T-10

USSR / Human and Animal Physiology. Nervous System.

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 3886

Author : Soldatenkov, P. F.
Inst : Moscow Academy of Veterinary Medicine
Title : Higher Nervous Activity in Ruminant Animals

Orig Pub : Tr. Mosk. vet. akad., 1957, 20, 104-110

Abstract : A conditioned reflex hypoglycemia in response to the effect of a sound that was combined with administration of insulin appeared in sheep with the 22 - 33rd conjunction (i.e., slower than in dogs). In the tagil breed of cattle, conditioned reflex changes in respiration and interchange of gases appeared with the 7 - 14th conjunction, changes of cardiac rhythm and ECG with the 7 - 13th combination of a bell with administration of adrenalin. As compared with dogs, the more rapid acquisition of temporary connections is explained by the

Card 1/2

SOLDATENKOV, P.I. (Syerdlovsk).

Conditioned reflex regulation of basic functions in ruminants. (MIRA 11:3)
Trudy Inst. okean. 23:65-79 '57.
(CONDITIONED RESPONSE) (RUMINANTIA)

SOLDATENKOV, P.F., prof., doktor biolog.nauk; FILATOVICH, V.V., kand. sel'skokhoz.nauk; KOMOVATOV, V.S.; BOYCHENKO, P.Ya.

Butterfat content of milk in Tagil cattle depending on the amount of fat and proteins in feed rations of growing calves. Agrobiologiia no.3:349-357 My-Je '59. (MIRA 12:9)

1. Sverdlovskiy sel'skokhozyaystvennyy institut.
(Calves--Feeding and feeds) (Milk)

SOLDATENKOV, P.F., prof.; PLOTNIKOV, N.P., kand.veterin.nauk, starshiy nauchnyy sotrudnik; SYUZYUMOVA, L.M., mladshiy nauchnyy sotrudnik

"Nature of natural disease resistance of the organism of calves and measures for increasing it" by V.V.Nikol'skii. Reviewed by P.F.Soldatenkov, N.P.Plotnikov, L.M.Siuziumova. Zhivotnovodstvo 21 no.9:96 S '59. (MIRA 13:1)

1. Zaveduyushchiy kafedroy normal'noy i patologicheskoy fiziologii Sverdlovskogo sel'skokhozyaystvennogo instituta (for Soldatenkov). 2. Sverdlovskiy nauchno-issledovatel'skiy institut po profilaktike poliomiyelita (for Plotnikov). 3. Institut biologii Ural'skogo filiala AN SSSR (for Syuzyumova).
(Calves) (Immunity)

SOLDATENKOV, P.F.; TRUKHINA, Ye.P.

Changes in the morphological composition of the blood in Tagil calves during postnatal development. Trudy Inst.morf.zhiv. no.31:75-84 '60. (MIRA 13:6)

(Blood) (Calves)

SOLDATENKOV, P.F., prof., doktor biologicheskikh nauk

Dynamics of the morphological composition of the blood of Tagil cattle in ontogenesis. Zhivotnovodstvo 23 no.7:82-84 Jl '61. (MIRA 16:2)

1. Kafedra normal'noy i patologicheskoy fiziologii Sverdlovskogo sel'skokhozyaystvennogo instituta.
(Ural Mountains--Cattle--Physiology)
(Blood--Analysis and chemistry)

SOLDATENKOV, P.F.

"Carbohydrate metabolism in the walls of ruminants gastrointestinal tract."

Report submitted, but not presented at the 22nd International Congress of Physiological Sciences.
Leiden, the Netherlands 10-17 Sep 1962

SOLDATENKOV, P.E., prof.

Sapropel in agriculture. Priroda 51 no.4:76-77 Ap '62. (MIRA 15:4)

1. Sverdlovskiy sel'skokhozyaystvennyy institut.
(Sapropels)

SOLNTSEVA, I.F.; [illegible]

Metabolism of sugar, volatile fatty acids and acetone bodies in the wall of the **alimentary** tract in sheep on an empty stomach and after feeding glucose solution. Fiziol. zhur. SSSR 50 no.12:1484-1488 D '64. (MIRA 18:3)

1. Kafedra normal'noy i patologicheskoy fiziologii Sel'skokhozyaystvennogo instituta, Sverdlovsk.

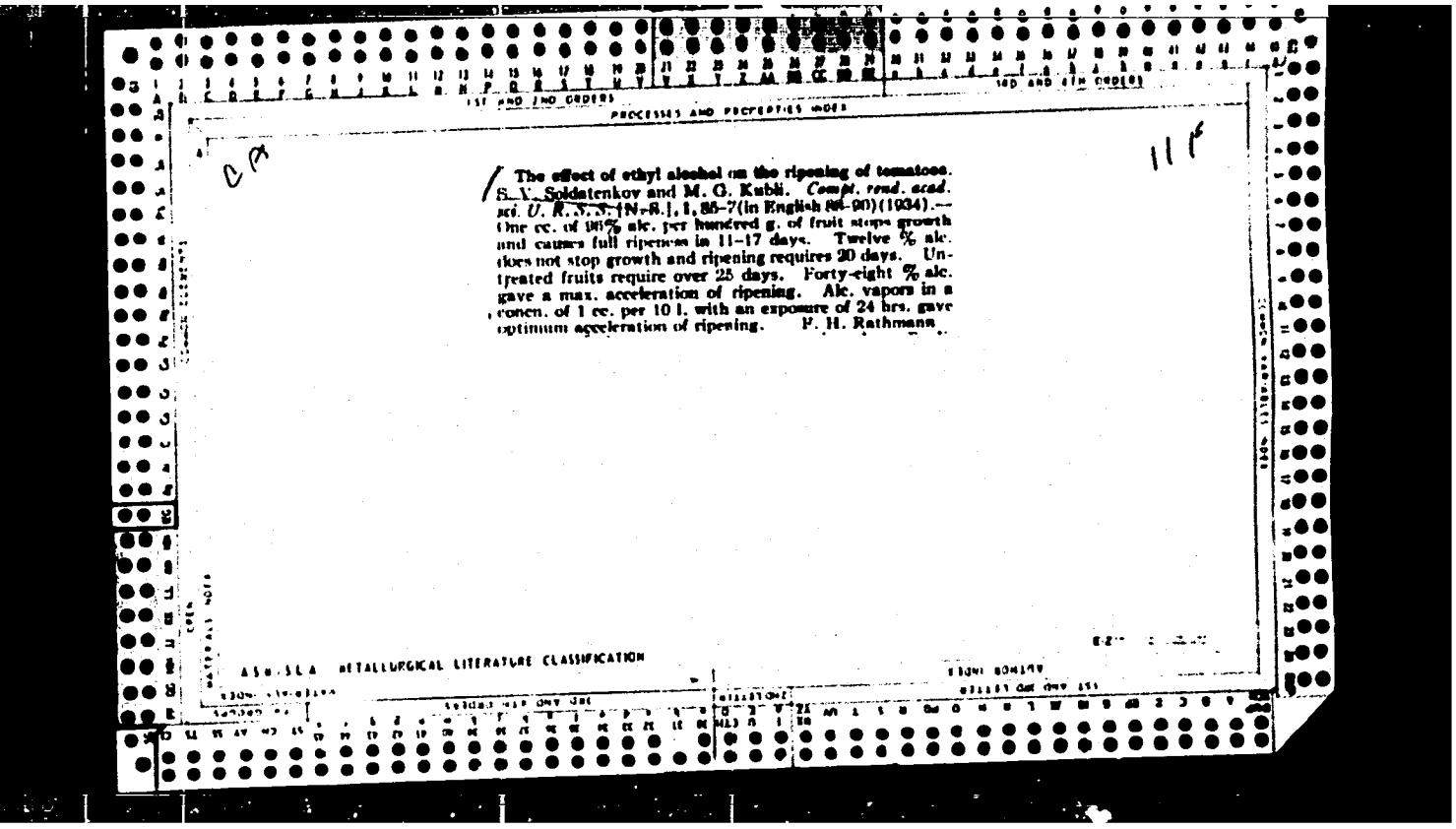
BOGDASHIN, A.S.; BOGORODSKIY, A.A.; VINGARDT, N.B.; GORBUNOV, V.I.; GORBUNOV, V.R.; DUROV, V.K.; YERMAKOV, A.L.; IVANOV, A.A.; KARAKOVA, N.I.; KOBYLYAKOV, L.M.; KOZLOVSKIY, N.I.; MARAKHTANOV, K.P.; MIRUMYAN, G.N.; NECHETOV, G.P.; NOVIKOV, A.G.; OL'KHOVSKIY, K.I.; PESTRYAKOV, A.I.; POLAPANOV, A.V.; SKLYAREVSKAYA, Ye.Kh.; SOLDATENKOV, S.I.; SOROKIN, Ye.M.; TRUSHINA, Z.V.; FEDOROV, P.F.; FEDOSEYEV, A.M.; FROG, N.P.; SHAMAYEV, G.P.; YANOVSKIY, V.Ya.; ORLKHOV, A.D., spetsred.; DEYEVA, V.M., tekhn.red.

[Handbook on new agricultural machinery] Spravochnik po novoi tekhnike v sel'skom khozialstve. Moskva, Gos.izd-vo sel'khoz. lit-ry, 1959. 364 p. (MIRA 13:2)
(Agricultural machinery)

BELKIN, Yu.L., inzh.; PAVLOVSKIY, D.Ya., inzh.; SOROKIN, Ye.M., inzh.; KARAKOVA, N.I., inzh.; SOLDATENKOV, S.I., inzh.; BARSUKOV, A.F., red.; PECHENKIN, I.V., tekhn.red.

