

ORLOVSKIY, N. I.

Beets and Beet Sugar.

Effect of conditions under which sugar beets are raised on the succeeding generation of plants. Sel. i sem. 19 No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 195~~7~~, Uncl.  
2

ORLOVSKIY, N.I.; SAMEUROV, V.I.

In the All-Union Institute of Sugar Beets. Agrobiologiya no.6:151-  
152 N-D '56. (MIRA 10:1)

(Sugar beets)

ORLOVSKIY, M.I.

Plant breeding as an important method for increasing the fertility  
and sugar content of beets. Visnyk AN URSR 27 no.1:11-22 Ja '56.  
(Sugar beets) (MIRA 9:6)

ORLOVSKIY, M.I.

Effect of storage time on beet seeds and yields. Sakh.prom.30  
no.1:59-62 Ja '56. (MLRA 9:6)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut sakharney  
svекly.

(Sugar beets)

ORLOVSKIY, N.I.

USSR/Cultivated Plants - Technical Oleaceae, Sugar Plants

M-7

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1683

Author : N.I. Orlovskiy

Inst : Lithuanian Institute of Agriculture, *AU Sci Res Inst Sugar Beets*

Title : Single Seeded Sugar Beets

Orig Pub Dokl. VASKhNIL, 1957, No 3, 7-13

Abstract : The task of raising single seeded sugar beets began in the USSR in the year 1932 and is presently being conducted by the All-Union Sugar Beet Institute at the Bielotserkovka, Ramon', Verkhnyachekaya, L'govskaya Selection Stations and also in the Lithuanian Institute of Agriculture. The productivity of the varieties raised in the USSR (of single seeded sugar beets) has grown considerably due to the combination of hybridization with selection, according to seeds and according to the weight of the root, sugar content and other biological characteristics. The basic advantage of the single-seeded beet consists in the fact that its breaking and testing takes 15-20% less work than the ordinary beet. Its saccharinity and the collection of sugar closely approximates that of the ordinary beet.

Card : 1/1

USSR/Cultivated Plants - Technical, Oleaginous, Sacchariferous. H-7

Abs Jour : Sov Zhur - Biol., No 9, 1950, 3-7

Author : Orlovskiy, H.I.

Inst : Institute of Agricultural Information.

Title : Principal Problems of Sugar Beet Selection Abroad.  
(A Survey).

Orig Pub : Sov. in- s.-kh. inform., 1957, No 7, 3-7.

Abstract : No abstract.

Card 1/1

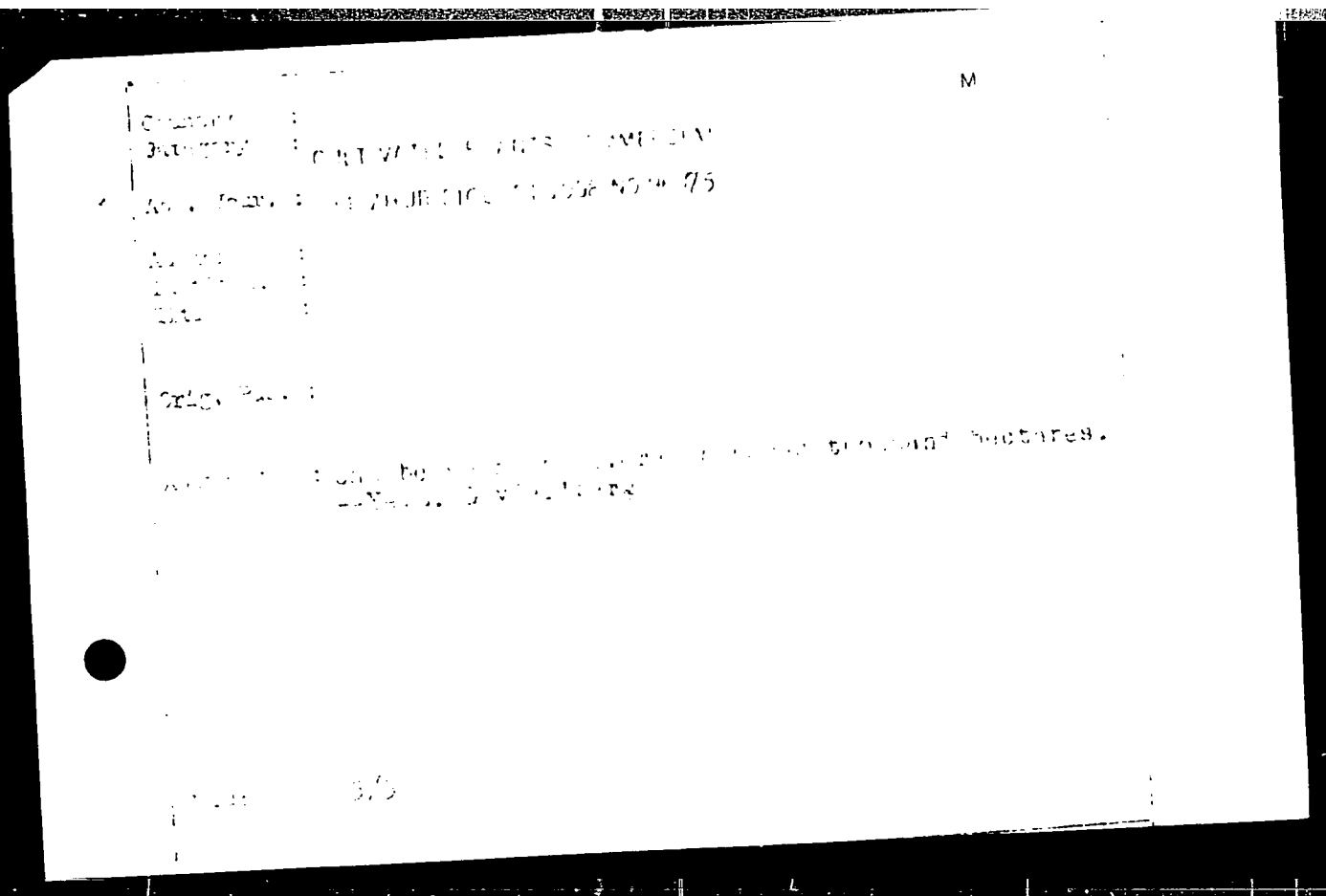
ORLOVSKIY, N. I.

Country : USSR  
 Category : CULTIVATED PLANTS.COMMERCIAL. Oleiferous. Sugar-  
 Bearing.  
 Abs. Jour. : REF ZHUR BIOL.,21,1958,NO-96075  
 Author : Orlovskiy, N. I.; Molodtsov, O. K.; Panov, A. V.  
 Title : Single Seed Sugar Beet

Tric. Pub. : Vestnik s.-kh. nauk, 1957, No.12, 65-74

Abstract : By means of the selection of single seed fruits and cross-pollinating their offspring 1 specimen of completely single seed sugar beet was obtained in the USSR in 1936. Subsequent crossing with better varieties of multiple seed beet and repeated selection (chiefly individual) for single-seed bearing, rapid ripening, productivity, saccharinity, disease resistance and other important characteristics made it possible to develop the single seed varieties and increase their produc-

Card: 1/3





ORLOVSKIY, N.I.

Potential resources from increased sugar content of beets. Sakh.  
prom. 32 no.2:56-58 P '58. (MIRA 11:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sakharnoy svekly.  
(Sugar beets)

ORLOVSKIY, N.I.

Most important achievements in sugar beet breeding during the last  
forty years. Sakh. prom. 32 no.3:60-63 Nr '58. (MIRA 11:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sakharney svekly.  
(Sugar beet breeding)

ORLOVSKIY, N.I., prof. (g. Kiev).

Seminar on the breeding of monospermous sugar beets.  
Agrobiologia no.6:144 H-D '58.  
(Sugar beet breeding)

(MIRA 12:1)

ORLOVSKIY, M.I., prof.

Monoapertous sugar beets, their breeding and seed production.  
Agrobiologiya no.6:846-851 M-D '59. (MIRA 13:4)

1. Vsesoyuznyy institut sakharnoy svekly, Kiyev.  
(Sugar beets)

ORLOVSKIY, N.I., prof., doktor sel'skokhoz.nauk

Role of the conditioning environment in plant breeding and seed production. Agrobiologiya no.6:803-808 N-D '60. (MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sakharnoy svekly, g.Kiyev.

(Plant breeding) (Seed production)

ORLOVSKIY, N.I. [Orlovs'kyi M.I.]; FILATOVA, T.A.; OKANENKO, A.S.; GOMOLYAKO,  
S.Ye. [Homoliako, S.IE.]

Professor Aleksandr Aleksandrovich Tabentskii; on his 70th birthday  
and 50th anniversary of his scientific activities. Ukr. bot. zhur.  
17 no.5:113-114 '60. (MIRA 13:12)  
(Tabentskii, Aleksandr Aleksandrovich)

ORLOVSKIY, Nikolay Ivanovich; PAL'KO, Yu.G., red.; CHEREVATSKIY, S.A.,  
tekh. red.

[Fundamentals of the biology of sugar beets; with the elements  
of cultivation practices and breeding] Osnovy biologii sakharnoi  
svekly (s elementami agrrotekhniki i selektsii). Kiev, Gos. izd-  
vo sel'khoz. lit-ry USSR, 1961. 323 p. (MIRA 15:4)  
(Sugar beets)

ORLOVSKIY, N.I.

Raise the standards for sugar beet varieties. Sakh. prom.  
35 no.12:48-50 D '61. (MIRA 15:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sakharnoy  
svekly.

(Sugar beets--Varieties)



BUZANOV, I.F.; SAMBUROV, V.I.; YEMETS, G.M.; ORLOVSKIY, N.I.;  
NEGOVSKIY, N.A.; FEDOROV, A.I.; GREKOV, M.A.; KUREATOV,  
S.T.; MEL'NICHUK, A.N.; TONKAL', Ye.A.; GORNAYA, V.Ya.;  
ROZHDESTVENSKIY, I.G.; SIDOROV, A.A.; KUDARENKO, F.F.;  
BROVKINA, Ye.A.; GELLER, I.A.; DOBROTVORTSEVA, A.V.;  
VARSHAVSKIY, B.Ya.; KUTSURUBA, N.V.; KUZ'MICH, S.I.;  
PRESNYAKOV, P.V.; USHAKOV, A.F.; SHEVCHENKO, V.N.;  
KHUCHUA, K.N.; PETRUKHA, Ye.I.; POZHAR, Z.A.; SHAPOVALOV,  
P.T.; AREF'YEV, T.I.; GRIGOR'YEVA, A.I., red.; BALLOD,  
A.I., tekhn. red.

[Sugar beets] Sakharnaia svekla. Moskva, Sel'khozizdat,  
1963. 487 p. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sa-  
kharnoy svekly. 2. Nauchnyye sotrudniki Vsesoyuznogo  
nauchno-issledovatel'skogo instituta sakharnoy svekly  
(for all except Grigor'yeva, Ballod).  
(Sugar beets)

ORLOVSKIY, N.I.; GOLDBERG, M.S.

Professor Aleksandr Aleksandrovich Labent'skii, 1894-1964: obituary.  
Fiziol. rast. 11 no.6:1115-1119 N-S '64.

(MIRA 18:2)

KARPENKO, P.V., doktor sel'khoz. nauk, zasl. deyatel' nauki RSFSR;  
KULESHOV, N.N., akademik, retsenzent; ~~ORLOVSKIY, N.I.,~~  
prof., retsenzent; FILIPETS, G.V., prof., retsenzent;  
IVANOV, S.Z. prof., retsenzent; GRACHEVA, V.S., red.

