, No 24670
Author : Glukhov, V. M.
Inst : Moscow Agricultural Academy imeni K. A.
Timiryazev.
Title : The Effectiveness of Various Methods of Autumn
Soil Cultivation under the Conditions of Novo-
Annenskiy Rayon in Stalingradskaya Oblast.
Orig Pub : Dokl. Mosk. s.-kh. akad. im. K. A. Timiryazeva,
1958, vyp. 32, 240-246
Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J
Abs Jour : RZhBiol., No 6, 1959, No 24672
Author : Orlovskiy, N. V.; Fesko, K. Ya.; Goppe, G. S.;
Strugalova, Ye. V.
Inst : Tomsk University.
Title : Salination of Soils in the Aley Irrigation
System and Measures of Prevention and Control
Thereof.
Orig Pub : Tr. Tomskogo un-ta, 1957, 140, 82-91

Abstract : The Aley irrigation system is the largest in
Altay Kray; its total area consists of 11,000
hectares. The Soil-Improvement Expedition of
the Altay Agricultural Institute investigated
on the irrigated territory of the Rubtsov Sugar-
Beet Collective Farm causes of secondary salina-

Card : 1/3

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J

Abs Jour : RZhBiol., No 6, 1959, No 24672

Author :
Inst :
Title :

Orig Pub :

Abstract : tion and methods of its control. After 20
years of irrigation, almost the entire ter-
ritory is in the grip of secondary salina-
tion processes of various intensity. The fun-
damental reason of soil salination are the
very costly mineralized subsoil waters. It is
recommended: (1) a strict differentiation of
irrigation; (2) realization of planned irriga-

Card : 2/3

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J

Abs Jour : RZhBiol., No 6, 1959, No 24672

Author :
Inst :
Title :

Orig Pub :

Abstract : ted fields; (3) measures to reduce water filtration from the canals; (4) creation of a thick structural arable layer, and (5) strengthening the role played by perennial grasses in crop rotation, etc. -- G. B. Zakhar'ina

Card : 2/3

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J

Abs Jour : RZhBiol., No 6, 1959, No 24673

Author : Bobchenko, V. I.
Inst : Academy of Sciences USSR.
Title : Subsoil Mole Irrigation of the Argillaceous Chernozems in Kurskaya Oblast.

Orig Pub : V sb.: Orosheniye s.-kh. kul'tur v Tsentr.-chernozem. polose RSFSR. Vyp. 2, M., AN SSSR, 1956, 155-184

Abstract : Observations of the effect of mole holes without irrigation on soil and plants showed the following: mole holes without apertures at the top (plugged up until the sowing season) increase in May-June the soil humidity, stimulate microbiological activity; in July they dry up the soil and improve the absorption of melted waters. Non-irrigated mole holes add

Card : 1/4

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J
Abs Jour : RZhBiol., No 6, 1959, No 24673
Author :
Inst :
Title :
Orig Pub :
Abstract : 20-25 percent to the harvest of the sugar beet and vetch-oat mixture. Mole holes with apertures over the anticlines dry up the soil during the greater portion of the vegetative period, increase evaporation, sometimes cause cracking of the soil near the apertures, hold back the rain and melted waters. It is necessary to plug up the mole drains in autumn. At supported irri-
Card : 2/4

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J
Abs Jour : RZhBiol., No 6, 1959, No 24673
Author :
Inst :
Title :
Orig Pub :
Abstract : gations, the mole holes plugged up in autumn, sustain 3 irrigations per season. At the unsupported method, stability of the mole holes is observable during 2 years. A combination of unsupported and supported methods of irrigation may bring about different soil humidity applicable to agricultural demands. Irrigation along the mole holes decreases the time period for
Card : 3/4

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J

Abs Jour : RZhBiol., No 6, 1959, No 24673

Author :
Inst :
Title :

Orig Pub :

Abstract : wheat growing and increases the harvest of agricultural products. The supported method of irrigation is recommended for cultivations with a surface root system. Subsoil mole irrigation permits a water-charged flow under the next cultivation, without waiting for the harvest of its predecessor to be collected. -- L. O. Karpachevskiy.

Card : 4/4

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J

Abs Jour : RZhBiol., No 6, 1959, No 24677

Author : Rabochev, I.
Inst : -
Title : Organization and Installation of Water Irrigation.

Orig Pub : Khlopkovodstvo, 1957, No 9, 37-39

Abstract : The organization and installation of fall-winter irrigation of the cotton-field soils under conditions of artificial drainage are described. the most favorable periods for irrigation are: on weakly and averagely salinated soils, light and averagely argillaceous soils, September - beginning of October; on soils of recent appropriation, August - September. There are also

Card : 1/2

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J

Abs Jour : RZhBiol., No 6, 1959, No 24677

Author :
Inst :
Title :

Orig Pub :

Abstract : submitted the norms and number of waterings
for the light-in-mechanical-composition soils,
at the deep level of ground waters, under the
conditions of Chardzhous, Tashauz and Khorezm
experimental stations.

Card : 2/2

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J

Abs Jour : RZhBiol., No 6, 1959, No 24678

Author : Kats, D.
Inst : -
Title : Utilization of Soil Waters for Irrigation in
the Bukhar Oasis.

Orig Pub : Khlopkovodstvo, 1956, No. 8, 49-51

Abstract : No abstract.

Card : 1/1

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J
Abs Jour : RZhBiol., No 6, 1959, No 24681
Author : Gruzdev, D. M.
Inst : Kinel' Selection Station.
Title : Effect of Forest Belts on the Wind Erosion of
Soils in the Regions beyond the Volga River.
Orig Pub : Pochvovedeniye, 1957, No. 9, 116-119

Abstract : There were conducted in the winters of 1948-1950 investigations of wind erosion of the soils in the territory of the Kinel' Selection Station, having at its disposal field-protecting forest belts and ravine-tree stands. The observations indicated that beginning with 50 meters from the forest belt, the organic portion of the eroded particles prevails over

Card : 1/2

Country : USSR
Category : Soil Science. Cultivation. Improvement.
Erosion. J

Abs Jour : RZhBiol., No 6, 1959, No 24681

Author :
Inst :
Title :

Orig Pub :

Abstract : the mineral, and content of the free forms of P_2O_5 in the soil increases to the extent of withdrawal from the forest stands. -- M. L. Yaroshenko

Card : 2/2

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