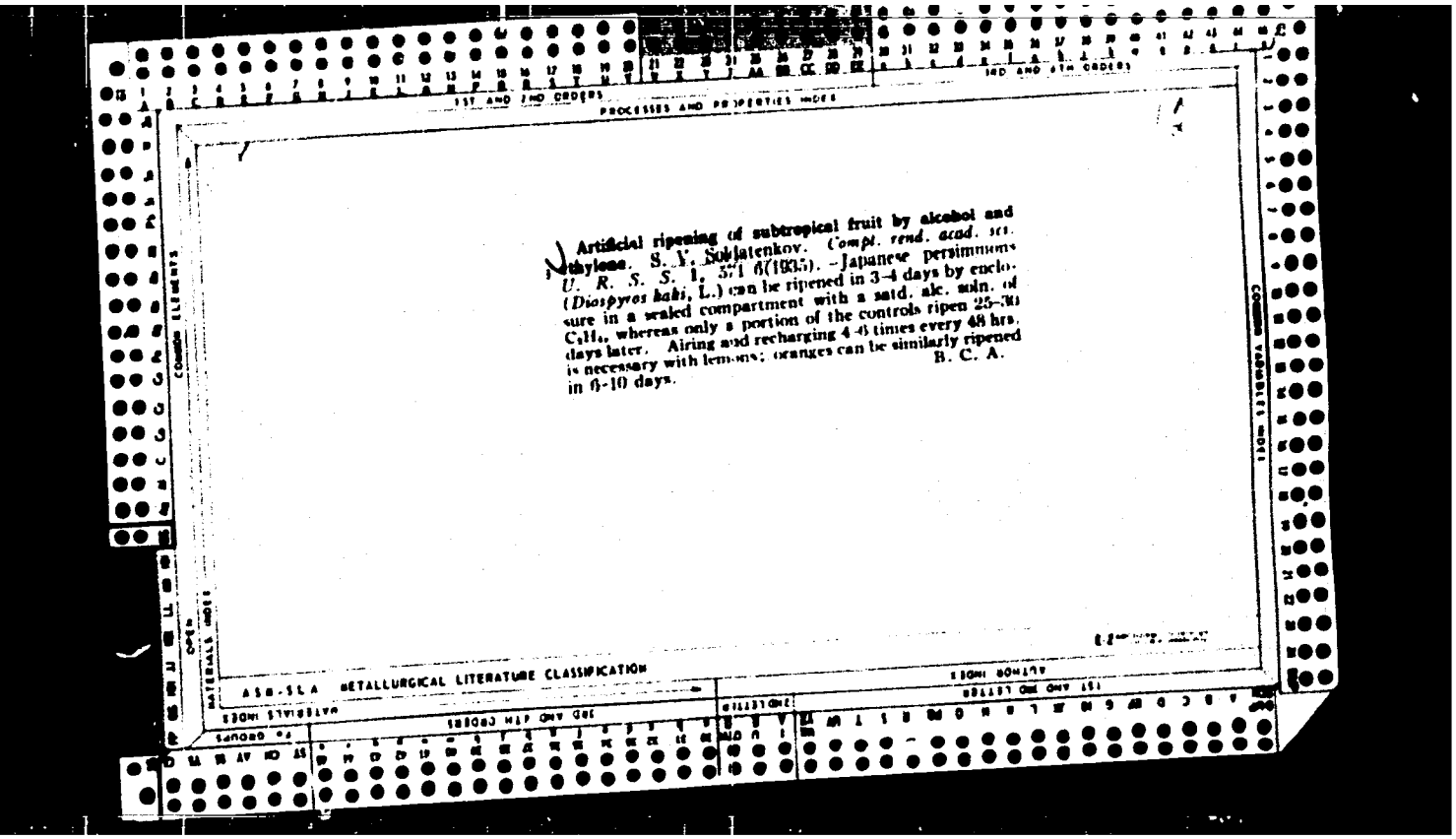
[New tractors and agricultural machinery; results of tests conducted in 1957] Novye traktory i sel'skokhoziaistvennye mashiny; rezul'taty ispytanii 1957 goda. Moskva, M-vo sel'skogo khoz.SSSR. No.1. 1959. 277 p. (MIRA 13:9)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.
(Tractors) (Agricultural machinery)



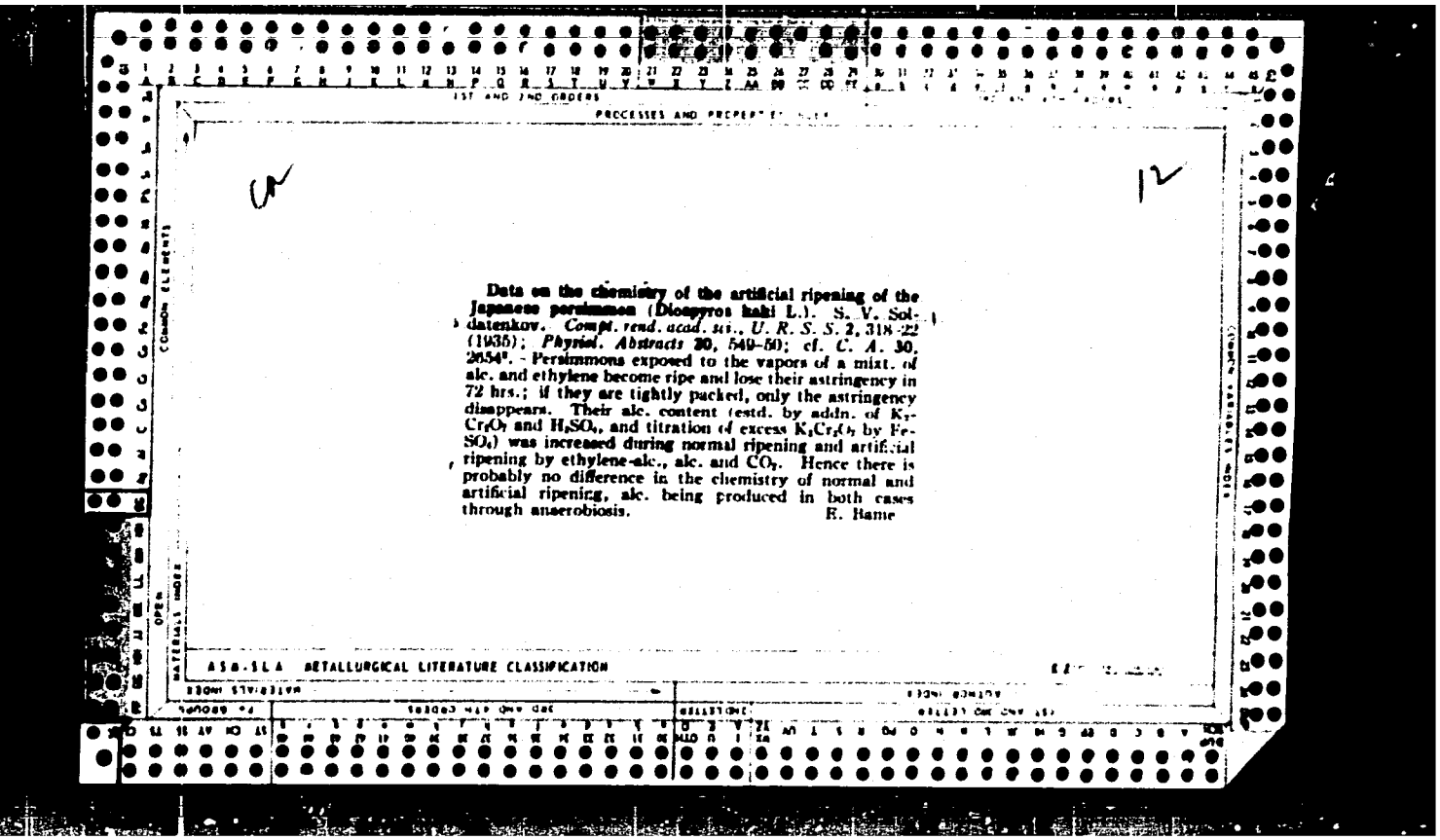
The effect of ethyl alcohol on the ripening of tomatoes. S. V. Soldatenkov and M. G. Kubli. *Compt. rend. acad. sci. U. R. S. S.* [N.S.], 1, 85–7 (in English 86–90) (1934).—One cc. of 96% alc. per hundred g. of fruit stops growth and causes full ripeness in 11–17 days. Twelve % alc. does not stop growth and ripening requires 20 days. Untreated fruits require over 25 days. Forty-eight % alc. gave a max. acceleration of ripening. Alc. vapors in a concn. of 1 cc. per 10 l. with an exposure of 24 hrs. gave optimum acceleration of ripening. F. H. Rathmann.

ASM/SLA METALLURGICAL LITERATURE CLASSIFICATION



Artificial ripening of subtropical fruit by alcohol and ethylene. S. V. Sobolenkov. *Compt. rend. acad. sci. U. R. S. S.* 1, 571-6(1935). —Japanese persimmons (*Diospyros kaki*, L.) can be ripened in 3–4 days by enclosure in a sealed compartment with a satd. alc. soln. of C_2H_4, whereas only a portion of the controls ripen 25–30 days later. Airing and recharging 4–5 times every 48 hrs. is necessary with lemons; oranges can be similarly ripened in 6–10 days.

B. C. A.



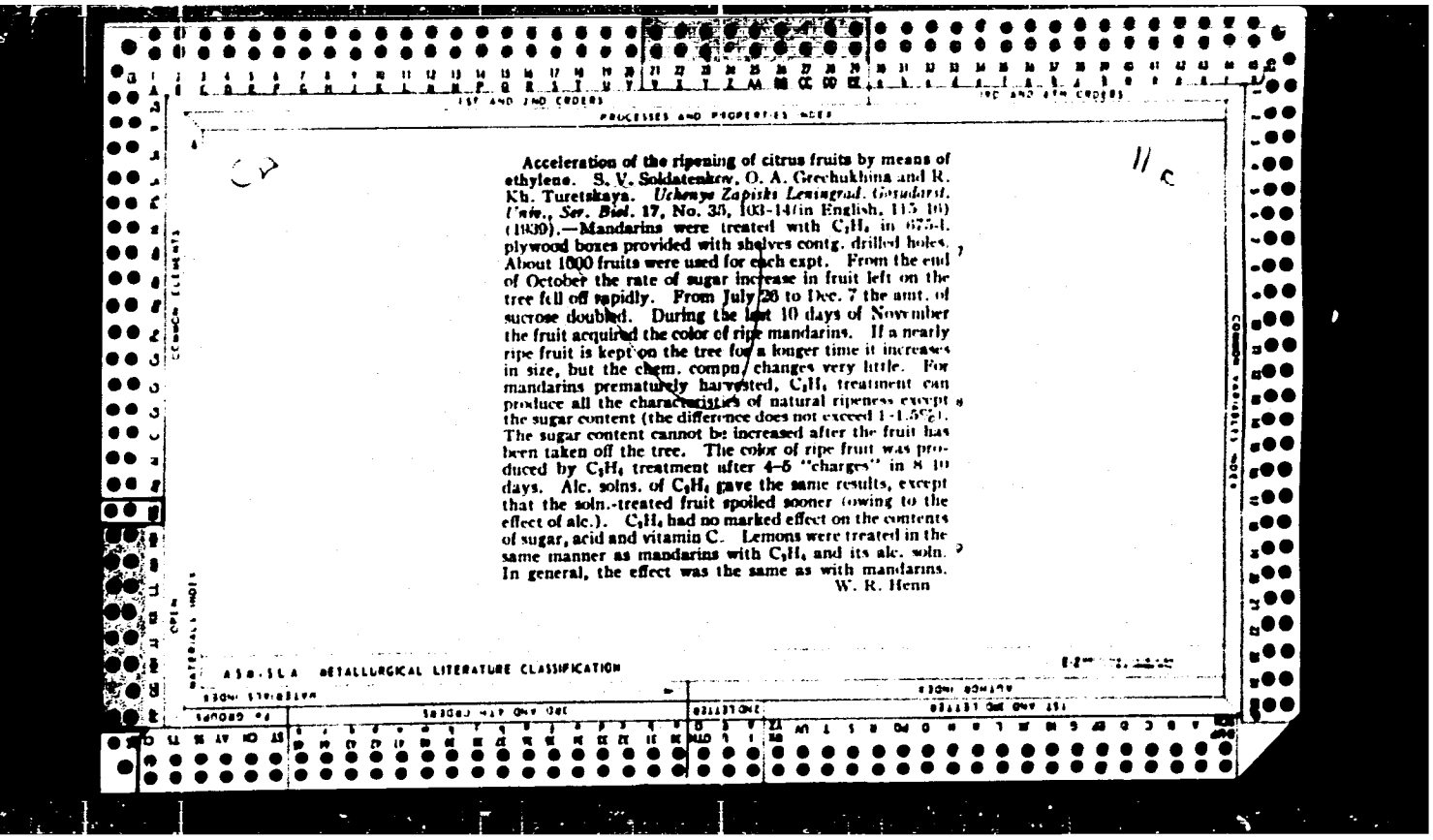
Data on the chemistry of the artificial ripening of the Japanese persimmon (Diospyros kaki L.). S. V. Soldatenkov. *Compt. rend. acad. sci., U. R. S. S.* 2, 318-22 (1935); *Physiol. Abstracts* 20, 549-50; cf. *C. A.* 30, 2654⁸. - Persimmons exposed to the vapors of a mixt. of alc. and ethylene become ripe and lose their astringency in 72 hrs.; if they are tightly packed, only the astringency disappears. Their alc. content (estd. by addn. of $K_2Cr_2O_7$ and H_2SO_4, and titration of excess $K_2Cr_2O_7$ by $FeSO_4$) was increased during normal ripening and artificial ripening by ethylene-alc., alc. and CO_2. Hence there is probably no difference in the chemistry of normal and artificial ripening, alc. being produced in both cases through anaerobiosis. R. Bame