[Sugar-beet growing] Sveklovodstvo. Izd.3., perer. Mo-  
skva, Kolos, 1964. 307 p. (MIRA 17:10)

ORLOVSKIY, N.N. [Orlovs'kyi, M.I.]; OKANENKO, A.S.

Oleksandr Oleksandrovych Tabents'kyi, 1890-1964. Ukr. 501.  
zhur. 21 no.6:93-94 '64. (MIKA 18 4)

OKSENICH, Igor' Gur'yevich; ORLOVSKIY, Nikolay Sergeevich;  
PASHINSKIY, Aleksandr Zakharovich; ZLOBINA, M., red.;  
SAKHATOV, B., tekhn. red.

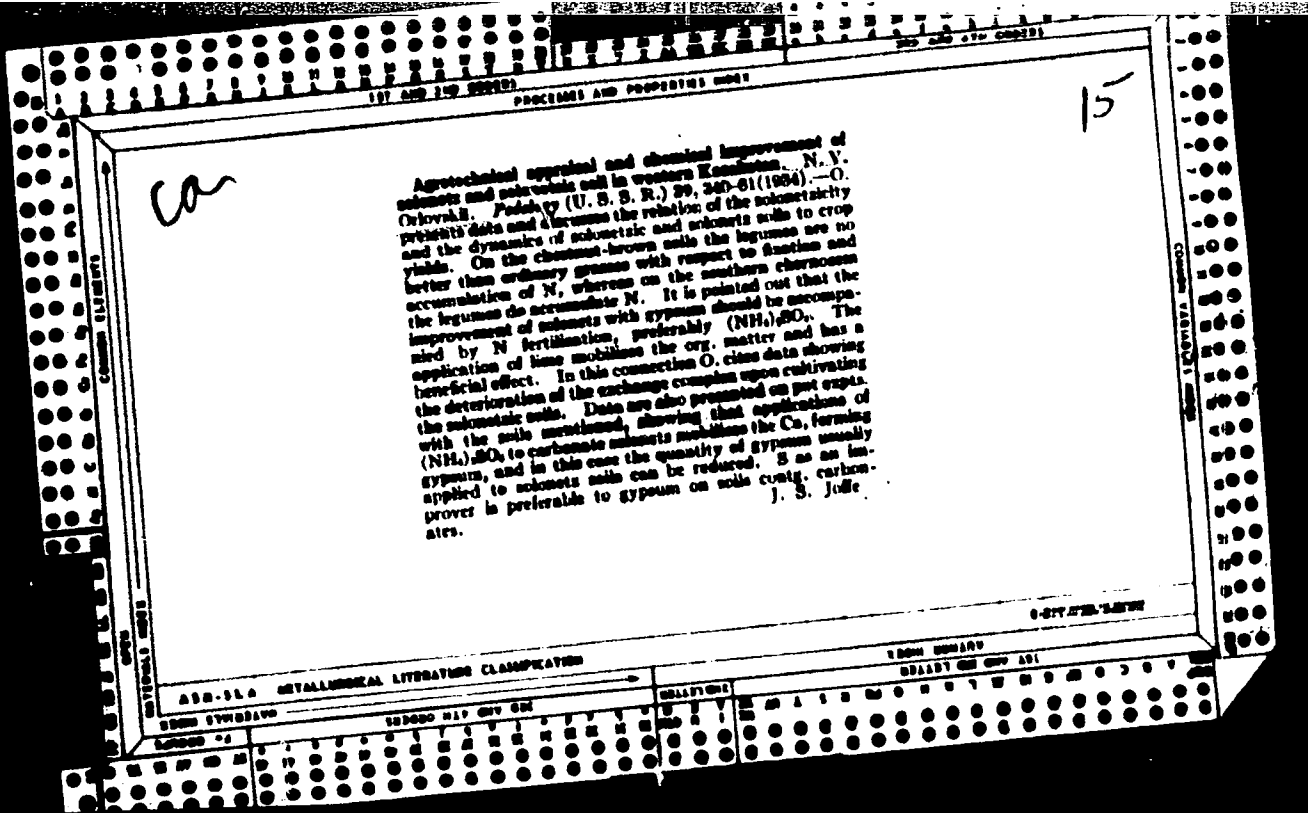
[Climate of Turkmenia] Klimat Turkmenii. Ashkhabad, Turkmen-  
gosizdat, 1962. 89 p. (MIRA 16:5)  
(Turkmenistan—Climate)

ORLOVSKIY, N.S.

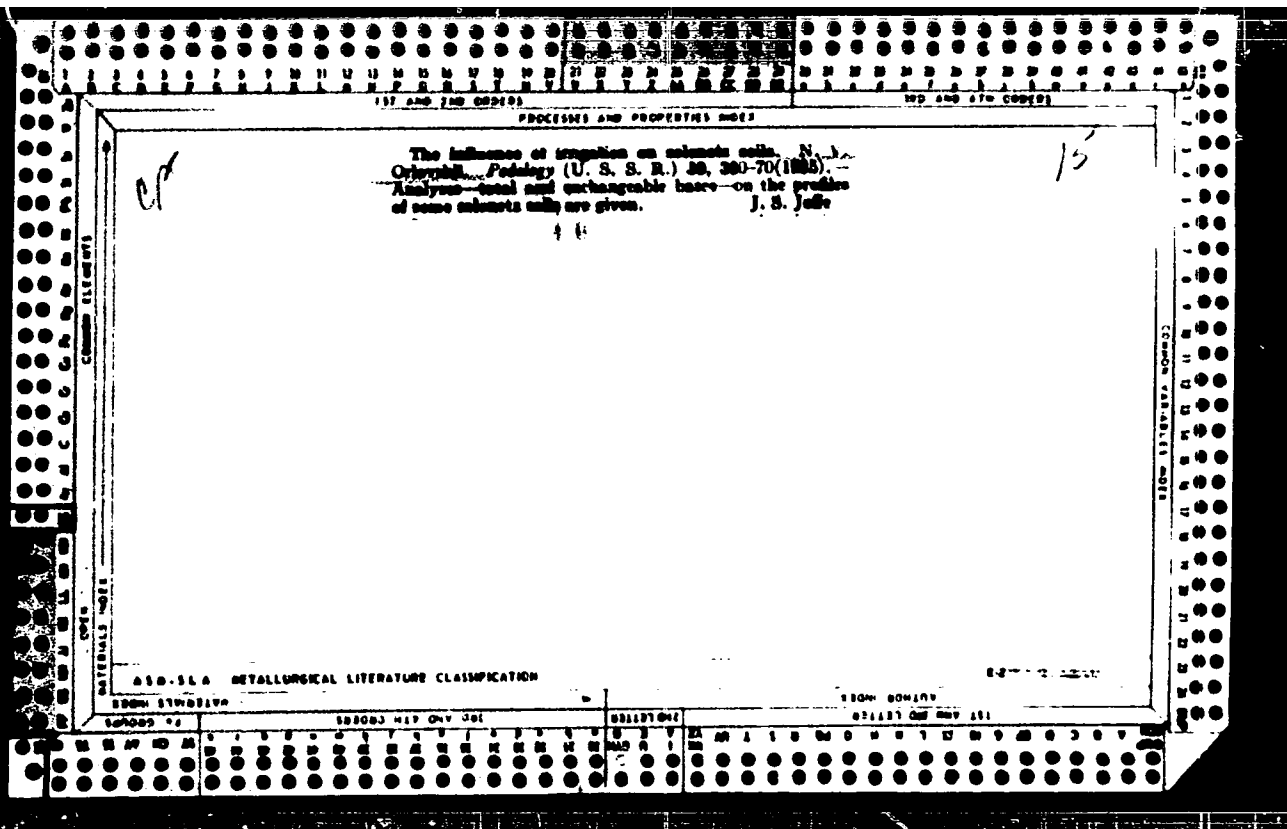
Some data on dust storms in Turkmenia. Sbor. rab. Ash. gidromet.  
obser. no.3:17-43 '62. (MIRA 17:1)

ORLOVSKIY, N.V.; KOTEL'NIKOV, V.I.; KUSKOVA, Ye.S.; OSTROVLIANCHIK, M.F.

Work of the PT-2-30 Three-level plow on Solonchaks soils. Trudy  
Biol. inst. Sib. otd. AN SSSR no.9:200-212 '62 (MIRA 17:8)



