

SOUTH AUSTRALIAN RELIEF WORKER

News of Miss Darnley Naylor.

Miss Margaret Darnley Naylor, who has recently joined the staff of the Save the Children Fund in London (says The Register), is the daughter of Professor Darnley Naylor, of the University of Adelaide, and is one of the youngest members of Australian women who are actively interested in social welfare and politics. After leaving the University of Adelaide she came to England in 1921, on her return became Secretary of the League of Nations Union in South Australia. In this capacity she has come into many phases of work and political activity in the Commonwealth, and took a very active part in the League of Nations. Since she left



Miss Margaret Darnley Naylor.

While early this summer, she has attended several international conferences in Europe. She was at the Federation of National Societies' Conference last year for the first time a speech given by a delegate from Australia. Mrs Darnley Naylor attended the Children Summer School at Vienna, and the conferences of the same association which took place in Vienna.

On her return to England, Miss Darnley Naylor has been hard at work for the Children Fund, and will shortly be on a tour through England, speaking to children in the schools on the work of the Children Fund. She also as a member of the British Overseas Committee of the International Suffrage Alliance. Miss Darnley Naylor has decided to become a citizen of the United Kingdom. Since being in England she has become a keen supporter of the British Labour Party.

MAN ON THE LAND.

WHEAT VARIETIES.

Characteristics Described.

11.—By Dr. A. E. V. Richardson, M.A. (Director, Wattle Research Institute).

Federation is a variety produced by Farrer from a cross between Yandilla and Purple Straw. This is, without question, the most popular and prolific variety in cultivation. The production of this wheat was the greatest of Farrer's triumphs in wheat breeding, for none of his many successful crossbred wheats have excelled for over a decade such popularity as *Federation*. Indeed, the colour of our harvest fields has been gradually changed from the golden yellow tint characteristic of wheats formerly grown to a dull bronze through the increasing popularity of *Federation*.

In 1924 approximately 60 per cent. of the wheat area of Victoria was sown with *Federation*. In the Wimmera district over 80 per cent. of the wheat area is devoted to this variety. This popularity was won by sheer merit, for

Federation, seen in the field for the first time, is decidedly unattractive, especially when grown side by side with the showy wheats of the Purple Straw type.

Most farmers in growing it for the first time have expressed great surprise at the yielding capacity when the wheat was taken off, for the yield invariably exceeded expectation based on pre-harvest estimates.

As a matter of fact, Farrer's main aim in producing *Federation* was to obtain a variety suited to the Australian methods of harvesting with the stripper. As might be expected, there are numerous strains of *Federation* developed from the original of Farrer's. Hard *Federation*, produced by Pridham, of New South Wales, is slightly earlier, and has grain of better quality than *Federation*, and in some districts it yields as well as *Federation*.

Wannon, a selection of *Federation* produced by the Victorian Department of Agriculture at Longerenong College, has shown improved yielding capacity over *Federation*.

During the last few years many of the crossbred wheats have a strain of *Federation* in their pedigree. *Federation* is a medium, short-growing variety, with hollow, thick-walled straw, which does not lodge.

The ears are of moderate length, square to slightly tapering, bald, glabrous, dark-brown in colour, and of moderate density.

Spikelets are large and spreading, with low, medium-sized grains of soft, mealy consistency. The grain is of low milling strength, and poor in gluten.

It is susceptible to rust, flag smut, and, to a lesser extent, takeall. Notwithstanding these drawbacks, it is a prolific grain variety. The grain is liable to suffer from bleaching, especially during showery harvest weather, owing to the fact that, unlike many of the older wheat varieties, the ear stands upright when ripe, and readily allows rain to penetrate. It is a mid-season variety, a heavy yielder, and holds the grain well.

Fairbanks, *Gallipoli*, and *Gluyas*.

Fairbanks is a crossbred variety bred by Farrer by crossing Zealand with Maifra; an early maturing variety grown largely for hay, especially in the Riverina. It is a tall-growing variety, with hollow straw, and long, light, yellow, tapering, glabrous ears with a few short awns.

The ear is lax and open, with large, spreading, irregular spikelets.

The grain is large, yellowish, opaque, soft, and starchy.

Gallipoli is a crossbred variety produced by the writer by crossing Clubhead with Yandilla King. This is a short-growing mid-season variety, with shallow, thick-walled, strong straw. It has a bald, brown, glabrous, dense, moderately long, compact, clubbed ear, with large, but not spreading, glumes, and yellow semi-translucent large oval grain, with very long embryo.