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

Acceleration of the ripening of tomatoes by means of oxygen. S. V. Soldatenkov and M. G. Kuhli. *Trav. soc. naturalistes Leningrad* 66, 163-87(1937); *Chem. Zentr.* 1937, II, 4124; cf. C. A. 28, 2073. Tomatoes ripen in 4-8 days in an atm. contg. over 60% O_2, the optimum concn. being 75-85%. In this O_2-rich atm. C_2H_4 has only an insignificant stimulating effect as compared to that of the O_2 alone. The respiration of the tomatoes in the O_2 atm. is 50-100% more intensive than in air. The sugar content of the tomatoes is not changed by the action of the O_2. The tomatoes are kept in the O_2-rich atm. only 3-4 days since a more prolonged action of the O_2 interferes with the maturing. M. G. M.

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652210003-1"



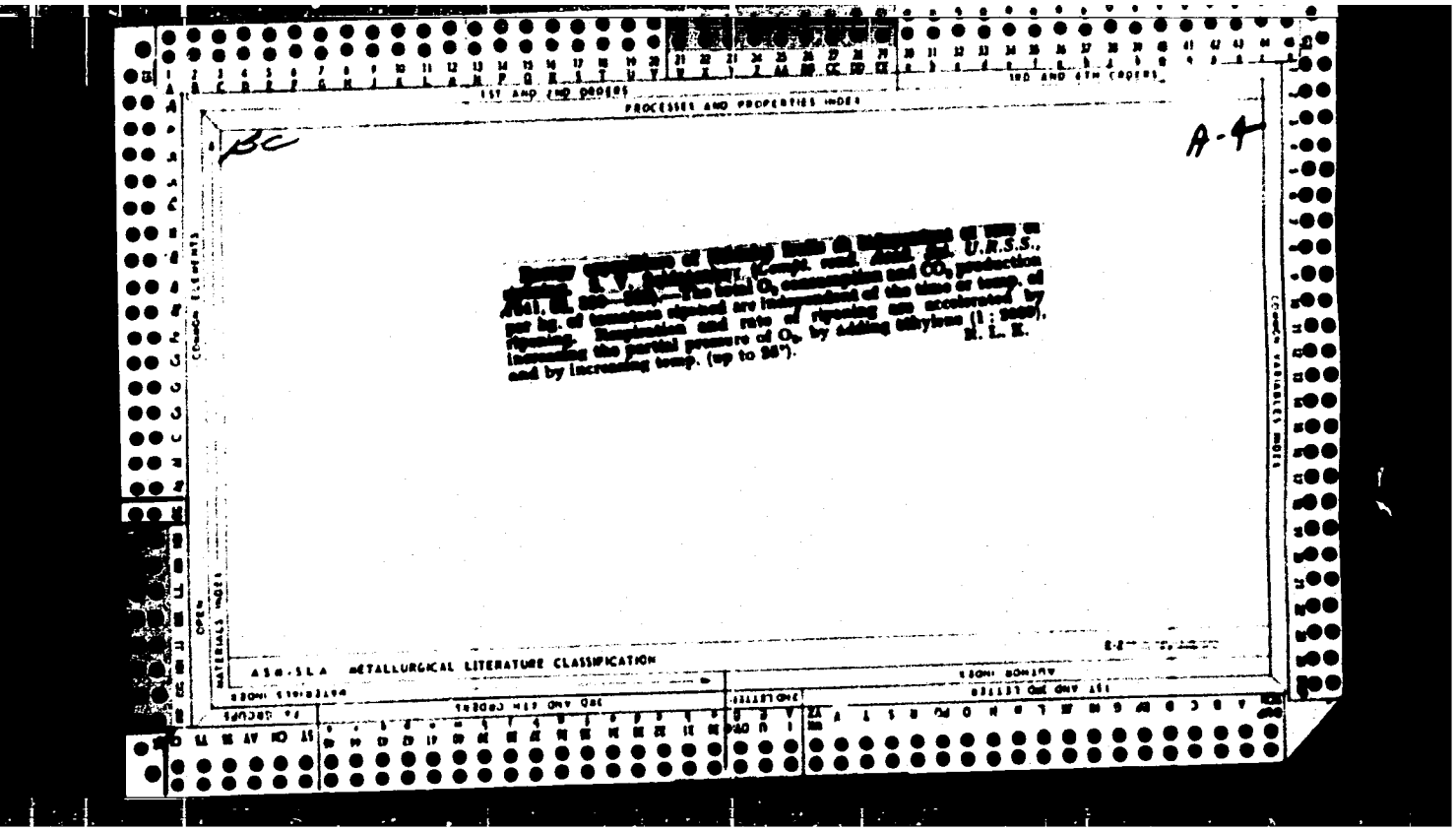
Acceleration of the ripening of citrus fruits by means of ethylene. S. V. Soldatenkov, O. A. Grechukhina and R. Kh. Turetskaya. *Uchenye Zapiski Leningrad. Gosudarst. Univ., Ser. Biol.* 17, No. 35, 103-14(in English, 115-16) (1939).—Mandarins were treated with C_2H_4 in 675-l. plywood boxes provided with shelves contg. drilled holes. About 1000 fruits were used for each expt. From the end of October the rate of sugar increase in fruit left on the tree fell off rapidly. From July 20 to Dec. 7 the amt. of sucrose doubled. During the last 10 days of November the fruit acquired the color of ripe mandarins. If a nearly ripe fruit is kept on the tree for a longer time it increases in size, but the chem. compn. changes very little. For mandarins prematurely harvested, C_2H_4 treatment can produce all the characteristics of natural ripeness except the sugar content (the difference does not exceed 1-1.5%). The sugar content cannot be increased after the fruit has been taken off the tree. The color of ripe fruit was produced by C_2H_4 treatment after 4–5 "charges" in 8–10 days. Alc. solns. of C_2H_4 gave the same results, except that the soln.-treated fruit spoiled sooner (owing to the effect of alc.). C_2H_4 had no marked effect on the contents of sugar, acid and vitamin C. Lemons were treated in the same manner as mandarins with C_2H_4 and its alc. soln. In general, the effect was the same as with mandarins.

W. R. Henn

A58-51A METALLURGICAL LITERATURE CLASSIFICATION

SOLDATENKOV, S. V.

(The role of oxygen in the ripening of fruits) (Leningrad)
Leningradskii gos. univ., 1941. 109 p.