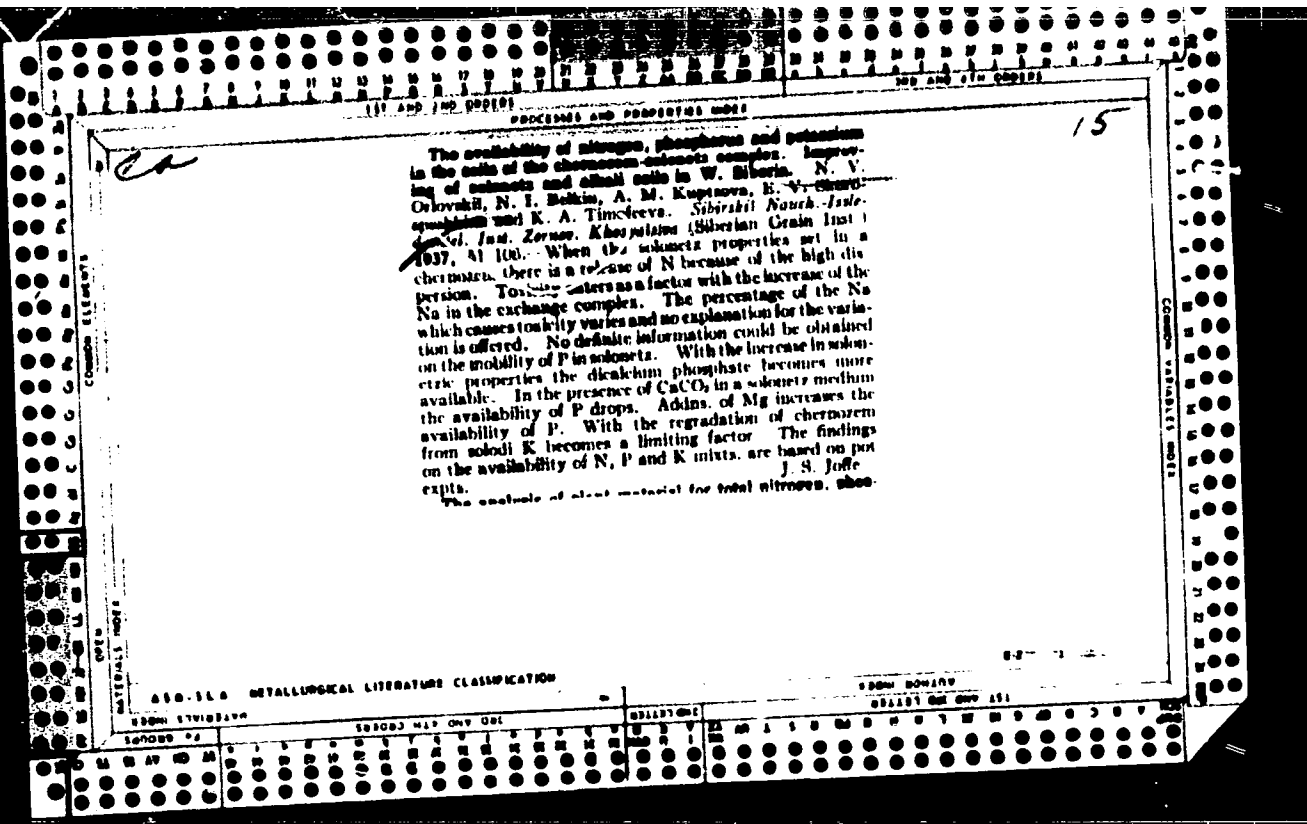


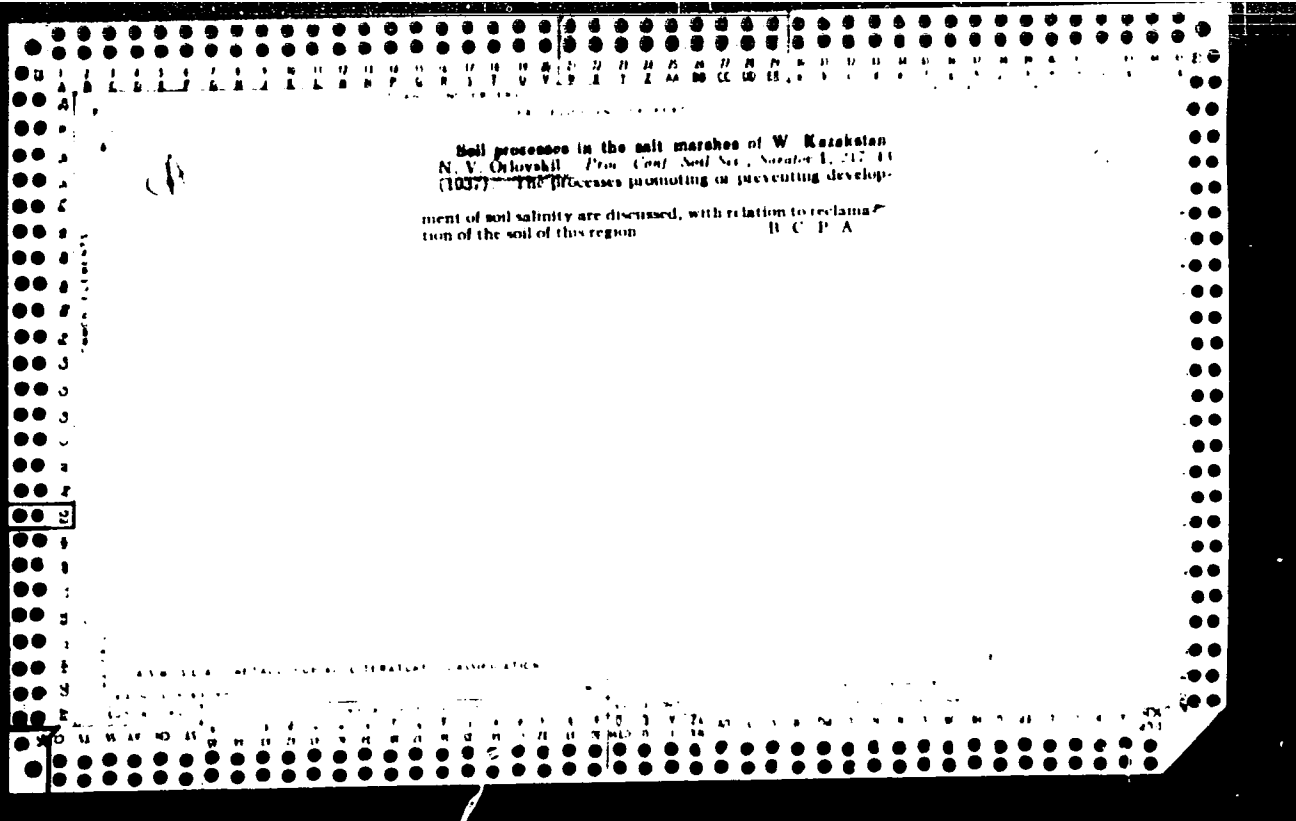


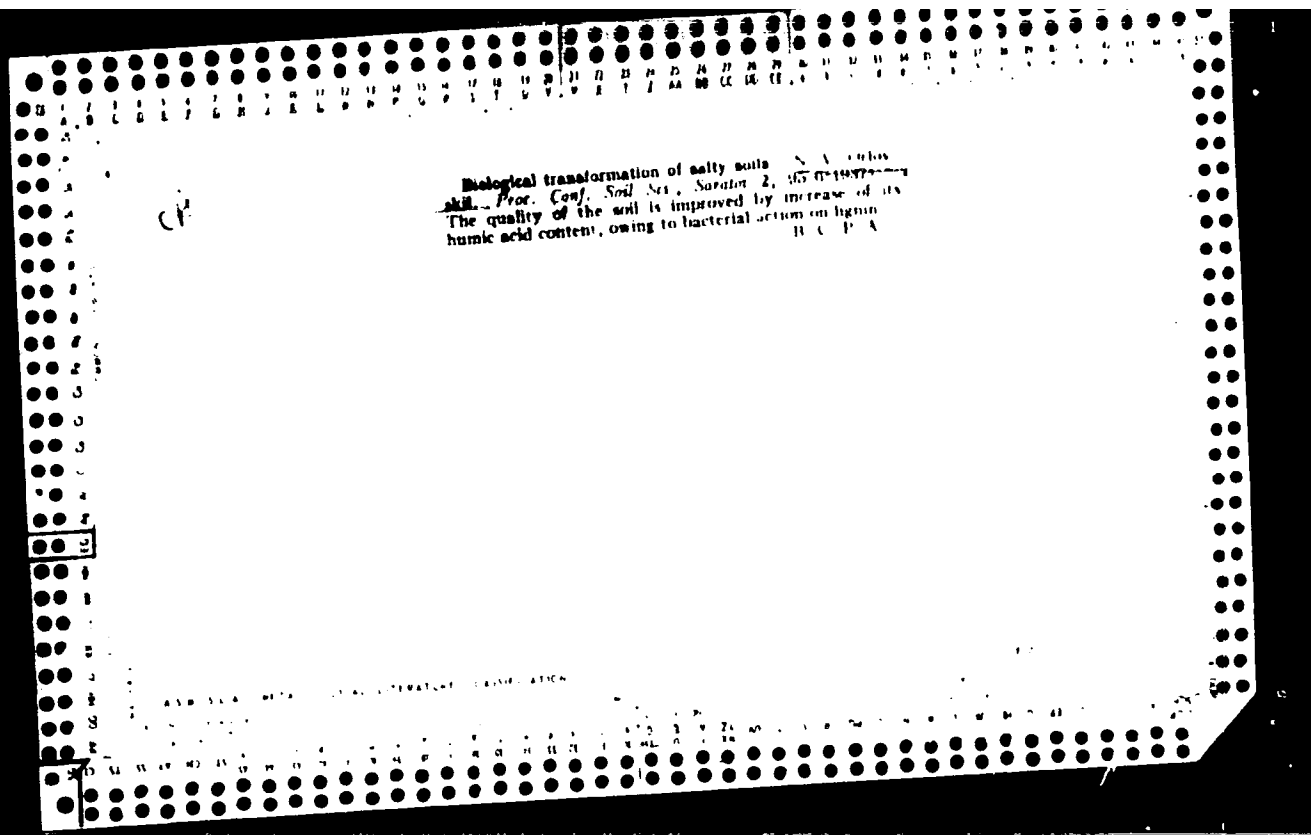
15

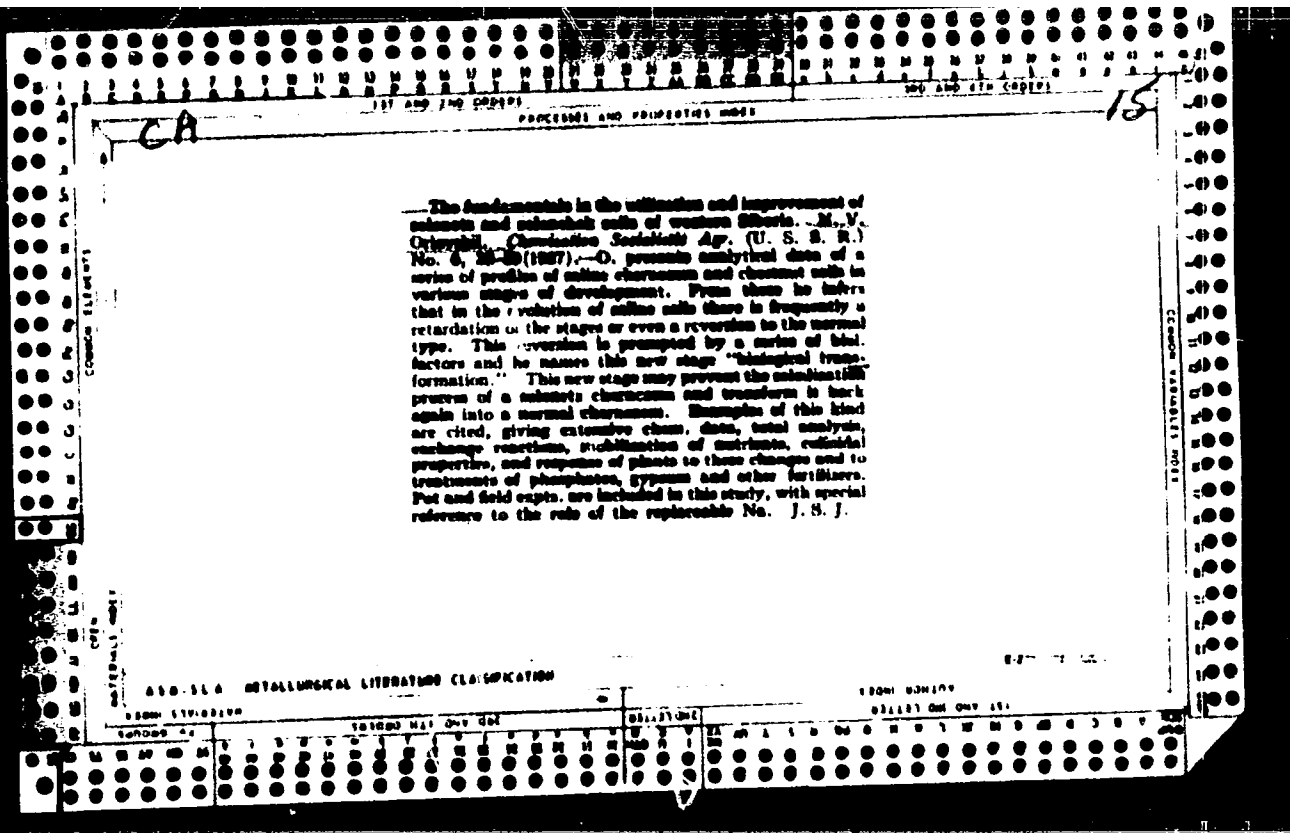
The forms of organic matter of the solonchaks of Western Siberia in relation to their genesis. In: review of solonchaks and other soils in W. Siberia. A. A. Mironov and N. V. Orlovskii. *Sibirskii Nauch.-Issledovatel. Inst. Zoologii i Khimii* (Siberian Sci. Inst.) 1959, 3-4. The biol. element in the formation of solonchaks soils into solonchaks causes the transformation of the exchange complex and an increase of exchangeable Ca. There is no clear-cut effect of the Mg in this biol. transformation; the Na is replaced by Ca and H; the humus accumulates; the lignins are not stable in the solonchaks medium; the N-comp. complexes become stable under solonchaks conditions. Analyses of the chernozem-solonchaks type are given. The methods of org. matter fractionation are criticized because of their arbitrariness. J. B. Joffe

