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A LITTLE LESSON IN JUDGING CATTLE

By CHARLES SUMNER PLUMB, Professor of Animal Husbandry

LOCAL WEATHER SIGNS

By J. WARREN SMITH, Section Director, U. S. Weather Bureau



IS IT A BEEF OR DAIRY TYPE ?

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"Then come along home, pretty mooly cow, do,"

The mooly cow only said, "Moo-o-o!"



The Cow-Boy's Song

2

“Mooly cow, mooly cow, home from the wood
They sent me to fetch you as fast as I could.
The sun has gone down ; it is time to go home.
Mooly cow, mooly cow, why don't you come?
Your udders are full, and the milkmaid is there,
And the children all waiting their supper to share.
I have let the long bars down,—why don't you pass through?”
The mooly cow only said, “Moo-o-o!”

“Mooly cow, mooly cow, have you not been
Regaling all day where the pastures are green?
No doubt it was pleasant, dear mooly, to see
The clear running brook and the wide-spreading tree,
The clover to crop, and the streamlet to wade,
To drink the cool water and lie in the shade ;
But now it is night : they are waiting for you.”
The mooly cow only said, “Moo-o-o!”

“Mooly cow, mooly cow, where do you go,
When all the green pastures are covered with snow?
You go to the barn, and we feed you with hay,
And the maid goes to milk you there, every day ;
She pats you, she loves you, she strokes your sleek hide,
She speaks to you kindly, and sits by your side.
Then come along home, pretty mooly cow, do.”
The mooly cow only said, “Moo-o-o!”

“Mooly cow, mooly cow, whisking your tail,
The milkmaid is waiting, I say, with her pail ;
She tucks up her petticoats, tidy and neat,
And placed the three-legged stool for her seat :—
What can you be staring at, mooly? You know
That we ought to have gone home an hour ago.
How dark it is growing ! O, what shall I do?”
The mooly cow only said, “Moo-o-o!”

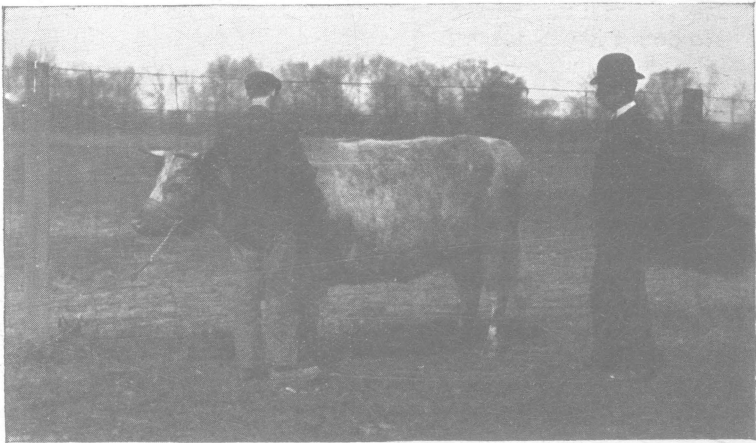
—Mrs. Anna M. Wells.



A LITTLE LESSON IN JUDGING CATTLE

By CHARLES SUMNER PLUMB,
Professor of Animal Husbandry

Standing in a corner of the barnyard at the University was a large, broad-backed cow. She attracted the attention of Henry Ashton, who was seeing the herd for the first time. "What is she?" he asked. "That, my boy, is Czarina," I replied. "She is a Shorthorn cow, and the State University bought her to teach our young men an object lesson with good stock. You noticed at once that she is pretty large. Here in the yard are forty other cows. If you will look closely you will see still others with forms rather like that of Czarina." "Yes, I see that," said Henry, "but there are some cows here that strike me as quite a bit different. They haven't the same shape." "Right you are," said I, "and in about five minutes I will give you a little object lesson about shape and usefulness among cows. We will just have that Jersey cow, Silver's Mollie, brought up alongside of Czarina. Steady there!"



"That, my boy, is Czarina."

"Now first, I want to tell you that the form or shape of a farm animal indicates her special use or purpose. Good specimens of animals that are what we call well bred, always belong to a type of a distinct kind. We say cows like Czarina belong to the beef type. If you will stand back a bit my boy, and take a sideways view of her, you will see that she is pretty smooth all over, and that she has a deep body and not very long legs, if you compare her with some of the other cows. You will notice that her breast extends forward so that she looks rather full there, while the back end of her body is also plump and well filled out. Now change your position and look at her from in front. What do you see?"

"I notice," said Henry, "that her front legs are wide apart, that she is thick through and that her breast is very big."