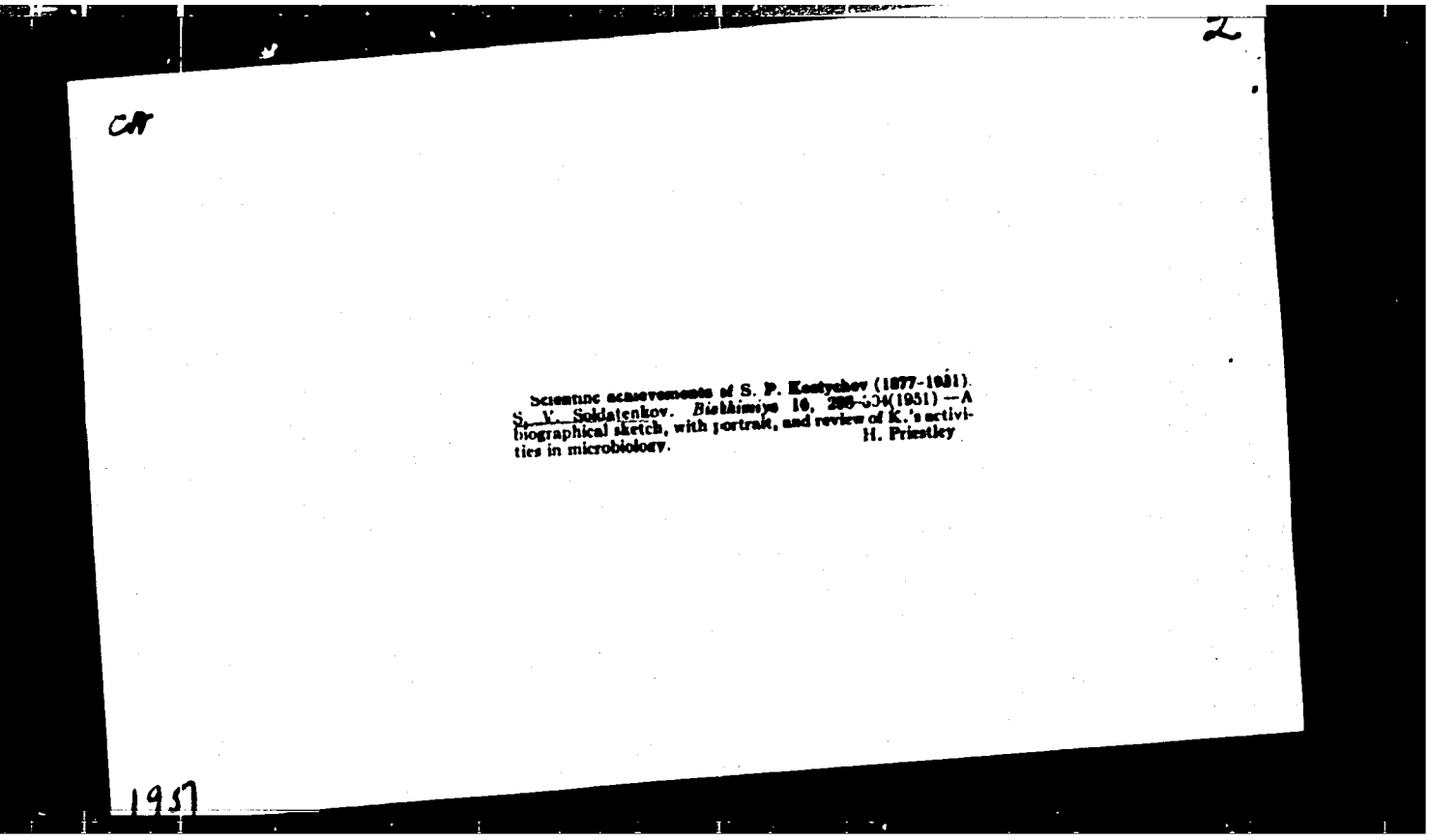


USSR

The formation of and changes in the organic acids of sprouting cereal seeds. S. V. Soldatenkov, A. N. Panteleev, and T. A. Mazurova. *Trudy Leningrad. Obshchestva Estestvoispytatelei* 70, No. 3, 49-67(1950); cf. *C.A.* 48, 12240a.—Mono-, di-, and tricarboxylic acids are always present in cereal seeds and sprouts. In the grains of wheat and rye their content is 0.27–0.35%, and in some varieties of corn as high as 1.18%. In the process of seed sprouting, together with hydrolysis of stored proteins and starches, there is an energetic process of org. acid formation which may increase 3–5-fold the original content in the seeds. Ninety % of the monocarboxylic acids of corn seeds is represented by an unidentified volatile org. acid. Among the di- and tricarboxylic acids malic acid is predominant, while citric and aconitic acids are found in smaller quantities. In sprouting corn seeds a profound shift in the quant. ratios of the org. acids takes place, the di- and tricarboxylic types increasing 12–14-fold and the monocarboxylic 3–3.5-fold. The content of monocarboxylic acids in the leaves of seedlings is much lower than in the original grains. In the leaves of wheat and rye seedlings grown in an O-free atm., lactic acid is also formed. No lactic acid was found under similar

conditions in the leaves of corn seedlings, but volatile monocarboxylic acid was found in the roots. In an O-free atm. dicarboxylic acids are not formed in seedlings or in leaves of adult plants. The process of normal respiration of higher plants is chemically represented as follows: $C_4H_6O_5 + O_2 = COOHCH_2CHOHCOOH + CH_2OHCHO$; H_2O; $COOHCH_2CHOHCOOH + 3O_2 = 4CO_2 + 3H_2O$; $CH_2OHCHO + 2O_2 = 2CO_2 + 2H_2O$; and thus $C_6H_{12}O_6 + 6O_2 = 6CO_2 + 6H_2O$. Accordingly, in the first stage of plant sugar oxidation, malic acid and glycolaldehyde are formed. The fate of malic acid is a double one: (1) it becomes oxidized largely to $CO_2 + H_2O$, accumulating in the plant in its unchanged form to a minor extent only; (2) in the dark and in an atm. of CO_2 it may accumulate in the plant in large amts. Glycolaldehyde may (1) oxidize to CO_2 and H_2O; (2) become resynthesized into carbohydrates; and (3) oxidize to glycolic or oxalic acid. The formation of citric acid chemically is not directly associ. with the process of respiration; it can be interpreted as the product of interaction between malic acid and glycolaldehyde oxidized to glycolic acid as per equation: $COOHCH_2CHOHCOOH + CH_2OHCOOH = COOHCH_2C(COOH)OHCH_2COOH + H_2O$.

B. S. Levine

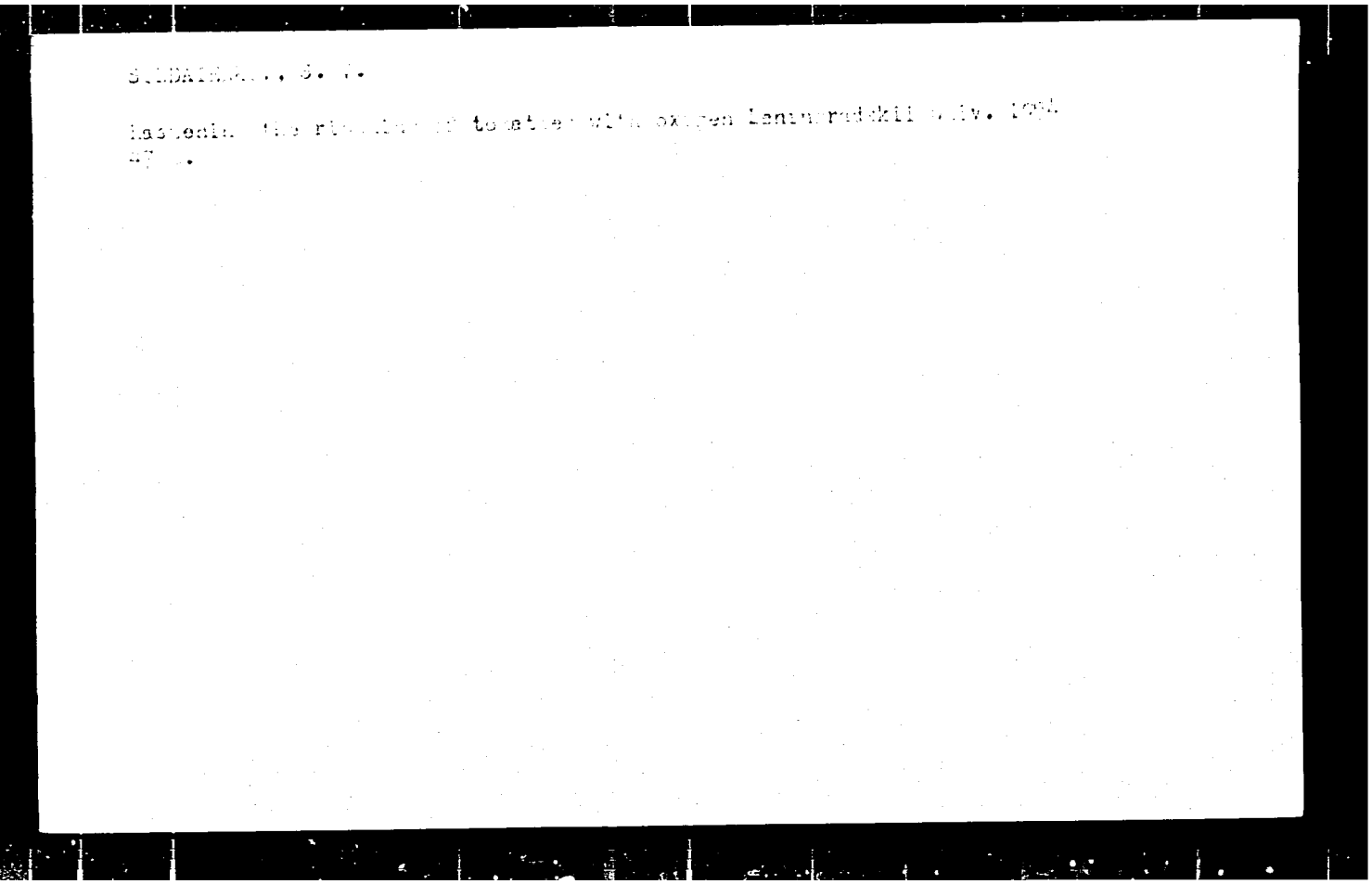


CAT

2

Scientific achievements of S. P. Kostychev (1877-1931). S. V. Soldatenkov. *Biokhimiya* 16, 288-304(1951).—A biographical sketch, with portrait, and review of K.'s activities in microbiology. H. Priestley

1951



SOLDATENKOV, S. V.

Converzion of organic acids during the sprouting and ripening of wheat seeds. S. V. Soldatenkov and T. A. Mazunova (A. A. Zhdanov State Univ., Leningrad). *Biokhimiya* 19, 110-60(1954).—Summer and winter varieties of wheat were analyzed following 10–20 days of sprouting and at final maturity. Acetic, malic, citric, and formic acids were found in the sprouts and mature seeds. Aconitic acid as a temporary constituent was found in the sprouts only. In the 13-day old sprouts (free from roots) the content of malic acid was increased 4–13 fold and of citric 2–3 fold. Sixty percent of the total di- and tricarboxylic acids in the sprouts consists of aconitic acid. Citric acid predominates in the mature seeds, but constitutes only 10–15% of the total acids of the sprouts. As the seeds near maturity, aconitic acid disappears and the percentages of other acid undergo a shift.

B. S. Levine

(1)

SOLDATENKOV, S. V.

The effect of light on the convention of the organic acids of succulent plants. S. V. Soldatenkov and T. P. Ivanova. *Uchenye Zapiski Leningrad. Gosudarst. Univ. im. A. A. Zhdanova* No. 166, *Ser. Biol. Nauk* No. 39, 19–38(1955).— The authors investigated the rate of digestion of the org. acids of *Bryophyllum* (I) and *Echeveria* (II) in light under natural conditions and in the absence of CO_2. In the absence of CO_2, org. acids are a natural source of carbohydrates for photosynthesis. The digestion of the acids is accompanied by the formation of significant quantities of O_2. The rate of digestion of acids depends on the amt. of chlorophyll in the leaves and is 5–10 times as great in I as in II. An increase in the concn. of CO_2 in the atm. sharply reduces the digestion of acids. The reaction does not occur in powd. leaves. The digestion occurs 12-20 times more rapidly in light than in darkness. J. M. Widom

2

Med

SOLDATENKOV, S.V.; TUGANAYEVA, N.Kh.; ZONOV, D.I.

Effect of ecological conditions on the quantity and composition of protein in the Diamant spring wheat variety. Uch.zap.Len.un. 186: 121-128 '55. (MLRA 9:8)

(Wheat) (Proteins) (Plants, Effect of minerals on)

SOLDATENKOV, S.V.; MAZUROVA, T.A.