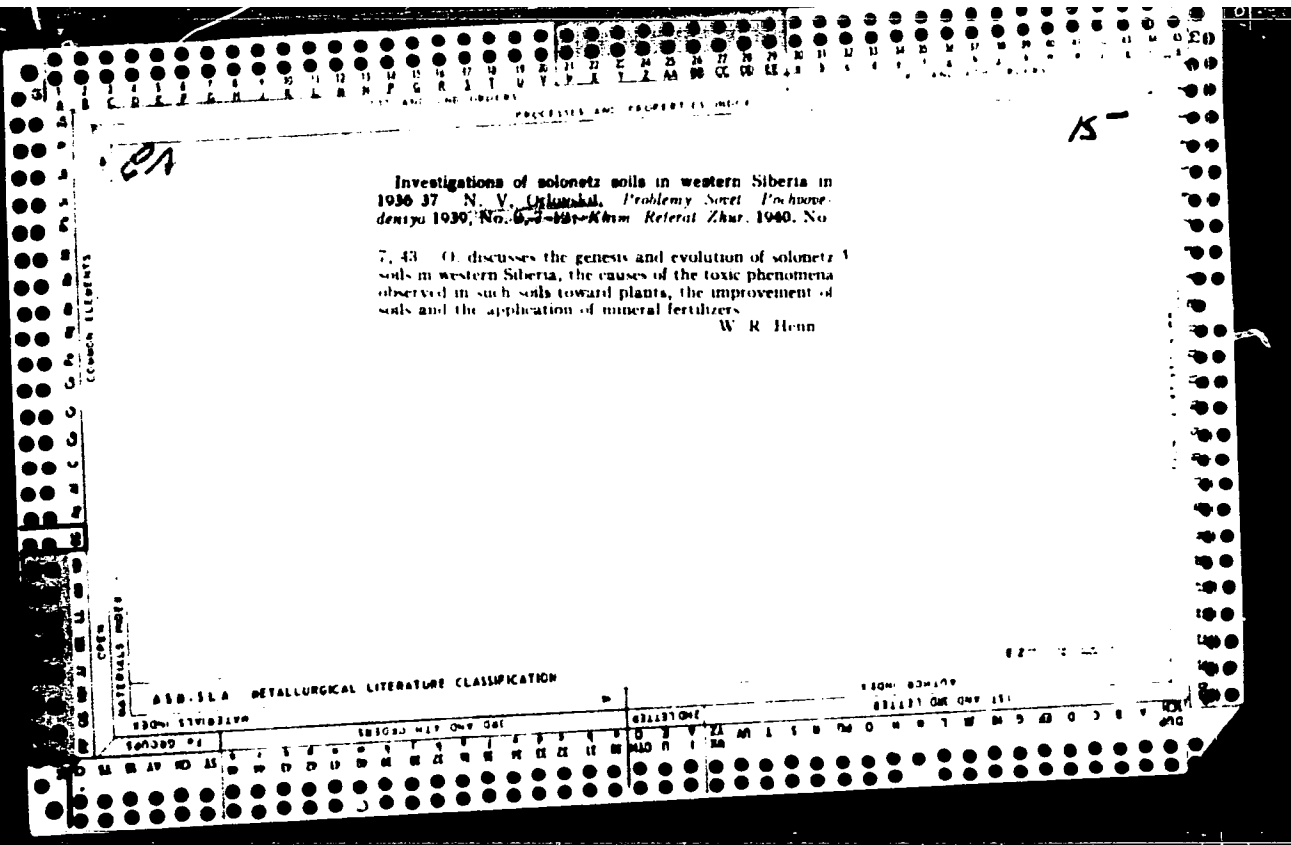
433-334 METALLURGICAL LITERATURE CLASSIFICATION