The original crossbred held the grain very closely, somewhat like the Yandilla King parent, but several selections have been obtained, in which the grain is readily threshed. This variety has given heavy yields at Werribee and Longerenong, and at various experimental plots in the wheat belt.

It has a high percentage of grain to straw, and its short straw and prolific character make it suitable for hot, dry districts.

Gluyas is an early maturing variety of wheat raised by Messrs. Gluyas, of South Australia, as a selection from Ward's wheat.

It is a beardless, glabrous, dark-chaffed, and light-grained wheat.

Although the straw is semi-solid, it has great tendency to lodge. The ear

possesses a few irregular tip-awns, and is of medium length, lax, with spreading spikelets.

The grain is large, and usually soft and starchy.

It is fairly immune from fungoid diseases, and possesses high rust resistant qualities.

It is a vigorous, moderately tall, early maturing variety, especially suited to the drier areas.

Its great drawback is its weak straw and its tendency to lodge. As the grain ripens the dark-bronze-coloured ears

become pendulous, but do not shell on account of the firmly closed enveloping glumes. A bearded form of this, somewhat earlier in maturity, is grown under the name of Bearded Gluyas.

Graham and *Huguenot*.

Graham is a crossbred variety produced by the writer from a cross between Indian S and Comeback.

It is a tall-growing mid-season to late variety with hollow, thick-walled straw.

The ear is pale yellow, bald, with tip-awns, glabrous, square to lightly tapering, lax, with large spreading, regular spikelets.

The grain is large, yellow, dark, and translucent.

This variety has given good results in departmental tests.

It is a good grain yielder, and a good hay wheat.

Huguenot is a variety produced from Medea by J. Correll, of Arthur River, Western Australia.

It is a tall-growing wheat of the mazancor or durum class, quite free from the long, coarse beards characteristic of Medea.

The straw is practically solid, and very sweet in character.

It stands up well, frequently growing to a height of 6 ft.

It stools sparsely, so that it must be sown very thickly.

In early growth it is erect and of light green colour.

The head is very dense and compact, bald, light brown, with bluish-black markings, and large, compact, very regular spikelets.

The grain is long, hard, horny, angular, slightly pinched, dark yellow, and adheres closely to the chaff, making the wheat difficult to thresh.

It has a high gluten content, but the colour of the flour is objectionable.

It is highly resistant to fungoid diseases.

It yields heavy crops of fodder and hay, but its grain yield is low.

It is essentially a hay and forage variety.

The price of the seed is much higher than that of other varieties.

The proportion of grain to straw in this variety is low.

King's Early and *Mac's White*.

King's Early is a selection made by Mr. Joseph King, of Georgetown.

It is a tall-growing, mid-season variety, with semi-solid straw, largely grown for grain in the hot, dry areas of South Australia.

The ears are light yellow, tapering, bearded, glabrous, and lax, with large spreading spikelets.

The grain is large, soft, opaque, and semi-translucent.

Two types, based mainly on colour of grain, were isolated by Professor Perkins, of Roseworthy College—*King's Red*,

with beetroot red grains, and *King's White* with light yellow grains.

Despite the semi-solid character of the straw, this variety tends to lodge in favourable seasons.

In spite of its beard, it is valued in the dry mallee areas of South Australia as a hay wheat on account of the solidity and sweetness of its straw, and its capacity to retain its colour.

Mac's White is said to have been obtained by Mr. W. McDonald from a consignment of wheat imported from New Zealand.

This is a popular wheat in the newer Victorian mallee, where it is valued on account of its strong growing qualities and its capacity to grow above the ubiquitous mallee shoots that are so prevalent in the early stages of mallee settlement.

Because it provides a good bulk of straw and fuel for stubble burning.

After harvest a good stubble burn assists in the control of mallee shoots.

While it yields well, it has a strong tendency to shatter its grain, and must be harvested as soon

as possible. It is a tall-growing variety with hollow, but slightly tuberous, straw. The ears are long, open, tapering, smooth, glabrous, with large spreading spikelets. The grain is large, yellowish-white, soft, and mealy.

Major and *Marshall's No. 2*.

Major is a cross red developed by H. Pye, of Dookie Agricultural College, from Federation and Wallaroo.

This variety has become very popular in Victoria, especially in the mallee districts owing to its high yielding capacity in favourable years.

It is a moderately tall-growing mid-season to late variety, with strong, coarse, hollow straw. The ears are light yellow in colour, glabrous, fairly dense, bald, with a few irregular awns, square, with a tendency to clubbing towards the apex. The ear is moderately long, with large, broad, spreading spikelets and yellowish-white, oval, compact, soft, starchy, medium to large grain.