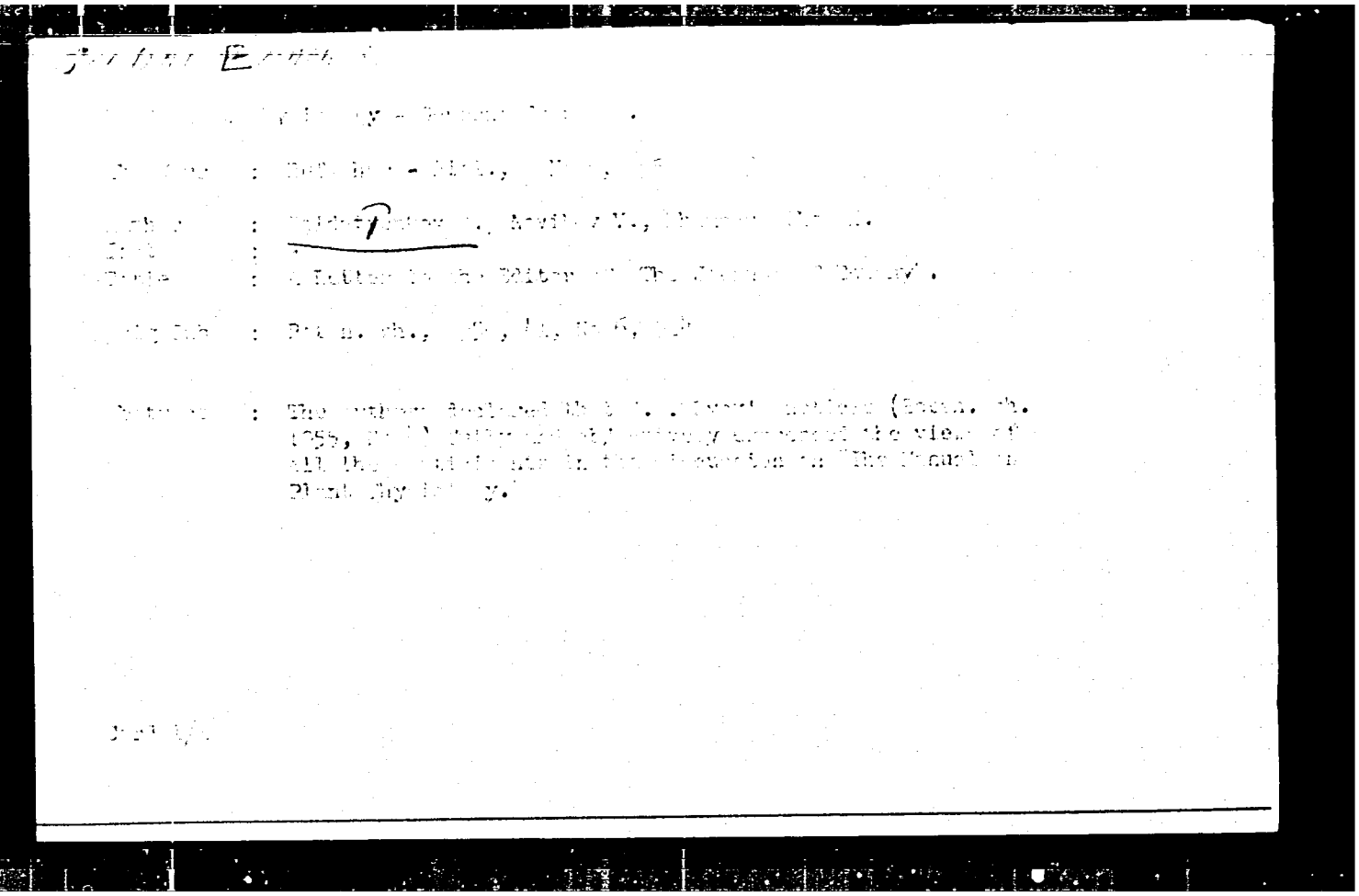
Formation of organic acids in the seeds of leguminous plants during germination. Biokhimiia 21 no.5:573-576 S-O '56. (MLRA 9:12)

1. Kafedra fiziologii rasteniy Leningradskogo gosudarstvennogo universiteta imeni A.A.Zhdanova
(ACIDS, ORGANIC) (GERMINATION) (LEGUMES)

SOLDATENKOV, S.V.; MAZUROVA, T.A.

New acids as products of primary oxidation of sugars in leguminous plants [with English summary in insert]. Biokhimiia 21 no.6:652-662 N-D '56. (MIRA 10:7)

1. Kafedra fiziologii rasteniy Leningradskogo gosudarstvennogo universiteta imeni A.A.Zhdanova.
(LEGUMES) (ACIDS, ORGANIC) (SUGARS)



SOLDATENKOV, S.V.; MAZUROVA, T.A.

Malonic acid in leguminous plants [with summary in English].
Biokhimiia 22 no.1/2:345-350 Ja-F '57. (MLRA 10:7)

1. Kafedra fiziologii rasteniy Leningradskogo gosudarstvennogo universiteta im. A.A.Zhdanova.
(MALONIC ACID) (LEGUMINOSAE)

SOLDATENKOV, S.V.; MAZUROVA, T.A.

Quantitative determination of di- and tricarboxylic acids by paper chromatography. Fiziol.rast. 6 no.1:112-117 Ja-F '59.
(MIRA 12:2)

1. Department of Plant Physiology, Leningrad University.
(Plants--Chemical analysis) (Acids, Organic)
(Paper chromatography)

SOLDATENKOV, S.V.

"A brief course in plant physiology" by N.A. Maksimov, Reviewed by S.V. Soldatenkov. Fiziol.rast. 6 no.1:126-128 Ja-F '59. (MIRA 12:2)

(Plant physiology) (Maksimov, N.A.)

SOLDATENKOV, S.V.

Sergei Dmitrievich L'vov; obituary. Fiziol.rast. 6 no.2:255-256 Mr-Ap '59. (MIRA 12:5)
(L'vov, Sergei Dmitrievich, 1879-1959)

SOLDATENKOV, S. V., MAZUROVA, T. A., (USSR)

"The Formation of Acids from the Primary Oxidation of Sugars in Plants and their Utilization."

Report presented at the 5th Int'l. Biochemistry Congress, Moscow, 10-16 Aug 1961.

SOLDATENKOV, S.V.; CHZHAO SYAN'-DUAN [Chao Hsien-tuang]

Role of kidneybean and corn leaves in the respiration of roots deprived of oxygen. Fiziol. rast. 8 no.4:385-394 '61. (MIRA 14:11)

1. Department of Plant Physiology, A.A.Zhdanov Leningrad State University.

(Plants—Respiration)
(Beans)
(Corn(Maize))

SOLDATENKOV, S. V.

Organic acids of higher plants and their conversion in metabolism. Trudy PBI no.19:35-56 '62.
(MIRA 16:1)

1. Laboratoriya fiziologii i biokhimii rasteniy Petergofskogo biologicheskogo instituta.

(Acids, Organic) (Plants—Metabolism)

BELOZEROVA, L.S.; SOLDATENKOV, S.V.

Transformation of organic acids in illuminated succulents. Fiziol. rast. 10 no.2:212-218 Mr-Ap '63. (MIRA 16:5)

1. A.A. Zhadanov Leningrad State University.
(Acids, Organic) (Succulent plants)
(Plants—Metabolism)

SOLDATENKOV, S.V.; BYKOV, O.D.

Formation and transformation of acids of primary sugar oxidation in plants. Fiziol. rast. 11 no. 3:515-521 '64. (MIRA 17:7)

1. Kafedra fiziologii i biokhimii rasteniy Leningradskogo gosudarstvennogo universiteta imeni A.A.Zhdanova.

CHIRKOVA, T.V.; SOLDATENKOV, S.V.

Channels of oxygen conduction from leaves to roots kept under anaerobic conditions. Fiziol. rast. 12 no.2:216-225 Mr-Ap '65. (MIRA 18:6)

1. Kafedra fiziologii i biokhimii rasteniy Leningradskogo ordena Lenina gosudarstvennogo universiteta imeni Zhdanova.

VEYNSHTEYN, Ye.A.; SOLDATENKOV, S.V.

Effect of sodium fluoride on the respiration of bean leaves and the formation of acids in them. Vest. LGU 20 no.9:113-117 '65. (MIRA 18:6)

SOLDATENKOV, S.V.; MIRYAKUBOVA, M.G.; MAZUROVA, T.A.; KALUGINA, Ye.V.

Sugar compounds with organic acids in dormant and germinating corn and wheat seeds. Fiziol. rast. 12 no.3:457-462 My-Je '65. (MIRA 18:10)

1. Kafedra fiziologii i biokhimii rasteniy Leningradskogo gosudarstvennogo universiteta imeni A.A. Zhdanova.

L 10814-63 EWT(1)/EWG(k)/BDS/EEC(b)-2/ES(w)-2--AFFTC/ASD/ESD-3/AFWL/SSD--Pz-4/Pab-4/Pi-4/Po-4--AT/IJP(C)

ACCESSION NR: AP3000007 S/0057/63/033/005/0544/0549

AUTHOR: Demirkhanov, R. A.; Gutkin, T. I.; Soldatenkov, T. R. 83

TITLE: Containment of particles in a fluted system with current 91

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 33, no. 5, 1963, 544-549

TOPIC TAGS: plasma containment, fluted magnetic field, toroidal drift instability

ABSTRACT: Drift equations are used to describe the motion of a particle in a fluted magnetic field, with longitudinal current taken into account. A cylindrical rather than a toroidal coordinate system is used, permitting simplification of the analysis, as drift angle can be considered the same in both toroidal and cylindrical systems. It is shown that under certain conditions of current, magnetic field modulation, and periodicity, resonance particles which lead to increased losses can be eliminated in a closed system with a fluted magnetic field by a longitudinal current along the axis; charge separation and toroidal drift of particles to the walls are thereby prevented.

Card 1/2

L 10814-63 2

ACCESSION NR: AP3000007

Both high- and low-velocity particles are affected, and the containing properties of the system are considerably increased. "In conclusion the authors express their thanks to A. G. Kirov for his repeated and useful discussions." Orig. art. has: 29 equations.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN Gruzinskoy SSR Sukhumi (Physico-technical Institute AN Gruzinskoy SSR)

SUBMITTED: 21Jun62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: PH,SD NO REF SOV: 003 OTHER: 000

mcs/wr
Card 2/2

ACCESSION NR: AP4013412 S/0057/64/034/002/0266/0268

AUTHOR: Demirkhanov, R.A.; Gutkin, T.I.; Soldatenkov, T.R.

TITLE: On the equilibrium of a plasma in a spatially periodic magnetic field

SOURCE: Zhurnal tekhn.fiz.,v.34, no.2, 1964, 266-268

TOPIC TAGS: plasma, magnetic field, periodic magnetic field, plasma equilibrium, magnetohydrodynamics, pinch, linear pinch, resonance particles

ABSTRACT: A solution of the magnetohydrodynamic equations is obtained which describes an equilibrium state of a plasma filament in a spatially periodic magnetic field. Such a solution is considered to be of interest because it has recently been shown that the resonance particles that occur in these systems can be removed by means of a longitudinal current (R.A.Demirkhanov, T.I.Gutkin, T.R.Soldatenkov,ZhTF, 33,544,1963). The solution was obtained with the aid of an equation derived by R. Lüst and A.Schlüter (Zs.Astrophys.38,190,1955) and under the assumption that both the current and the pressure gradient are proportional to the magnetic flux. For a certain value of the longitudinal current, the periodicity of the magnetic field in the solution obtained disappears, and the solution reduces to that for a linear

Card 1/2

ACCESSION NR: AP4013412

pinch. When the longitudinal current vanishes, the solution reduces to one given by Lust and Schluter (loc.cit.). Orig.art.has: 14 formulas.