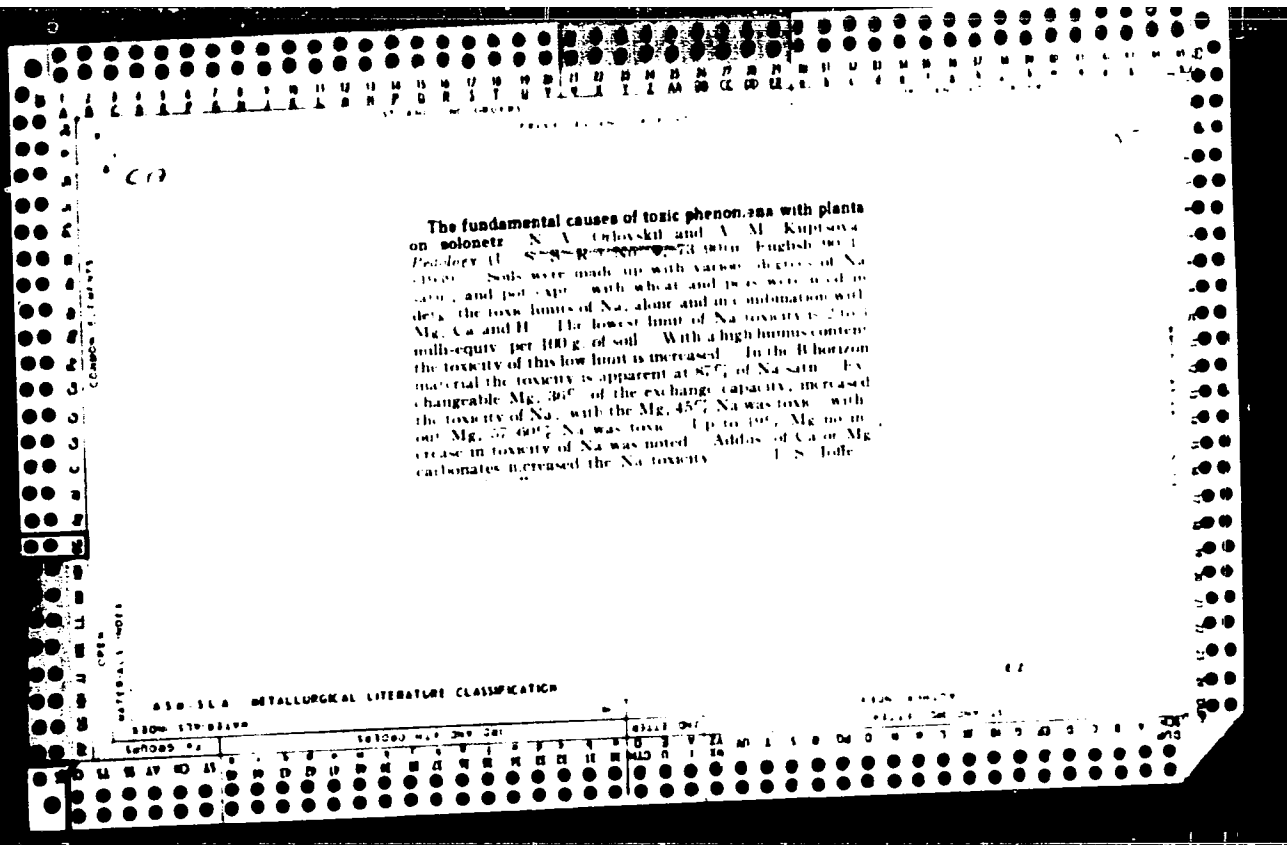




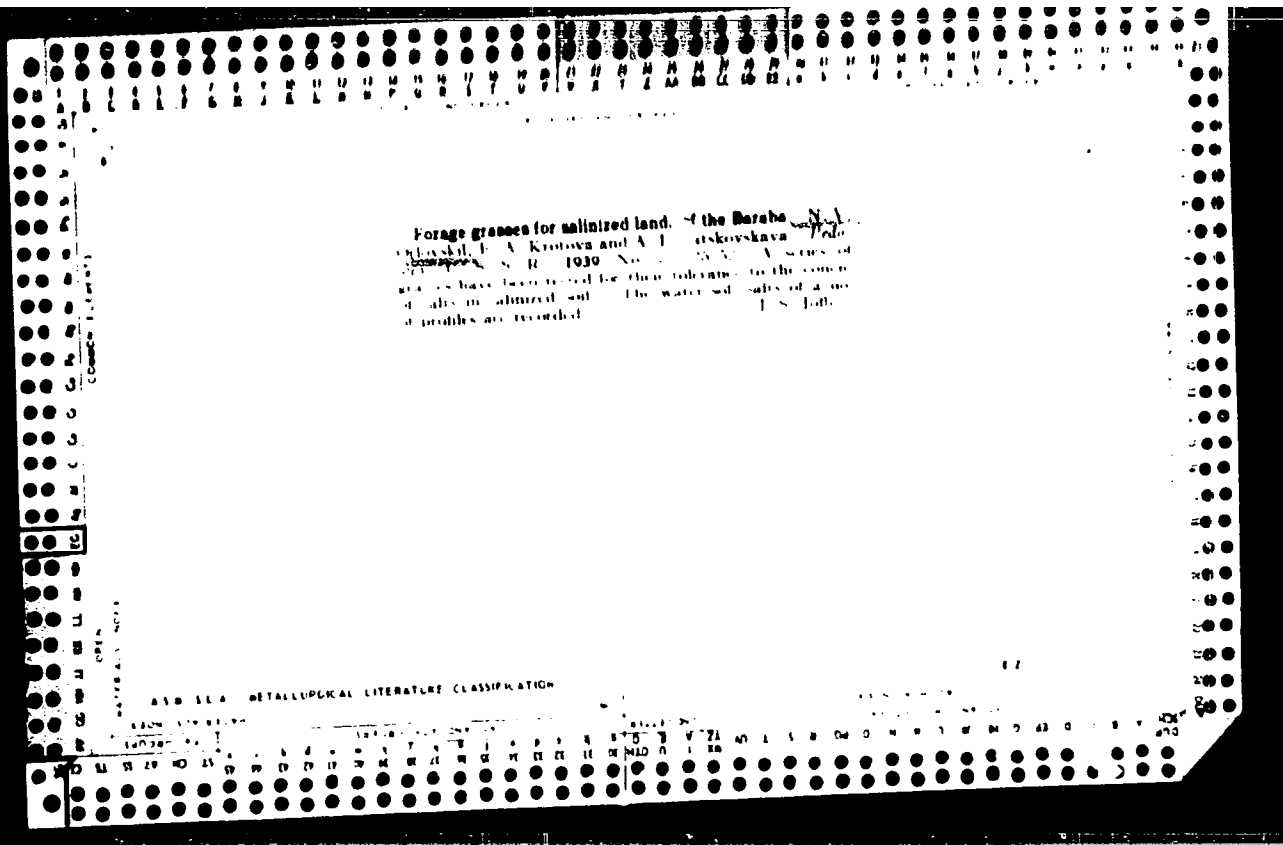


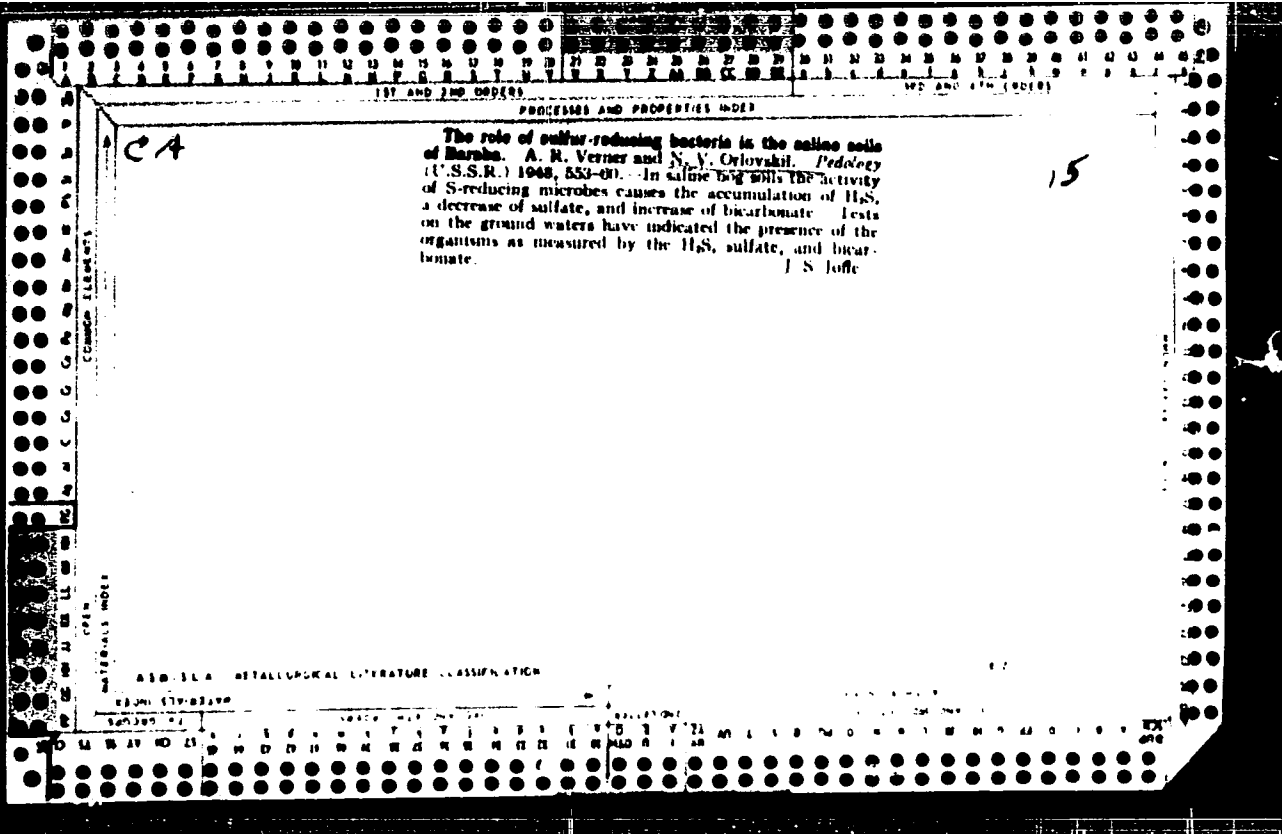












ORLOVSKIY, N. V.

24842. ORLOVSKIY, N. V. Solesy Rezhim Bruntozykh Sod V Barabe. Trudy Yubileynoy Sessii, Posbyashch. Stoletiyu So Dnya hozhdeniya Dokuchayeva. L. L., 1949, S. 560-70. - Bibliogr: S. 57

SO: Letopis' No. 33, 1949

ORLOVSKIY, N. V.

129N/5

723.5

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Osvoyeniye tselinnykh i zaleznykh zemel' v altayskom kraye  
(Utilization Of The Soils Of The Virgin And Waste Lands Of Altay Kray)  
Moskva, 1955.

102 p. illus., map, tables.

"Literatura": p. 101-(103)

At head of title: Akademiya Nauk SSSR. Nauchno-Populyarnaya Seriya.

ORLOVSKIY, N.V., professor

Altai, the territory of reclaimed new lands. *Priroda* 44 no.8:  
35-36 Ag '55. (MLRA 8:10)  
(Altai Territory--Reclamation of land)

ORLOVSKIY, N.V.

Investigation of the genesis, of the salt regime, and of the amelioration of typical saline and other salt-containing soils of the Barabinsk lowlands. N. V. Orlovskii (Exptl. Amelioration Sta., Ubiinsk). *Trudy Pochvennogo Inst. im. V. V. Dokuchaeva, Akad. Nauk, S.S.S.R.* 47, 226-409(1955). — A description of expts. done from 1938 to 1950. In addn. to the naturally occurring rain, H<sub>2</sub>O was added or not to exptl. plots at different times of the year, and analyses were taken for HCO<sub>3</sub><sup>-</sup>, Cl<sup>-</sup>, SO<sub>4</sub><sup>-2</sup>, Ca<sup>+2</sup>, and Mg<sup>+2</sup> at various times and various depths, and the treated and untreated soils were planted with grass and sugar beets with or without treatment by various fertilizers. Detailed results are presented. 106 references. Werber Jacobson

ORLOVSKIY, N.V.; KARPACHEVSKIY, L.O.; MAKAROVA, G.A.; PIKALOV, M.A.

In reference to the textbook "Agricultural chemistry". Reviewed by  
N.V.Orlovskii and others. Pechvevedenie no.5:127-130 My '56.  
(Agricultural chemistry--Textbooks) (MIRA 9:9)

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 territory is in the grip of secondary salination processes of various intensity. The fundamental 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 fil-  
tration from the canals; (4) creation of a  
thick structural arable layer, and (5) streng-  
thening the role played by perennial grasses  
in crop rotation, etc. -- G. B. Zakhar'ina  
Card : 2/3

ORLOVSKIY, N.V.

Work of the Altai Branch of the All-Union Society of Soil  
Scientists in 1957. Pochvovedenie no.11:101-102 N '58.  
(MIRA 11:12)  
(Altai Territory--Soil research)

ORLOVSKIY, N.V.

First Siberian Conference of Soil Scientists. *Izv.Sib.otd.AN SSSR*  
no.6:134 '61. (MIRA 14:6)  
(Siberia—Soils—Congresses)

ORLOVSKIY, N.V., doktor sel'khoz. nauk, prof., otv. red.

[Papers of the First Siberian Conference of Soil Scientists] Trudy Pervoi sibirskoi konferentsii pochvovedov. Krasnoyarsk, Krasnoyarskoe otd-nie Vses. ob-va pochvovedov, 1962. 518 p. (MIRA 16:4)

1. Sibirskaya konferentsiya pochvovedov, 1st, Krasnoyarsk. 1961.

(Siberia--Soil science--Congresses)

ORLOVSKIY, N.V., doktor sel'khoz. nauk, prof., otv.red.; PAVLOV,  
K.N., red.izd-va; POLYAKOVA, T.V., tekhn.red.

[Soil and soil moisture investigations in forest and  
forest plantations] Pochveno-gidrologicheskie issledo-  
vaniia v lesu i lesnykh kul'turakh. Moskva, Izd-vo AN  
SSSR, 1963. 178 p. (MIRA 16:12)

1. Akademiya nauk SSSR. Institut lesa i drevesiny.

ORLOVSKIY, N.V.

Some problems in the classification and nomenclature of soils in  
Central Siberia. Pochvovedenie no.1:105-107 Ja '63.

(MIRA 16:2)

(Siberia—Soils)

CZECHOSLOVAKIA/Forestry - Forest Biology and Typology.

K.

Abstr Jour : Ref Zhur - Biol., No 4, 1958, 15358

Author : O.J. Orlovskiy

Inst :

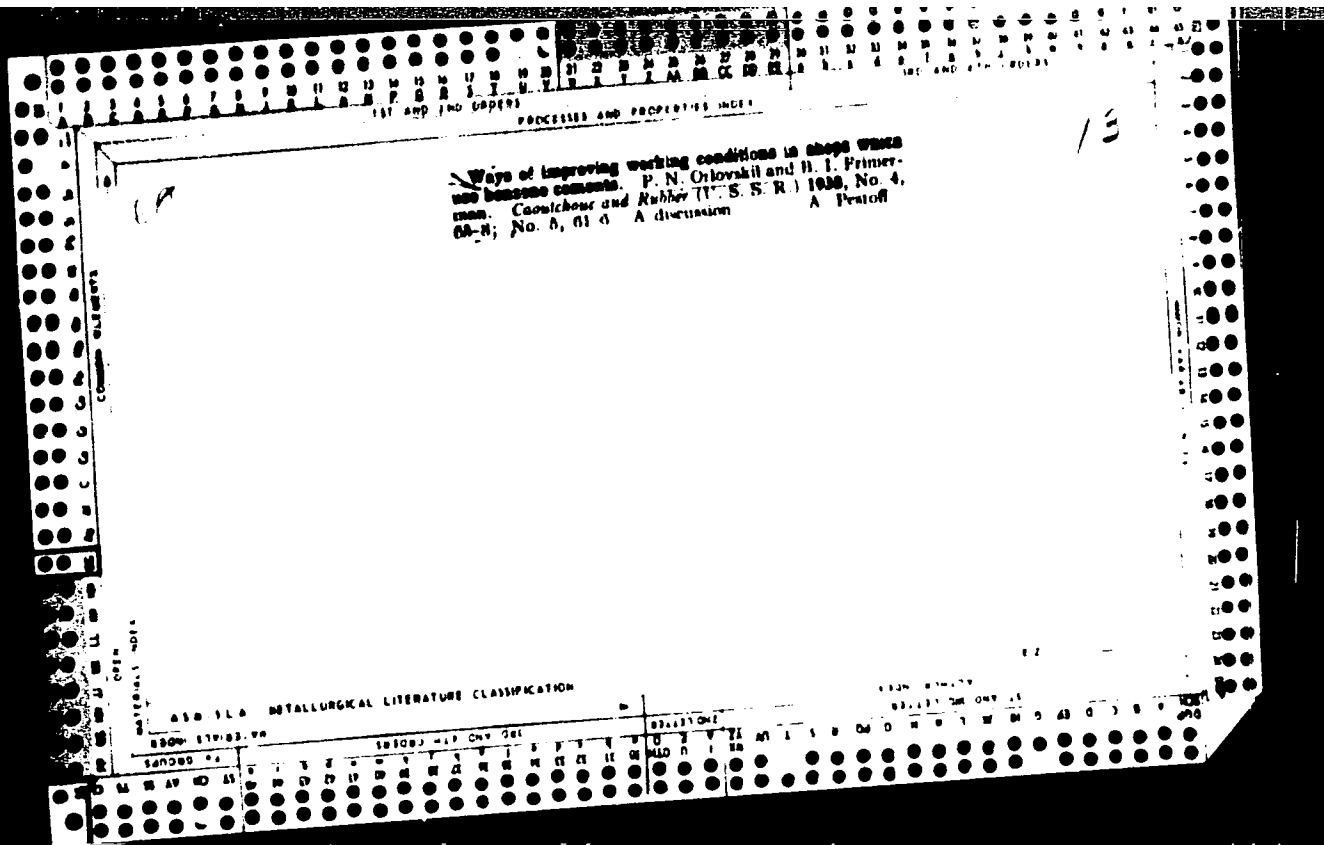
Title : The Developmental Cycle of the Speckled Alder and the Spruce Growing on the Carpathian Shales.  
(O tsikle razvitiya beloy ol'khi i yeli na karpatskikh slantsakh).

Orig Pub : Lesn. prace, 1957, 36, No 5, 210-211.

Abstract : No abstract.

Card 1/1





ORLOVSKIY, P. N.; VOYUTSKIY, S. S.; KARMIN, B. K.

"B. A. Dogadkin," Kolloidnyy Zhurnal, Vol 12, No 4, Jul - Aug 1950, pp 311 - 312.

Review W-15655, 6 Dec 50

ORLOVSKIY, P. N.

USSR/Chemical Technology. Chemical Products and Their Application -- Crude rubber, natural and synthetic. Vulcanized rubber, I-21

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6021

Author: Orlovskiy, P. N., Lukomskaya, A. I., Bogatova, S. K.