Marshall's No. 2 is a selection from Ward's *Prolific* made by H. Marshall of South Australia.

It is a late maturing wheat of good milling capacity but rather slow growing when young, with spreading habit, and broad, dark green, drooping leaves.

The straw when ripe is hollow, slightly pithy, and develops a purplish tinge.

The ears are long, tapering, very lax and open, bald, but with slight tip-awns, creamy yellow glabrous.

The grain is large, soft, white, yellowish in colour. It is fairly resistant to rust, and is popular in South Australia, New South Wales, and Queensland, and is a reliable general purpose variety.

Medea, *Minister*, and *Nizam*.

Medea is very similar to *Huguenot* in structure and general qualities, except that the ear possesses long, straight, scarcely toothed awns.

It is suitable for fodder, meal, or hay.

This variety was obtained from M. Vilmosin, Paris.

Minister is a variety produced by H. Pye, of Dookie Agricultural College, from a cross between Durt's Imperial and an unnamed

crossbred.

It is one of the best milling wheats grown, and is highly valued by millers.

The grain is yellowish to dark yellow in colour, hard, translucent, oval, and of medium to large size.

It has a good gluten content, and the flour possesses high water absorption capacity.

It is a mid-season to late variety, with hollow straw carrying some pith.

The ears are creamy white, glabrous, dense, with distinctly clubbed appearance.

Spikelets are of medium size, regular, but somewhat spreading.

It gives the best yield of those varieties of high milling quality, and its production marks a distinct advance in the direction of producing a prolific wheat of good quality.

Nizam is a new cross-bred variety produced by the crossing of Indian 17 with *Federation*.

A vigorous tall-growing mid-season to early variety, with bald, compact, glabrous, well-developed ears, clubbed at the apex with bronze-coloured chaff devoid of awns.

The grain is oval, medium to large, yellowish, soft, and starchy.

This variety has done well in departmental tests, and also in the tests in the new mallee areas. It is a prolific yielder of grain in moderately dry seasons.

Penny, *Purple Straw*, and *Steinwedel*.

Penny is a selection from *Squash*, produced by Mr. Penny, of Western Australia.

This variety has given consistently good yields in the mallee and Wimmera of Victoria.

It is a strong, tall-growing wheat, with hollow, somewhat pithy straw.

The ears are creamy yellow in colour, glabrous, well developed, compact, and clubby, almost bald, but with tip-awns.

The ear is dense, with large, regular, spreading spikelets.

The grain is large, oval, soft, mealy grain.

It is very liable to rust and takeall, and owing to its liability to disease it has been gradually superseded by harder, less leafy and more prolific varieties.

Steinwedel is a selection made by A. Steinwedel, of South Australia.

An early maturing hollow strawed variety, extensively grown in South Australia and New South Wales,

and to some extent in northern Victoria.

It is a heavy yielder, but has a strong tendency to shed its grain, and should therefore be harvested as soon as it reaches maturity in order to obviate losses.

The ears are pale yellow, moderately dense, glabrous, beardless, with slight tip-awns.

The ear is of medium length, slightly tapering with broad spreading spikelets set irregularly on the rachis.

The grain is rather large, oval, yellowish white opaque, soft, and starchy.

Improved *Steinwedel*, a Dookie selection, does not scatter its grain as badly as the original selection.

Rajar, *Rante*, and *Turvey*.

Rajar is one of the new crossbred varieties which has shown considerable promise in the mallee areas.

An early maturing, vigorous variety, with some what short but compact bald ear.

Club light creamy-yellow with short tip-awns, wide spreading spikelets with many grains in the spikelet; grain medium large, yellowish-white, soft, and starchy.

It is a prolific grain yielder in dry, hot mallee districts.

This variety was obtained by crossing Indian E with Telford's *Rante*, an early maturing crossbred variety which has given considerable promise in the newer mallee areas; ears of moderate length, dark brown, glabrous, bald, with short tip-awns; ears moderately dense and somewhat tapering at the tip.

Grain medium large, brownish yellow, slightly starchy to semi-translucent.

A prolific grain yielder in hot, dry mallee districts, it was produced by crossing Indian E with *Federation*.

Turvey is a variety grown fairly extensively in Victoria for hay.

It is a tall-growing, vigorous, fibrous variety with hollow purple straw.

It possesses light yellow, glabrous, tip-bearded, tapering lax ears, with large, regular, somewhat spreading spike