ASSOCIATION: none

SUBMITTED: 31Jan63 DATE ACQ: 26Feb64 ENCL: 00

SUB CODE: PH NR REF SOV: 003 OTHER: 001

2/2
Card

ACCESSION NR: AP4020571 S/0057/64/034/003/0448/0453

AUTHOR: Berezin,Yu.A.; Gutkin,T.I.; Lozovskiy,S.N.; Soldatenkov,T.R.

TITLE: Interaction of a plasma with high frequency fields in the presence of a constant uniform magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.3, 1964, 448-453

TOPIC TAGS: plasma, plasma in alternating field, extraordinary wave, plasma in microwave field, skin effect

ABSTRACT: The interaction of an axially symmetric plasma in a uniform longitudinal magnetic field with an axially symmetric high frequency electromagnetic field is discussed theoretically. The high frequency field is assumed to consist of a longitudinal magnetic field and a transverse electric field (extraordinary wave). The case of a longitudinal high frequency electric field and an azimuthal magnetic field has been previously discussed by others (H.A.Boot, S.A.Self and R.B.R.Shersby-Harvie, J.Elec.Contr.,5,435,1958; E.S.Weibel,Ibid.5,435,1958). The motion of the ions and electrons is separated into a rapid component having the frequency of the applied alternating field and the slow component that remains after averaging over a period

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ACC.NR: AP4020571

of the alternating field. The system is described by the two-fluid hydrodynamic equations and Maxwell's equations. Longitudinal and transverse temperatures and pressures are distinguished. In the "zeroth approximation", quasineutrality is assumed and the non-linear hydrodynamic terms, the pressure gradients, and the Lorentz forces due to the magnetic component of the variable field are neglected. To these zeroth approximation equations is adjoined the sum of the "first approximation" equations of motion averaged over a period of the high frequency field. From the resulting equations the particle velocities and two of the three components of the alternating field are eliminated. Two differential equations are thus obtained for the plasma density and the azimuthal electric field as functions of the distance from the symmetry axis. These equations were integrated numerically for several values of the parameters, and some of the results are presented graphically. There are two resonant frequencies. For sufficiently dense plasmas these frequencies are approximately the Langmuir frequency and the geometric mean of the ion and electron Larmor frequencies. When the frequency of the applied field is larger than the mean Larmor frequency, the plasma density increases and the alternating field decreases with approach to the symmetry axis. The mathematical simplification that results when the skin penetration depth is small compared with the radius of the plasma filament is discussed briefly. When the applied frequency is smaller than the mean Larmor

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ACC.NR. AP4020571

frequency, the extraordinary wave penetrates the plasma. In this case the azimuthal electric field amplitude is an oscillatory function of distance from the axis, and the plasma density increases, with superposed oscillations, as the distance from the axis is increased. The criterion for the validity of the approximations employed is that the electron velocity be small compared with the product of the frequency of the applied field and a characteristic length which may be either the skin penetration depth or the wavelength. "In conclusion the authors express their gratitude to R.A.Demirkhanov for his interest in the work and for discussions." Orig.art.has: 20 formulas and 4 figures.

ASSOCIATION: none

SUBMITTED: 31Jan63 DATE ACQ: 31Mar64 ENCL: 00

SUB CODE: PH NR REF SOV: 003 OTHER: 002

Card 3/3

L 7727-66 EWT(l)/EWP(m)/ETC/EPF(n)-2/EWG(m)/EPA(w)-2 IJP(c) AT

ACC NR: AP5025883 SOURCE CODE: UR/0057/65/035/010/1749/1754

AUTHOR: Sidorov, V.F.; Soldatenkov, T.R.

ORG: none

TITLE: Entrainment of a plasma by a rotating electromagnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 10, 1965, 1749-1754

TOPIC TAGS: plasma stability, plasma dynamics, magnetohydrodynamics, rotation, rotating magnetic field

ABSTRACT: The entrainment of a plasma cylinder in a uniform magnetic field by a rotating electromagnetic field is discussed in the magnetohydrodynamic approximation. The calculations were undertaken because rotation of a plasma cylinder can be useful in prolonging its life, in suppressing flute instability, and possibly in heating it. The rotating electromagnetic field discussed is that due to currents proportional to exp i(ft + mθ) in the z direction on a cylindrical surface coaxial with the plasma cylinder. Here r, θ, z are cylindrical coordinates, f is the frequency, and m is an integer. The magnetohydrodynamic equations are solved by a successive approximation method based on expansion in powers of the ratio of the strength of the alternating magnetic field to that of the uniform axial magnetic field. In the zeroth approximation the plasma is assumed to be at rest. The first approximation describes the distribution of the high frequency fields in the plasma, but the plasma motion appears only in the

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L 7727-66

ACC NR: AP5025883

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second approximation. In order to obtain the second approximation it is assumed that the entrainment time is long compared with the period of the high frequency field, and all quantities are separated into slowly-varying and high-frequency parts. In the second approximation there appear radial and azimuthal motions of the plasma, a radial electric field, and an azimuthal current. The second approximation describes only the initial stages of the plasma entrainment because the reaction of the plasma motion on the field appears only in higher order approximations, which are not calculated in general form. The entrainment time is estimated under further restrictive assumptions. The effect on the entrainment process of the finite plasma lifetime and the possibility of instability as due to the rotational velocity gradients and the azimuthal currents must be further investigated. The authors thank R.A.Demirkhanov and T.I.Gutkin for suggesting the problem and for their stimulating interest, and A.A.Rukhadze, L.I.Rudakov, and D.P.Kostomarov for valuable discussions. Orig. art. has: 41 formulas.

SUB CODE: ME/ SUBM DATE: 09Nov64/ ORIG REF: 001/ OTH REF: 002

Card 2/2

L 23102-66 EWT(1)/ETC(f)/EPF(n)-2/EWG(m) IJP(c) AT

ACC NR: AP6007071 UR/0057/66/036/002/0246/0249

AUTHOR: Soldatenkov,T.R.

ORG: none

TITLE: The motion of charged particles in constant and rotating magnetic fields

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 2, 1966, 246-249

TOPIC TAGS: plasma confinement, rotating magnetic field, longitudinal magnetic field, magnetic mirror,

ABSTRACT: The author is concerned with the motion of a plasma in the simultaneous presence of a constant longitudinal magnetic field and a rotating transverse magnetic field. This problem is of interest in connection with the confinement of plasma in a magnetic mirror system. The motion of separate charged particles in combined constant and rotating magnetic fields has previously been treated by A. Legatowicz (Nuclear Fusion, 1, No.3, 161, 1961) and the motion of a plasma has been treated in the hydrodynamic approximation by V.P.Sidorov and the author (ZhTF, 35,1749,1965). In the present paper the motion of a plasma is treated in the drift approximation under the assumptions that the strength of the transverse rotating component of the magnetic field is small compared with that of the constant longitudinal component and that the field rotation frequency is small compared with the Larmor frequency. It is found

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ACC NR: AP6007071 2

that when the rotation frequency of the field exceeds a certain value the motions of both ions and electrons are finite and independent of the direction of rotation of the magnetic field. At lower field rotation frequencies (or higher relative strengths of the rotating field component) the motions are finite only when the angular velocity vector of the rotating field component is in the direction of the constant field component. In a plasma with a finite number of particles and a sufficiently low collision frequency there develops a condensation of electrons in the plane of the rotating component of the field. This condensation rotates with the field and can drag the ions along. The author thanks R.A.Demirkhanov and T.I.Gutkin for discussing the results. Orig. art. has: 9 formulas.

SUB CODE: 20 SUBM DATE: 09Nov64 ORIG. REF: 002 OTH REF: 003

Card 2/2 ULR

SOLDATENKOV, V., inzh.

New machines for roadside tree planting. Avt. dor. 28 no.9
30-31 S '65. (MIRA 18:10)

SOLDATENKOV, V.Ye., inzh.

Electric geophysical exploration used in winter surveying. Avt. dor. 21 no.12:20-21 D '58. (MIRA 12:1)
(Roads--Surveying)

SOV/139-59-5-10/17

AUTHOR: Soldatenkov, V.Ye.

TITLE: Experience With Electric Prospecting in Winter Conditions

PERIODICAL: Razvedka i okhrana nedr, 1959, Nr 5, pp 48-49 (USSR)

ABSTRACT: The author describes a special electrode which permits electric prospecting in winter. The electrode must be lower than usual - about 1.2 to 1.5 m long, made of hard steel and of conical form to facilitate its driving into the frozen soil with a sledge hammer. It must have a ring on its top to permit its extraction. When a brass or copper electrode is used - the hole must be made with a steel electrode of the same diameter, then the brass electrode is placed in the prepared hole. As a measuring device the EP-1 potentiometer, constructed by the Geologorazvedka Plant, was used. There are 2 figures.

ASSOCIATION: (Soyuzdorproyekt)

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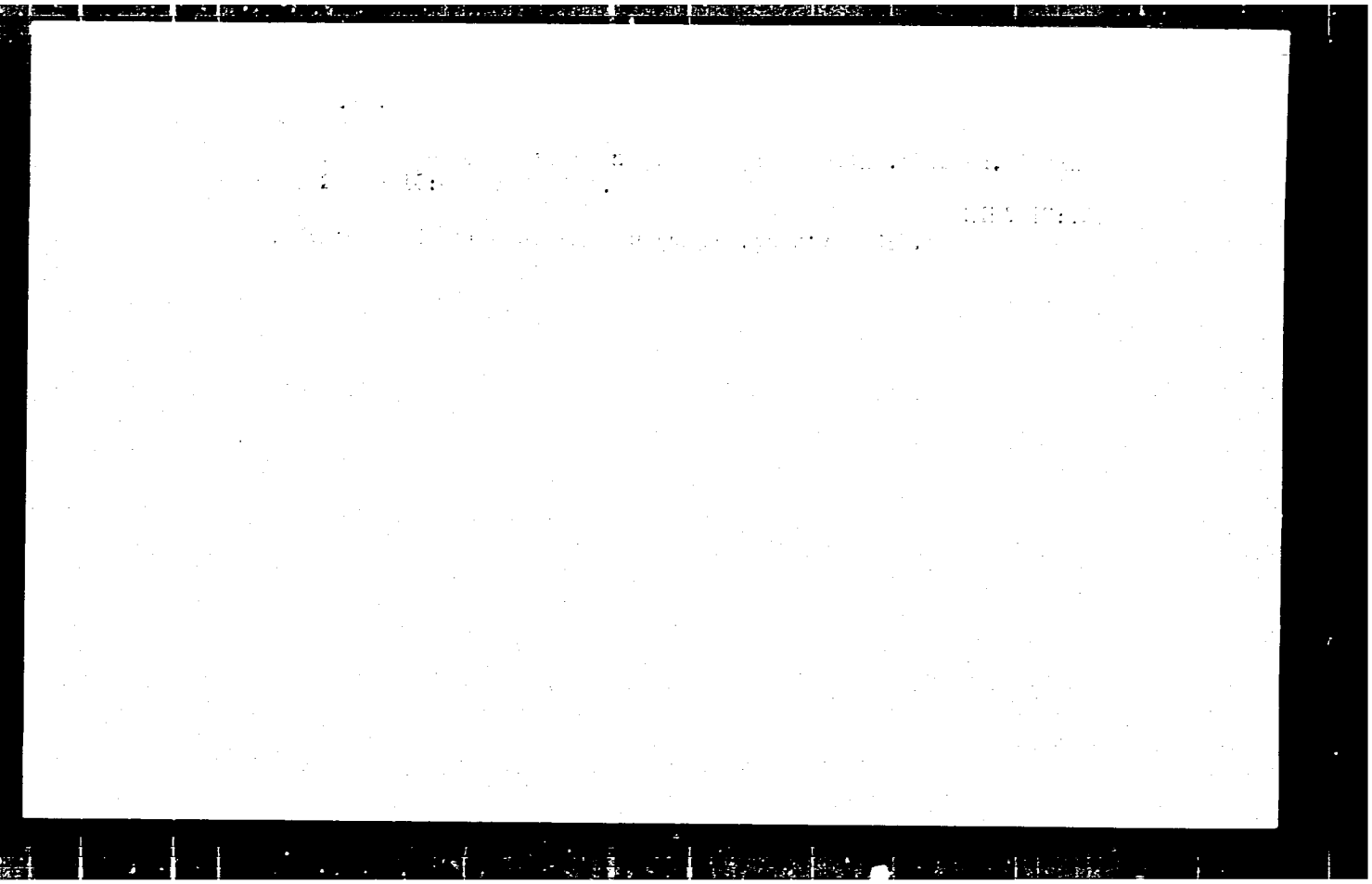