Institution: None

Title: Concerning Methods for the Evaluation of Technological Properties of Carbon Black Rubber Mixes

Original

Publication: Khim. prom-st', 1956, No 4, 217-224

Abstract: Comparison of elastic recovery indices (E) determined by means of compression plastometers of Williams and Defo type, Muni type shear plastometer, and extrusion plastometer operating at a given rate of deformation, with the shrinkage values (S) of three-component mixtures of SKB rubber, stearin and carbon black, containing varying amounts of channel, furnace and lamp carbon black, after calendering or extrusion in a worm-gear press. Shear and extrusion plastometers, which provide testing conditions that are analogous to the

Card 1/3

USSR/Chemical Technology. Chemical Products and Their Application -- Crude rubber, natural and synthetic. Vulcanized rubber, I-21

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6021

Abstract: conditions of processing of the mixtures in industrial equipment, correlate E and S. The Defo type plastometer gives a very approximate evaluation of S on the basis of the index  $E/P_D$ , wherein  $P_D$  is Defo hardness. Williams type plastometer is not suitable for an evaluation of S. A method has been worked out for the determination of the roughness coefficient C, in order to evaluate the condition of the surface of a calendered sheet of the mixture:  $C = \pi abt/4v_0$ , where a, b and t are, respectively: minor axis, major axis and thickness of an ellipse obtained after relaxation (shrinkage) of a circular sample cut on the middle roller of a three-roller calender,  $v_0$  being the actual volume of the sample. The shear plastometer makes it possible to evaluate C on the basis of an empirical equation of the type:

$$1/C\% = A/R_k\% + (1 - A)/I\%$$

wherein  $R_k\%$  is the ratio in percent of the E of the filled mixture, recomputed for the content of the rubber phase in the mixture, to the E of the unfilled mixture;  $I\%$  is the ratio in percent of the drop

Card 2/3

ORLOVSKIY, P.

2876. Action of metal oxides as vulcanization  
 activators. H. S. FRIEDLÄNDER, P. ORLOVSKI, and  
 H. A. BOMANN. *Kautsch. u. Gummi*, 1967, No. 1,  
 p. 21. The activation of vulcanization of natural  
 rubber of liquid-phase polyisoprene, natural buta-  
 diene rubber by metal oxides differs from their  
 action in mass vulcanization. The activation  
 values depend essentially on the type of acceler-  
 ators and active fillers used. Metal oxides influence  
 the effect of structuring of vulcanizates. With  
 SK 400 (butadiene-styrene rubber) calcium  
 hydroxide is a more powerful activator than is  
 zinc oxide; this is a result of its independent  
 structuring action and acceleration of the reaction  
 of rubber and sulphur. Magnesium oxide has a  
 positive influence upon the technical properties of  
 vulcanizates and the aging properties of tyre covers  
 made from butadiene-styrene and natural buta-  
 diene rubbers. There are 11 references.

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2 May

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PECHKOVSKAYA, K.A.; ORLOVSKIY, P.N.; SIMANOVSKAYA, S.A.

Chemical and physicochemical methods of evaluating carbon black quality. Kauch. i rez. 16 no.3:28-32 Mr '57. (MIRA 12:3)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.  
(Carbon black)

AUTHORS: Pechkovskaya, K.A., Shediid-Khuzemi, N.A., Orlovskiy P.N.,  
Livshits, F.B., Novikova I.S. and Bryushkova, I.I. SOV/138-58-6-3/25

TITLE: Chemical and Physico-Chemical Methods of Evaluating the  
Properties of Carbon Black (Khimicheskiye i fiziko-  
khimicheskiye metody otsenki kachestva sazh)  
Part II: The Fundamental 'Structure' of Carbon Black  
(Soobshcheniye II: pervichnaya 'struktura' sazhi)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 6, pp 8 - 13 (USSR)

ABSTRACT: The colorimetric method for evaluating the dispersity of  
carbon black was discussed in Part I (Ref 1). This article  
describes investigations on the 'structure' of carbon  
black. After defining the terminology of 'carbon black  
particles', crystallite, and the primary and secondary  
aggregate, methods for the quantitative evaluation of the  
fundamental 'structure' of carbon black are discussed.  
None of these methods was entirely satisfactory. Com-  
parative evaluation of the fundamental 'structure' can be  
achieved by defining the oil number and the 'structure'

Card 1/3 index. The form factor is an index character-  
istic. The partial breakdown of the fundamental 'structure'  
APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001

SOV/138-58-6-3/25  
Chemical and Physico-Chemical Methods of Evaluating the Properties  
of Carbon Black

of jet carbon black leads to a decrease in the oil number without causing appreciable changes in the unit surface. The fundamental 'structure' inhibits granulation of the carbon black. The secondary 'structure' makes granulation easier. The degree of the development of the fundamental 'structure' indicates a change in the technological properties of the raw material mixtures; mixtures containing carbon black with large primary particles are usually more viscous, can be sprayed more quickly and give a thinner deposit than mixtures containing carbon black of normal structure. Jet carbon black (with partly disintegrated fundamental 'structure') imparts to vulcanisates, based on SKB, a lowered modulus, a lower degree of electroconductivity and increased bonding strength to cords (Fig 3). The degree of dispersity and data on the 'structure' of various Soviet carbon blacks are listed in

Card 2/3



SOV/138 -58-6-3/25

Chemical and Physico-Chemical Methods of Evaluating the Properties of Carbon Black

Table 2, and Table 4 gives the physico-chemical and technological properties of American furnace carbon black. There are 5 tables, 3 figures and 13 references (7 English, 2 German and 1 Soviet)

ASSOCIATION: Nauchnoissledovatel'skiy institut shinnoy promyshlennosti (Research Institute for the Tire Industry)

1. Carbon black--Physical properties    2. Carbon black--Chemical properties  
3. Colorimetric analysis--Applications

Card 3/3

YUSHCHENKO, N.R., prof., doktor tekhn.nauk; ORLOVSKIY, P.N., inzh.  
(Dnepropetrovsk)

Improvements in the utilization of switcher locomotives in  
classification yards. Zhel. dor. transp. 40 no.9:33-37 S '58.  
(MIRA 11:10)

(Railroads--Yards) (Railroads--Locomotives)

15(9)

SCV/53-4-1-1/31

AUTHORS: Fel'dshteyn, L. S., Candidate of Chemical Sciences, Orlovskiy.  
I.N., Candidate of Technical Sciences

TITLE: Modern Chemical Materials for the Rubber Industry (Sovremennyye  
khimicheskiye materialy dlya rezinovoy promyshlennosti)

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1959, Vol. 4, Nr. 1,  
pp. 26-34 (USSR)

ABSTRACT: Sulfur is the universal vulcanization accelerator. For poly-  
chloroprene and carboxylate rubbers metal oxides are employed  
as accelerators. Among organic compounds the thiazoles are ex-  
tensively applied in vulcanization. Mercaptobenzothiazole de-  
rivatives are used as accelerators for butadiene-styrene  
rubbers. Organic di- and polysulfides are vulcanization agents  
and accelerators at the same time. For butyl-rubber the special  
agent and accelerator of vulcanization n-quinonedioxime has  
been developed. Retarders prevent the premature vulcanization.  
The most important of them is phthalic anhydride. The age re-  
sistors belong to the primary and secondary aromatic amines,  
the aromatic diamines, the condensation products of aromatic  
amines with aldehydes, and the phenols. Phenyl  $\beta$ -naphthyl-

Card 1/3

Modern Chemical Materials for the Rubber Industry

SOV/63-4-1-4/31

amine is extensively used. Orthotolyl- $\beta$ -naphthylamine is an age resistor for synthetic rubbers. Among the alkylphenols the most effective compounds are of the type 2,4,6-trialkylphenol. As accelerators of plastication thio- $\beta$ -naphthol is very effective, but also very toxic. Pentachlorothiophenol, di-o-benzamidophenyldisulfide and its zinc salt are widely in use. A special plasticizer for butadiene-styrene and nitrile rubbers is dimethylphenylparacresol. As plasticizers petroleum products, like asphalt-bitumic substances or chlorinated paraffins, are employed, as well as rosins, or organic substances, e.g. butadiene-akrylonitrile copolymers and alkyl-phenolaldehyde resins. Carbon blacks are the most important fillers. They are produced in different types: NRS which is processed with difficulty; YeRS which is easily processed; and the medium type MRS. Organic fillers are thermoplastic high-molecular substances. White fillers are used for the production of colored rubbers. Silicon fillers, like aerosil, are extremely pure ( $\text{SiO}_2$  99.99%). Calcium, aluminum and zirconium silicates are also employed. Precipitated and activated types of

Card 2/3

Modern Chemical Materials for the Rubber Industry

SOV/63-4-1-4/31

calcium carbonate are synthetic mineral fillers.  
There are 103 references, 35 of which are Soviet, 60 English,  
5 German and 3 Japanese.

Card 3/3

YUSHCHENKO, N.R., doktor tekhn.nauk prof.; ORLOVSKIY, P.N., aspirant

Analysis of switching operations and potentialities of switch  
locomotive utilisation in hump yards. Trudy DIIT no.28:65-83  
'59. (MIRA 13:2)

1.Nachal'nik Dnepropetrovskogo instituta inzhenerov zheleznodorozhno-  
go transporta (for Yushchenko).  
(Railroads--Making-up trains)

15 9130

28040  
S/081/61/000/015/133/139  
B102/B101

AUTHORS P. ~~Orlovskiy~~ M. Orlovskiy, P., Dogadkin, B.

TITLE: Effect of metal oxides as vulcanization activators

PERIODICAL: Referativnyy zhurnal Khimiya, no. 15, 1961, 602 - 603,  
abstract 151377 (St. "Vulkanizatsiya rezin. izdeliy".  
Yaroslavl, 1960. 139 - 155)

TEXT: The effect of ZnO, Ca(OH)<sub>2</sub>, and MgO upon the vulcanization of various rubbers was investigated. In the case of coreless polymerized (KБ(SKE) ZnO decelerates the vulcanization. In butadiene-styrene rubbers, the activating effect of Ca(OH)<sub>2</sub> surpasses that of ZnO. Substitution of ZnO by MgO in tire mixtures increases the life of the tire tread. The activating action of metal oxides depends largely on the type of black. [Abstracter's note: Complete translation.]

X

Card 1/1

S/081/61/000/023/014 1-1  
B106/B101

AUTHORS: Pechkovskaya, K. A., Livshits, F. B., Orlovskiy, F. M.,  
Novikova, I. S.

TITLE: Comparative study of the physicochemical and technical  
properties of test samples of disperse furnace blacks of the  
HAF type

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1961, 560, abstract  
23P347. (Tr. N.-i. in-ta shin. prom-sti, sb. 5, 1960, 68-80)

TEXT: The results of a comparative study of the properties of test  
samples of disperse furnace blacks (DB) of the HAF type from liquid raw  
material and import fillblack O are presented. The increased adsorption  
surface of the DB blacks and their higher oxygen content can retard the  
vulcanization process and sometimes diminish strength of vulcanizates.  
As to dispersity, the DB blacks, produced under semi-industrial conditions  
from liquid raw material, are not inferior to the best blacks of type HAF.  
The most important physicochemical and chemical properties of the DB  
blacks are given along with the electrical conductivity, internal friction.

Card 1/2



Comparative study of the...

S/081/61/000/023/054/061  
B106/B101

and physicommechanical properties of [UC-30 AM(SKS-30AM) rubber containing DB blacks. The latter tend to form secondary structures, which entails incomplete dispersion of the black in the compound and, consequently leads to a decrease in abrasion resistance and strength of the rubber. The properties of vulcanizates containing DB blacks can be improved by modifying the formula for the rubber compound used to examine the mentioned blacks. [ Abstracter's note: Complete translation ]



Card 2/2

ORLOVSKIY, P.N.

S/081/61/000/023/055/061  
B106/B101

AUTHORS: Pechkovskaya, K. A., Gol'dman, E. I., Shedid-Khuzemi, N. A.,  
Orlovskiy, P. N., Kupriyanova, V. L., Simanovskaya, S. A.

TITLE: Methods for determining the specific surface area of semi-  
reinforcing and reinforcing blacks for the technical control  
of black production

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1961, 560, abstract  
23P348. (Tr. N.-i. in-ta shin. prom-sti, sb. 5, 1960, 81-94)

TEXT: A description is given of three methods for determining the  
specific surface area of semireinforcing and reinforcing blacks. The  
specific adsorption surface is obtained by the method of adsorption of  $I_2$ ,  
the geometrical specific surface by the calorimetric method, and the  
method of Deryagin provides a specific surface close to the adsorption  
specific surface. All of the three methods furnish conditional values  
for the specific surface, are simple, and can be used for the first  
technical control of the dispersity of blacks in industrial laboratories.  
[Abstracter's note: Complete translation.]  
Card 1/1

S/138/60/000/007/006/010  
A051/A029

AUTHORS: Orlovskiy, P.N.; Lukomskaya, A.I.; Tsydzik, M.A.; Bogatova, S.K.  
TITLE: An Evaluation of the Technological Properties of Carbon Black Rubber  
Mixtures on a Shifting Flastomer  
PERIODICAL: Kauchuk i Rezina, 1960, No. 7, pp. 21 - 28

TEXT: The relationship between the technological properties of rubber mixtures (the shrinkage after the calender or the caterpillar press and the roughness coefficient) and the indices obtained on the shifting Mooney-type plastomer was determined. Methods for determining the tendency of the various mixtures to scorching were compared. The following mixtures were investigated: 1) three-component mixtures on a CH5 (SKB) rubber base, commercial stearin and Soviet carbon blacks (anthracene, jet and thermal), 2) three-component mixtures on a CHC-30A (SKS-30A) rubber base, commercial stearin and Soviet carbon blacks (gaseous channel and oven carbon blacks), 3) four-component mixtures on the above-mentioned rubber bases with combinations of various types of carbon black, 4) multi-component carbon black rubber mixtures based on tire mixture compositions. Table 1

Card 1/4

S/138/60/000/007/006/010  
A051/A029

### An Evaluation of the Technological Properties of Carbon Black Rubber Mixtures on a Shifting Plastomer

is a list of the characteristics of the applied carbon blacks. The authors refer to a previous article (Ref. 1), where they outlined the methods used for the technological evaluation of the rubber mixture under industrial conditions. The shrinkage of the rubber mixture after calendaring or passing under the worm press is caused by the elastic restoration after deformation and can be determined from the changes in the initial dimensions of the mixtures in various directions. The shrinkage is a function of the direction as well as of the initial dimensions of the samples. Formulae are submitted for the calculation of the shrinkage and for the calculation of the initial thickness of the sample,  $t_0$ , and the length of the sample  $L$ . It is pointed out that the shrinkage of the mixtures varies due to the heterogeneity of the material and due to the heterogeneous state of tension not only in various directions, but also at different parts of the material. That is why the surface of the material may be rough after shrinkage or may even change its shape. This complicates the measuring of the samples and the estimation of the shrinkage. However, the distortion of the shape enables one to judge the degree of the roughness. The roughness coefficient is taken to be  $C = V/V_0$ . The

Card 2/4

S/138/60/000/007/006, 011  
A051/A029

An Evaluation of the Technological Properties of Carbon Black Rubber Mixtures on  
a Shifting Plastomer

greater is its difference from unit, the rougher is the surface of the sample. The maximum thickness of the sample can also be measured without taking into consideration the change in the shape according to Figure 1. Formula 4 represents the relative roughness coefficient, which can be calculated from data obtained on the shifting plastomer (Ref. 1). The smoothness of the material 1/C would depend on the homogeneity and the ability of the material to retain its shape. The ratio  $R/v_2^H$  was taken to be the laboratory index of the elastic restoration to the viscosity according to Mooney. The viscosity data point to the expenditure of the power used. This is one of the factors which characterizes the shrinkage of the mixtures in the equipment. A quantitative coordination of the technological and laboratory indices was observed for the three-component carbon black rubber mixtures if the indices were expressed in relative units, i.e., in %, to the corresponding indices of non-filled mixtures. In this case the relative roughness coefficient could be determined, characterizing the quality of the processed mixture's surface on the shifting plastomer (according to the relative drop in the viscosity and the relative elastic reformation). There are 3 tables, 7 graphs, 1 diagram, 11 refer-

Card 3/4

S/138/60/000/007/006/010  
A051/A029

An Evaluation of the Technological Properties of Carbon Black Rubber Mixtures on  
a Shifting Plastomer

ences: 4 Soviet and 7 English.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute of the Tire Industry) ✓

Card 4/4

S/081/61/000/019/082/085  
B103/B147

AUTHORS: Lukomskaya, A. I., Reznikovskiy, M. M., Orlovskiy, P. N.,  
Stukalova, A. F.

TITLE: Efficient laboratory method for determining vulcanization of  
rubber mixtures before due time

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 523, abstract  
19P315 (Tr. N.-i. in-ta shin. prom-sti, sb. 7, 1960, 154-167)

TEXT: To find the most efficient method of determining the scorching  
capacity of rubber mixtures, the authors compared the characteristics of  
the most usual laboratory methods with those characterizing the behavior  
of mixtures directly during the technological processing. Scorching is  
essentially affected by the following factors acting during the preheating  
of mixtures: deformation, its amount, rate, and periodicity; temperature  
and its duration; medium of preheating; volume of the prepared mixture to  
be preheated. It is most convenient to determine the scorching capacity  
of rubber mixtures by means of shift plastometers. [Abstracter's note:  
Complete translation.]

Card 1/1

S/138/60/000/012/007/009  
A051/A027

**AUTHORS:** Fel'dshteyn, M.S., Orlovskiy, P.N., Dogadkin, B.A.

**TITLE:** The Action of Activators Depending on the Vulcanization Temperature

**PERIODICAL:** Kauchuk i rezina, 1960, No. 12, pp. 27-31

**TEXT:** The authors have investigated the action of activators of vulcanization (zinc oxide and calcium hydroxide) on the kinetics of the modulus change and tear resistance of mixtures from butadiene-styrene and natural rubbers depending on the vulcanization temperature. It was established that different metal oxides have a different effect on the nature of transverse bonds formed during the vulcanization process. The nature of these bonds is judged by the change of the modulus of the rubbers depending on the duration and temperature of vulcanization. The nature of the action of the activators is said to be under the significant effect of the type of accelerator and filler included in the composition of the systems being vulcanized (Ref.10). Various systems were investigated containing either zinc oxide or calcium hydroxide (Fig.1), as well as systems containing channel carbon black in the presence of N-morpholyl-2-benzothiazolesulfenamide 1/10 ✓



S/138/60/000/012/007/009  
A051/A027

## The Action of Activators Depending on the Vulcanization Temperature

oxide and zinc oxide (Fig. 2a). Fig. 2b shows the pattern of behavior for the vulcanizing system containing a double system of accelerators: altax + DPG (DFG). Fig. 3 and 4 show the action of calcium hydroxide and zinc oxide with an increase in temperature of the vulcanization for mixtures based on butadiene-styrene rubber filled with a highly-dispersed furnace carbon black (XAF - KhAF type) and containing the accelerators sulfenamide BT (BT) and N-cyclohexyl-2-benzothiazolesulfenamide (sulfenamide U-Ts). Attention is drawn to the fact that even for mixtures of natural rubber in which calcium hydroxide at the usual temperature of vulcanization is an extremely weak activator, its action (contrary to the action of zinc oxide) is characterized by a positive temperature coefficient of vulcanization according to the modulus and tear-resistance (Fig. 5). The established difference between calcium hydroxide and zinc oxide in their effect on the structure of the vulcanizates is explained by the fact that calcium hydroxide is an accelerator of the vulcanization process and a structuralizing agent (Ref. 10). The authors conclude that in the presence of the usually applied activator (zinc oxide) an increase in the vulcanization temperature from 143 to 163°C

Card 2/10

S/138/60/000/012/007/009  
A051/AC27

The Action of Activators Depending on the Vulcanization Temperature

leads to a decrease in the modulus of the produced vulcanizates. When using calcium hydroxide and elevating the vulcanization temperature (in the same temperature interval as mentioned above) vulcanizates are obtained with elevated values of the modulus. The vulcanization of these mixtures contrary to mixtures with zinc oxide is described by kinetic curves of the modulus change not exhibiting any reversion of the vulcanization process. There are 5 sets of graphs and 13 references: 11 Soviet, 2 English.

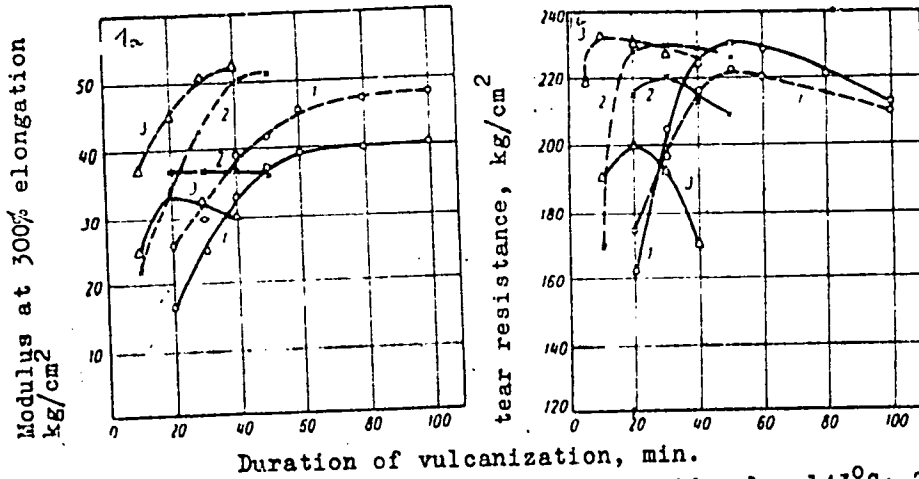
ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti  
(Scientific Research Institute of the Tire Industry)

Card 3/10

S/138/60/000/012/007/009  
A051/A027

The Action of Activators Depending on the Vulcanization Temperature

Fig. 1: Effect of the activators on the kinetics of change of the modulus and tear resistance in the vulcanization of mixtures based on SKS-30 AM containing 30.0 w.p. of channel carbon black and 1.0 w.p. of sulfenamide

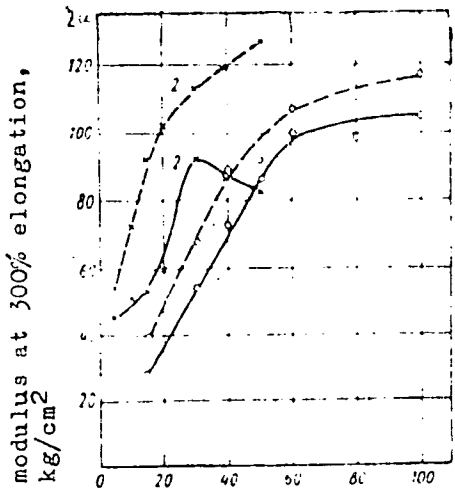


BT. — zinc oxide, - - - calcium hydroxide. 1 - 143°C; 2 - 153°C;  
Card 4/10 3 - 163°C.