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652210003-1"

SOLDATENKOV, V.Ye., inzh.

Electric logging operations in bridge construction. Avt.dor. 22 no.8:24-25 Ag '59. (MIRA 12:11)
(Logging (Geology)) (Bridge construction)

SOLDATENKOV, V.Ye., metodist

Radio-wave method of electric geological exploration. Transp. stroi. 14 no.10:48-49 O '64. (MIRA 18:3)

1. Vystavka dostizheniy narodnogo khozyaystva SSSR.

[illegible], [illegible].Ye., [illegible]dist; [illegible], [illegible].Ye., [illegible]; [illegible], N.; [illegible], G.Ye., inzh.; [illegible], [illegible], inzh.

Exhibitions and displays of special items. Inform. biul. [illegible] no.9: 13-15 S '64. (MIRA 17:12)

1. Pavil'on "Khimicheskaya promyshlennost'" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Naroditskaya). 2. Razdel "Geofizika" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Soldatenkov). 3. Glavnyy metodist pavil'ona "Khimicheskaya promyshlennost'" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Pol'skaya). 4. Zavod "[illegible]" Grodno-[illegible] soveta narodnogo khozyaystva (for Karnautov, Yablokov).

SOLDATENKOV, V.Ye., inzh.-geofizik

Exhibition of the Achievements of the National Economy helps road surveyors. Avt. dor. no.10:32, 3 of cover O '64.
(MIRA 17:12)

a L 10290-66

ACC NR: AP5028787 SOURCE CODE: UR/0230/65/000/009/0050/0050

AUTHOR: Soldatenkov, V. Ye. (Engineer) 44

ORG: Northern Government Scientific Research Institute (Severnyy nauchno-issledovatel'skiy institut promyshlennosti) 44

TITLE: Snow compactor for winter road construction

SOURCE: Transportnoye stroitel'stvo, no. 9, 1965, 50

TOPIC TAGS: roadbuilding equipment, construction machinery, snow/ KDM 100 tractor

ABSTRACT: A snow compacting machine for winter road construction is described. It consists of four major components: a tractor (KDM-100; 100 hp), a snow loosener consisting of a toothed cutter, a heating chamber in which fuel from six injector nozzles is burned, and a vibrating compactor with unbalanced rotating weights. The machines specifications are: width of path, 2.8 m; cutter speed, 300--350 rpm; vibrator frequency, 2500--3000 cpm; 8 m long, 1.8 m high, 3 m wide; 2 km/hr capacity; compacted snow density (for 70 cm deep snow layer) 0.62--0.64 gm/cm^3; weight, 10 tons. For snow depths < 50 cm the road path has to be

Card 1/2 UDC: 625.08

L 10290-66
ACC NR: AP5028787

prepared before the snowfall to remove tree stumps, etc. The snow compactor forms a compacted snow-ice layer which will support conventional vehicles after 10--12 hours after passage of the compactor. The compactor provides 2--2.5 times labor saving and 1.5--2 times economic savings over existing methods. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: none

PC

Card 2/2

RUDENKO, Nikolay Pavlovich; PASTUKHOVA, Zinaida Vasil'yevna; SOLDATENKOVA, T.A., red.

[Radioactive molybdenum isotopes] Radioaktivnye izotopy molibdena. Moskva, Atomizdat, 1965. 46 p. (MIRA 18:12)

PETROV, Rem Viktorovich; ZARETSKAYA, Yuliya Mikhaylovna;
SOLDATENKOVA, T.A., red.

[Transplantation immunity and radiation chimeras]
Transplantatsionnyi immunitet i radiatsionnye khimery.
Moskva, Atomizdat, 1965. 230 p. (MIRA 19:1)

BAKHUROV, Vasiliy Gerasimovich; LUTSENKO, Inna Kirillovna; SHASHKINA, Nadezhda Nikolayevna; KOLYCHEV, B.S., red.; SOLDATENKOVA, T.A., red.

[Radioactive wastes of uranium plants] Radioaktivnye otkhody uranovykh zavodov. Moskva, Atomizdat, 1965. 150 p. (MIRA 18:7)

GOL'DIN, Mikhail L'vovich; SOLDATENKOVA, T.A., red.

[Control and automation of ore grinding and crushing processes] Kontrol' i avtomatizatsiia protsessov drobleniia i izmel'cheniia rud. Moskva, Atomizdat, 1965. 439 p. (MIRA 18:9)

SOLDATENKOVA, Yu.P.

Some data on the vegetation in the Salekhard region (Cape Angal'skiy). Vest. Mosk. un. Ser. 6: Biol., pochv. 20 no.3:53-64 My-Je '65. (MIRA 18:7)

1. Kafedra geobotaniki Moskovskogo universiteta.

SOLDATENKOVA, Yu.P.

Temperature balance of soil and temperature of the ground cover of various plant communities in the Salekhard region. Vest.Mosk. un.Ser.6: Biol., pochv. 20 no.4:49-58 Jl-Ag '65.
(MIRA 18:12)

1. Kafedra geobotaniki Moskovskogo universiteta. Submitted January 29, 1965.

BELEVTSOV, G.A.; KRASAVTSEV, N.I.; MISHCHENKO, N.M.; SOLDATKIN, A.I.; SHARKEVICH, L.D.; Prinimali uchastiye: FROLOV, S.Ya.; SHESTOPALOV, I.I.; PECHNIKOVA, Z.A.; STOLBUNSKIY, L.Z.; USOV, V.T.; GLOTOV, P.L.; VOLKOVA, A.Ya.; ALDOKHINA, V.P.; VOLOSHIN, Yu.T.; SHUMAKOV, I.S.; ZAPOROZHETS, N.P.; SHAPOSHNIKOV, V.P.; GONCHAROVA, M.Ya.

Investigation of blast furnace smelting using natural gas. Stal' 22 no.6:483-486 Je '62. (MIRA 16:7)

(Blast furnaces--Equipment and supplies)

KOROSTIK, P.O.; KOTEL'NIKOV, I.V.; PANEV, G.A.; KRASAVTSEV, N.I.; SOLDATKIN, A.I.; POPOV, N.N.; DUNAYEV, N.Ye.; YAROSHEVSKIY, S.L.

Blast furnace smelting with coke made of a charge having an increased content of gas coal. Met.i gornorud. prom. no.6:7-10 N-D '63. (MIRA 18:1)

ROSTEMBERSKIY, A.V.; SOLDATKIN, A.I.; ZAPOROZHETS, N.P.

Use of chalk lime for the intensification of the sintering process. Metallurg 8 no.8:5-6 Ag '63. (MIRA 16:10)

1. Donetskiy filial Ukrainskogo nauchno-issledovatel'skogo instituta metallov i Yenakiyevskiy metallurgicheskiy zavod.

ROSTEMBERSKIY, A.V.; KANFER, V.D.; SOLDATKIN, A.I., kand.tekhn.nauk; KUMANI, B.G.; CHERNOV, G.I.; LOZNEVOY, V.S.; ZAPOROZHETS, N.P.

Increasing the productivity of sintering plants and improving the quality of the sinter. Met. i gornorud. prom. no. 2:20-22 Mr-Ap '64. (MIRA 17:9)

SOLDATKIN, A.L.

Making self-fluxing manganese ore sinter. A. L. Soldatkin. *Stal'* 15, 497–502(1955).—By smelting FeMn in a blast furnace, it was observed that, before being reduced, almost all the MnO dissolved in the slag which contained in the boshes 40–60% MnO and that CaO in the slag reduced its satn. with MnO. This suggested the use of sinter high in CaO. Plant-scale sintering expts. were conducted by using ore carrying MnO 65.0, SiO_2 9.28, and CaO 1.03%. The influence of moisture, thickness of sintering layer, C content of the mix, dimensions of coke and limestone particles, and the percentage of returns were examd. as a function of sinter quality and production. Effect of moisture was detd. by using a charge of ore 71, returns 15, limestone 14, and C 5.3% held in a layer 350 mm. thick. Best gas permeability, optimum sintering speed, best yield of good sinter, min. of 0–6-mm. fines, max. contraction of the charge, and highest temp. of the waste gases were recorded with 7–8% moisture. Best thickness of sintering layer for the same charge was 350–400 mm. and optimum C content 5%. Coke ground to pass a 6-mm. sieve and limestone smaller than 6 mm. produced best av. results. Proper temp. requires the use of returns, but more than 15% of them had no point. I. D. Cat

Soldatkin, A. I.

Material balance in the process of agglomeration of manganese ore. A. I. Soldatkin. *Trudy Leningrad. Politekh. Inst.* 1955, No. 170, 71–9; *Referat. Zhur., Met.* 1956, No. 1883.—Material balances for agglomeration of Mn ore without flux and with addn. of 14% lime are given. It was found that without addn. of lime considerable reduction of Mn_3O_4 to MnO occurred, while with lime part of MnO was oxidized to Mn_3O_4. Agglomeration removes ~75% S. Compn. of by-product gases was characterized by high content of CO_2 and CO. The cumulative O content of gases was higher than atm.

V. N. Bednarski

Met

AUTHOR: Tyutyunnikov, Yu.B. (U.Kh.I.N.), Soldatkin, A.I. (U.I.M.), Dvuzhil'naya, N.M. (Don U.G.I.), Kotel'nikov, S.B., Rodshteyn, P.M. (Zhdanov Coke Oven Works), Muguyev, G.D. and Tarasov, D.A. (Azovstal' Metallurgical Works).