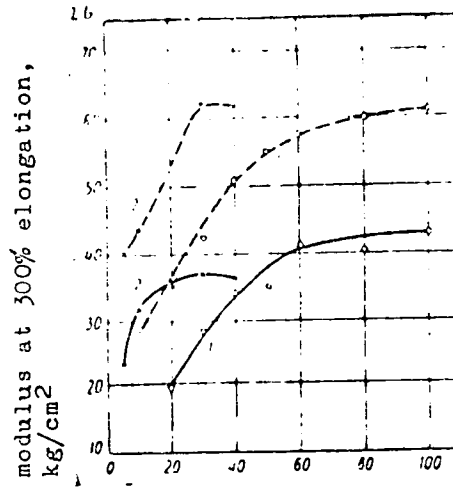
S/138/60/000/012/007/009  
A051/A027

The Action of Activators Depending on the Vulcanization Temperature

Fig. 2:



Duration of vulcanization, min. a



Duration of vulcanization, min. b

Card 5/10

S/138/60/000/012/007/009  
A051/A027

The Action of Activators Depending on the Vulcanization Temperature

Fig. 2 (continued) Effect of the activators on the kinetics of change of the modulus in the vulcanization of SKS-30 AM mixtures containing 50.0 w.p. of channel carbon black and 1.1 w.p. of sulfenamide M (a) and also 30.0 w.p. of channel carbon black and 0.6 w.p. of altax + 0.75 w.p. of DFG (b):  
—— zinc oxide, - - - calcium hydroxide 1 - 143°C, 2 - 163°C.

Fig. 3 Effect of the activators on the change kinetics of the modulus and relative elongation of SKS-30 AM mixtures containing 50.0 w.p. of KhAF carbon black when these are vulcanized in the presence of 0.6 w.p. of sulfenamide  
BT: —— zinc oxide, - - - calcium hydroxide, 1 - 143°C; 2 - 163°C.

Card 6/10

S/138/60/000/012/007/009  
A051/A027

The Action of Activators Depending on the Vulcanization Temperature

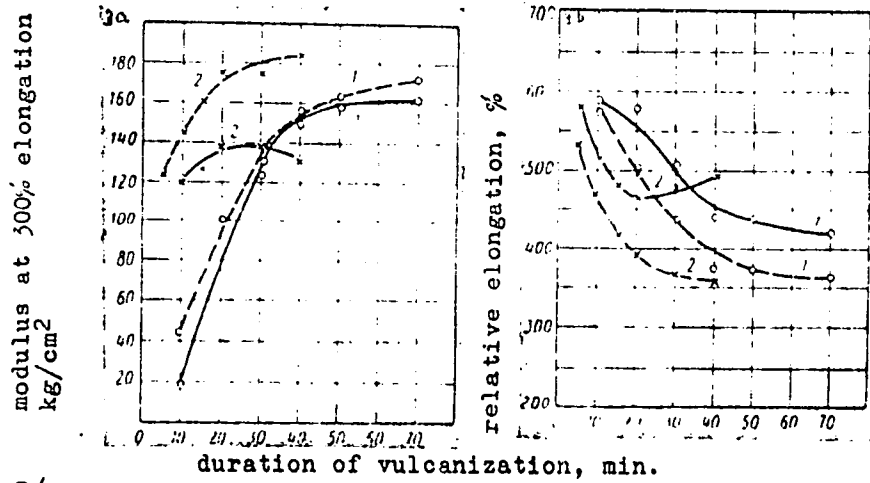


Fig. 3 (continued)

Card 7/10

S/138/60/000/012/007/009  
A051/A027

The Action of Activators Depending on the Vulcanization Temperature

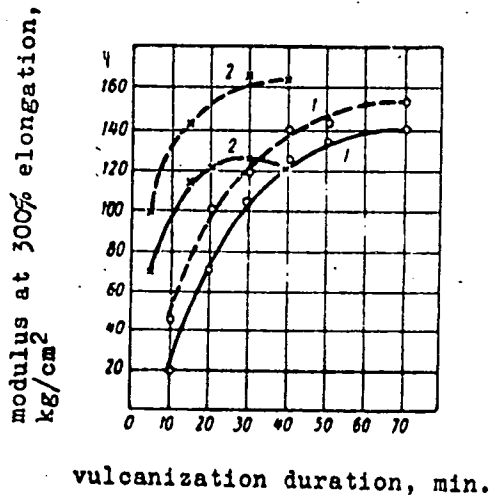
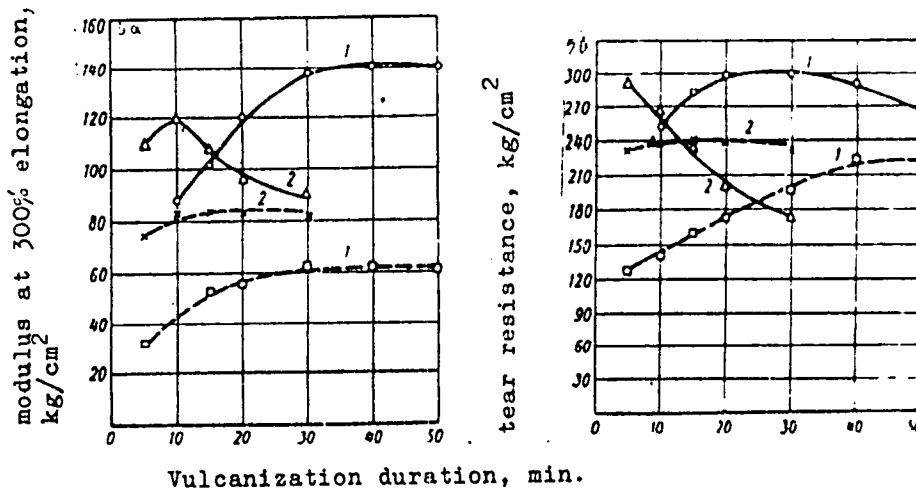


Fig. 4 Effect of the activators on the change kinetics of the modulus in the vulcanization of SKS-3OAM mixtures containing 50.0 w.p. of KhAF channel carbon black and 0.6 w.p. of sulfenamide Ts:  
— zinc oxide; - - - calcium hydroxide.  
1 - 143°C; 2 - 163°C.

S/138/60/000/012/007/009  
A051/A027

The Action of Activators Depending on the Vulcanization Temperature

Fig. 5



Card 9/10



S/138/60/000/012/007/009  
A051/A027

The Action of Activators Depending on the Vulcanization Temperature

Fig. 5 (continued) Effect of the activators on the change kinetics of the modulus and tear resistance of mixtures from natural rubber containing 40.0 w.p. of KhAF carbon black in their vulcanization in the presence of 0.4 w.p. of vulcaphore BSO: — zinc oxide, - - - calcium hydroxide. 1 - 143°C; 2 - 163°C. ✓

Card 10/10

3/130/41/000/004/005/006  
A051/A129

**AUTHORS:** Pechkovskaya, K.A., Orlovskiy, P.N., Gol'dman, E.I.

**TITLE:** The classification of carbon blacks for the production of rubber

**PERIODICAL:** Kauchuk i rezina, no. 4, 1961, 47-48

**TEXT:** Prior to the Second World War two types of carbon black were manufactured in the Soviet Union: channel gaseous and lamp carbon black. By 1956 six different types were produced, viz. furnace, jet burner, thermal and anthracene carbon black. In connection with the forthcoming revision of the **FOCT** - GOST 7885-56, the introduction of a new, stricter classification of the carbon blacks is being considered. In the recommended classification the name of the carbon blacks takes into account the use of the raw material. A number is added to the letter designation if more than one type of carbon black is produced by one method from the same raw material. The first letter designates the method of the carbon black production: **K** - (K), for channel, **П** (P) for furnace, and **Т** (T) for thermal. The second letter is associated with the type of the raw  
Card 1/4

S/13/11/001/004/005/006  
A051/A1 9

The classification of

material used Г - (G) - for gaseous, М - (M) - for carbon blacks produced from liquid raw material, А - (A) - acetylene, МН - (Mn) - methane. If a mixed raw material is used, then the designation includes the letters ГМ - (GM) or МГ - (MG), depending which of the two is the most important raw material. The table shows all the types of carbon blacks manufactured in the USSR, as well as all the new types intended for future production. ПМ -70 (PM) (furnace carbon black made from liquid raw material, with a specific surface of 70 m<sup>2</sup>/g) is an example of a carbon black produced after 1956 and thus not included in the GOST 7885-56. There is 1 table. ✓

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute of the Tire Industry).

Card 2/ 4

LUKOMSKAYA, A.I.; ORLOVSKIY, P.N.; MEREZHANNYY, S.B.; STUKALOVA, A.F.;  
Prinimali uchastiye: SAMOKHODKINA, K.G.; KALINOVA, L.T.;  
GORINA, A.K.; STULOVA, V.T.

Effect of the surface-to-volume ratio of a test piece in the  
evaluation of the processing qualities of rubber blends. Kauch.  
i rez. 20 no. 4:36-42 Ap '61. (MIRA 14:5)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (for  
Lukomskaya, Orlovskiy, Merezhanny, Stukalova).  
(Rubber, Testing)

S/138/62/000/004/007/008  
A051/A126

15.9300

AUTHORS: Lukomskaya, A.I.; Gudkova, L.F.; Merezhanney, S.B.; Orlovskiy.  
P.N.; Reznikovskiy, M.M.

TITLE: Measurements of the sliding of rubber mixes on metal under various conditions

PERIODICAL: Kauchuk i rezina, no. 4, 1962, 21 - 25

TEXT: The Mooney type shifting viscosimeter with a biconical rotor was used for studying the sliding phenomenon of rubber mixes on metal. The mathematical analysis for calculating the characteristics of sliding, introduced by Mooney, was applied, and the similarity of the two laws: viscose flow and external sliding of rubbers and rubber mixes was taken into account. Thus, methods for measuring the friction of rubber mixes against metal were developed: a) on a biconical shifting viscosimeter, working under stable conditions of a given rotational speed and pressure in the given tested material, using a smooth and a rough rotor; b) on a special device for determining the friction coefficient, working under non-stationary conditions of the given shifting load, sliding rate and rate of application of the normal load. The coincidence of the friction co-

Card 1/2

Measurements of the sliding of rubber mixes on ....

S/138/62/006/004/007/008  
A051/A126

efficients of rubber mixes, determined under various testing conditions, is proven. It is shown that rubber mixes can also be characterized by the same elevated temperatures, at which adhering of the former to metal is greater than cohesion. In this case, a cohesion destruction of the tested materials is noted during testing and the results of the friction test correspond qualitatively to data obtained when testing for adhesion and maximum flow in expansion. Obtained experimental data show the possibility for measuring the sliding of rubber mixes along metal under various conditions, and a connection between the condition indices. A mathematical analysis is given. There are 4 figures and 3 tables. The reference to the most recent English-language publication reads as follows: M. Mooney, International Rubber Conference, Washington, November 8 - 13, 1959.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute of the Tire Industry)

Card 2/2

ORLOVSKIY, P.N., inzh.

Improving the utilization of switching locomotives in hczp;  
classification yards. Trudy DIIIT no.43:16-64 '63.

(MIRA 17:11)

End

#398