TITLE: The use of gas coals in blends of the Southern Coking Plants. (Ispol'zovaniye Gazovykh ugley v shikhtakh yuzhnykh koksokhimicheskikh zavodov.)

PERIODICAL: "Koks i Khimiya" (Coke and Chemistry), 1957, No. 2, pp. 20 - 23, (U.S.S.R.)

ABSTRACT: An experimental blend containing 30% of gas coals instead of the usual 15% was used for one month in the Zhdanov Coke Ovens and the coke produced tested on a No. 1 blast furnace in the Azovstal' Works and No. 2 furnace in the Il'ich Works. The composition and properties of the usual and the experimental coal blends (Tables 2, 3), coking balances (Table 4), and properties of coke produced (Tables 5, 6, 7) are given. Operational data of blast furnaces on normal and experimental cokes are given in Table 8. The mean size of coke decreased from 60.85 mm to 58.74 mm. This decrease in the size of coke had only a small effect on the blast furnace operation.
There are 8 tables and 4 Russian references.

SOLDATKIN, A.I.

18(5); 25(5) PHASE I BOOK EXPLOITATION SOV/1574

Kyyiv. Ukrayins'kyy naukovo-doslidnyy instytut metaliv

Vprovadzhennya novoyi tekhniky i tekhnologiyi na metalurhiynykh zavodakh Ukrayiny; zbirnyk, t. 3 (Introduction of New Techniques and Technology in Ukrainian Metallurgical Plants; Collection of Articles, Vol. 3) Kyyiv, Derzhtekhvydav URSR, 1958. 192 p. 1,000 copies printed.

Exec. Ed.: H. Afonina; Tech. Ed.: P. Patsalyuk.

PURPOSE: The book is intended for metallurgists employed in rolling and slabbing operations.

COVERAGE: This is a collection of 11 Ukrainian articles, compiled by 22 authors, some of whom are referred to as eminent specialists. The subjects dealt with in the articles are: use of limestone-fluxed slag in making pig iron, use of blast-furnace gas under increased pressure, use of oxygen in making steel in open-hearth and Bessemer furnaces, description of a new method of "intensified" squeezing of slabs in blooming mills. Some design details, with direct references to actual plants and certain operational

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practices are also featured. Introduction of full mechanization of rolling processes at steel-works is taking place. Numerous diagrams accompany the text. Some articles have bibliographic entries, mainly Soviet.

TABLE OF CONTENTS:

25(1) PHASE I BOOK EXPLOITATION SOV/2132

Kiyev. Ukrainskiy Nauchno-issledovatel'skiy institut metallov

Tekhnologiya proizvodstva i svoystva chernykh metallov; sbornik (The Manufacture and Characteristics of Ferrous Metals; a collection of articles) Khar'kov, Khar'kovskiy gos.univ. im. A.M. Gor'kogo, 1958. 271 p. (Series: Its: Trudy, vyp. 4) Errata slip inserted. 1,000 copies printed.

Editorial Staff of this book: P.A. Aleksandrov, D.S. Kasarnovskiy, M.I. Kurmanov, M.F. Lavs, V.F. Onopriyenko, V.A. Tikhovskiy; and Ya. A. Shneyerov; Ed.: S.S. Liberman; Tech. Ed.: K.O. Gurin

PURPOSE: The book is intended for the scientific personnel of institutes and for engineers and technicians of metallurgical enterprises and other branches of the industry.

COVERAGE: The collection of articles reviews the work carried on at the Institute of Metals on the technology of blast furnaces, open-hearth furnaces, and rolled stock production. It also deals with problems in metallography, heat treatment of ferrous metals and methods for their study. Particular attention is devoted to the preparation of charges and blast furnace practice with increased gas pressure, open-hearth production with oxygen blast and rolling of light profiles. No personalities are mentioned. References accompany each article.

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CNOPRIYENKO, V.P., kand.tekhn.nauk; LEBEDEV, A.Ye., kand.tekhn.nauk; SOLDATKIN, A.I., kand.tekhn.nauk; LOZOVOY, P.R., inzh.; PETRUKHIN, B.A., inzh.; ARBUZOV, V.A., inzh.; Prinimali uchastiye: FURMAN, D.M., KONOPLYA, M.V.; KOTOV, A.I.

Pilot-plant production of sinter with a basicity of 1.2 from Kerch ore concentrates. Biul. TSIICHM no.10:17-22 '60. (MIRA 15:4)

1. Ukrainskiy institut metallov (for Furman, Konoplya). 2. Kamyshburunskiy kombinat (for Kotov).
(Sintering) (Kerch Peninsula--Iron ores)

SOLDATKIN, A.I., kand.tekhn.nauk; Prinimaldi uchastiye: PETRUKHIN, B.A.; BABIY, A.A.; SHARKEVICH, L.D.; VYAZOVSKIY, Yu.V.; GRIBANOV, L.M.; KIREYEVA, K.K.; PAVLOVA, V.D.; PRISHUTOVA, V.S.

Preparation of fluxed sinter from Kerch ore concentrates. Trudy Ukr. nauch.-issl. inst. met. no.7:36-50 '61. (MIRA 14:11)
(Kerch Peninsula--Iron ores) (Sintering)

BELEVTSEV, G.A.; GAVRILENKO, N.G.; GRINENKO, I.M.; KOROSTIK, P.O.; KOTEL'NIKOV, I.V.; KRASAVTSEV, N.I., kand. tekhn. nauk; MISHCHENKO, N.M.; POPOV, N.N., kand. tekhn. nauk; SEMIK, I.P., kand. tekhn. nauk; TOTSKIY, G.P., kand. tekhn. nauk; SHESTOPALOV, I.I.; Prinimali uchastiye: SOLDATKIN, A.I.; SOLOMKO, V.P.; SOLOMATIN, A.M.; BOLOTSKIY, D.V.; ZAPOROZHETS, N.P.; BESSCHASTNYY, A.Ye.; SHVETS, N.Kh.; LIKHUNIN, S.D.; SHUMSKIY, L.B.; VAS'KOVICH, N.A.; YEROKHINA, A.I.; GELYUKH, B.A.

Desulfuration of pig iron in a fast-revolving and continuous drum. Met. i gornorud. prom. no.4:3-5 Jl-Ag '65. (MIRA 18:10)

YEVDOKIMOV, N.A.; SOLDATKIN, A.I., kand. tekhn. nauk; VAZHINSKIY, V.I.

Lengthening the service life of blast furnace air tuyeres.
Met. i gornorud. prom. no.4:10-11 Jl-Ag '65. (MIRA 18:10)

RATNER, G.L.; SOLDATKIN, B.K.

Closure of a defect of the interauricular septum using an ivalon obturator experimentally. Eksper. khir. i anest. 9 no.6:14-16 N-D '64. (MIRA 18:7)

1. Kafedra fakul'tetskoy khirurgii (zav. - prof. G.L.Ratner) Kuybyshevskiy meditsinskogo instituta.

SOLDATENKO, G.I.

Airtightness of wells for underground gas storage. Gaz. prom. 5 no.5:41-43 My '60. (MIRA 14:11)
(Gas, Natural--Storage)

MASTRENKOV, A.N.; REZNIK, B.A.; SOLDATKIN, G.I.

Features of the preparation of the Lower-Shchigry water-bearing reservoir as an underground gas-storage reservoir. Gaz. prom. 9 no.12:36-39 '63 (MIRA 18:2)

BUZINOV, S.N.; LEVYKIN, Ye.V.; SOLDATKIN, G.I.

Buffer and active volumes in the storage of gas in water-bearing beds. Gaz. prom. 9 no.11:33-38 '64. (MIRA 17:12)

MASTERKOV, A.M.; REZNIK, B.A.; SOLDATKIN, G.I.

Results of the experimental withdrawal of gas from the Shchelkovo underground gas reservoir. Gaz. prom. 9 no.8:31-35 '64. (MIRA 17:9)

NOVOKRESHCHENOVA, N.S.; SOLDATKIN, I.S.; DENISENKO, L.K.: MARTENS, L.A.

Use of radioactive carbon for tagging fleas. Med.paraz.iparaz. bol. 30 no.1:72-76 Ja '61. (MIRA 14:3)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo instituta mikrobiologii i epidemiologii Yugo-Vostoka SSSR ("Mikrob") (dir. instituta D.G. Savostin).
(FLEAS) (CARBON—ISOTOPES) (INSECTS, MARKING OF)

SOLDATKIN, I.S.; NOVOKRESHCHENOVA, N.S.; RUDENCHIK, Yu.V.; OSTROVSKIY, I.B.; LEVOSHINA, A.I.

Study of the feeding activity of fleas of the greater gerbil under natural conditions by the use of radioactive indicators. Zool. zhur. 40 no.11:1647-1650 N '61. (MIRA 14:11)

1. All-Union Research Institute "Mikrob", Saratov and Anti-Plague Station of Nukus.

(Fleas) (Insects--Food)

NOVOKRESHCHENOVA, N.S.; SOLDATKIN, I.S.; LEVOSHINA, A.I.

Method of radioactive indicators used for determining the comparative frequency of feeding of various species of fleas under laboratory conditions. Vop. ekol. 4:135-137 '62. (MIRA 15:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut "Mikrob", Saratov.
(Fleas) (Insects--Food) (Radioactive tracers)

ACC NR: AP7001090 (A,N) SOURCE CODE: UR/0439/66/0045/004/0481/0486

AUTHOR: Soldatkin, I. S.; Rudenchik, Yu. V.; Ostrovskiy, I. B.; Levoshina, A. I.

ORG: All-Union "Microbe" Antiplague Scientific Research Institute, Saratov (Vsesoyuznyy nauchno-issledovatel'skiy protivochumnyy institut "Mikrob"); Nukus Antiplague Station (Nukusskaya protivochumnaya stantsiya)

TITLE: Quantitative characteristics of the development of plague epizootic in *Rhombomys optimus* colonies

SOURCE: Zoologicheskiy zhurnal, v. 45, no. 4, 1966, 481-486

TOPIC TAGS: ~~human ailment, epizootic~~, plague, disease vector, ~~gerbil~~, flea, ANIMAL PARASITE, EPIZOOTIOLOGY, INFECTIVE DISEASE, ANIMAL DISEASE, RODENT

ABSTRACT: The process of the infection of fleas infesting diseased gerbils (*Rhombomys optimus*) was studied using radioactivity labeled materials to simulate disease agents in a model experiment. Results were compared with those obtained with plague-infected gerbils. The number of fleas feeding on one gerbil were recorded, as well as the distribution of these fleas after five or six days. Calculations based

Card 1/2 UDC: 599.323.4 Rhombomys: 616.981.452

ACC NR: AP7001090

on experimental data showed that the mean number of gerbils that can be infected by one sick animal is 0.3—0.6 in summer and winter and 1.7—2.5 in spring and fall. Orig. art. has: 4 tables.

[WA-50; CBE No. 14]

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Card 2/2

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