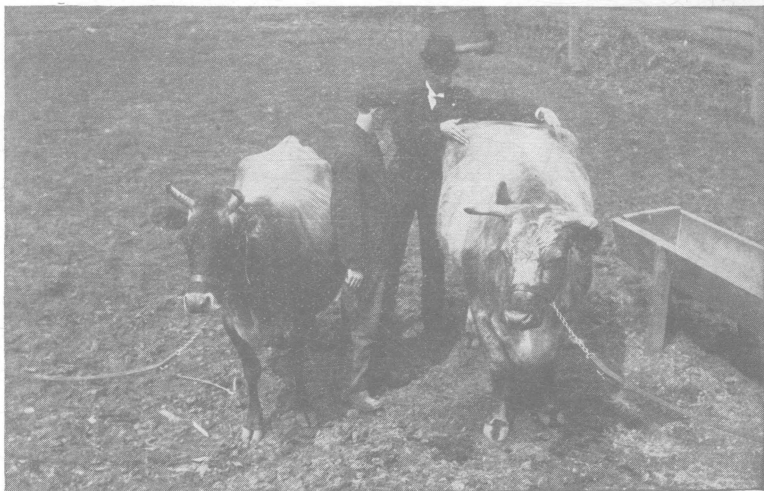
"That is right. Now go back of her and what do you see?"

"She is thick enough behind. She has lots of thick meat there."

"That is exactly it," said I, "Now, if you will look down over her back, if you can, you will see, I guess, that she is broad on top, not only along the middle of her back, but in behind on top where you



"She is thick enough behind."



"She is broad on top."

said she was thick, and also in front over her shoulders. She is what we call broad and deep and thick, or blocky. She has a great body. That means she can eat a lot of food. If you will feel of her back you will notice how like a firm cushion it seems. Right there, where it is so

wide, the butcher gets those fine steaks your mother buys which cost 25 cents a pound."

"O yes," said Henry, "I know what you mean. Those are what they call porterhouse, for that is what I heard the butcher call them."

"Yes, you are right. Now here is an important thing. Cattle like Czarina have been bred to produce meat. The man who breeds such cattle tries to produce just as wide backs and just as thick ends as he can, for here is where the butcher gets his best meat. Do you notice that fat steer over there? We call him Ohio Prince. Well, he had a mother like Czarina. Now we have been feeding him to show what the farmer can make if he puts good feed in the stomach of a steer that is bred right. Notice how wide his back is and how thick he is at each end. If you feel along his back, it will be mellow and thick. If you rub your hands along his sides you will hardly notice that he has any ribs.



"How thick he is at each end!"

That is because his food has been changed into meat which has been smoothly spread all over his skeleton. When the butcher kills him he knows pretty near what he will get. He calls him a prime steer and says he will top the market if he sells him. He will make a mighty fine killer."

"Well, how about this Jersey cow?" said Henry. "Aren't you going to say anything about her?"

"That reminds me, I was just about to remark that now we would take a look at Silver's Mollie. We think she is a beautiful cow, but the Lord never intended her for a beef maker. Won't you just stand back a bit and look at her as you did Czarina? Now tell me what you see."

"To begin with," said the lad, "she isn't as big by a good deal. Then, she shows her ribs, and her muscles look big to me. Her body is deep, and her legs are short, and she seems deeper in behind than forward. When I stand and look at her from in front, she seems narrow. Her breast isn't thick like Czarina's. It has a kind of sharp edge to it,

and I notice her neck is rather long and thin, especially on top, while Czarina's seems short and thick."

"Yes, you are right my boy, as far as you have gone. Now go in behind and look at her. What do you see now?"



"She shows her ribs."



"You said her thighs were thin and muscular."

"Well, she is pretty wide, and she has a big bag between her legs which are thin behind and muscular. I noticed Czarina and the steer had real thick, roundish sort of legs."

"Yes," said I, "they cut the round steaks from those thick parts of the leg. That is where some of the heaviest meat is found on the steer."

We call that the hind quarter. But let us look back to our Jersey. Now come and stand with me and look down over her back. You notice that she is broad in the middle, but not so wide as Czarina by a good deal. She is narrower all over. If you will look down on her from over her fore legs you will notice that she is real narrow and sharp, where Czarina was thick and wide. Now the beef type is thick all through here in front, while this Jersey cow is sharp here on top and then widens off below like a wedge. You said she seemed narrow and sharp as you stood in front and looked at her, but she was thick behind. You also said she was much deeper behind than in front as you looked at her from one side. So you see you have discovered something of a wedge form in this Jersey, and as you saw it from three positions, we call it a triple wedge form. That is really what we call dairy type."



"The cow's udder is wonderful thing."

"Yet one of the most wonderful things about the dairy cow, that we have hardly referred to is her udder, or as we often call it her bag. This is held by strong muscles up between the hind legs at the thigh, and when it is of good shape it has considerable front and rear to it, with four nice teats all hung on a level and wide apart, and just big and long enough for a man to take them comfortably in his full hand when he is milking. Now when you first looked at Silver's Mollie from behind, you said her thighs were thin and muscular. That is just as she should be. If her thighs were thick and meaty she would not have room in between for that big, fine udder which makes so much milk."

"There is one other thing, Henry, to which I want to call your attention which but few people ever notice. If you will put your hand up on the under side of the body of Silver's Mollie, in front of her udder, you will feel a great big vein on one side, and if you feel on the other side you will find another. These are called milk veins, and on some cows they are almost an inch thick and are twisted along under the belly in a

most interesting way, and finally disappear at a hole in the belly, which is known as a milk well. Good judges of dairy cattle think the best milkers as a rule have large udders, milk veins, and milk wells. These are always much larger on old cows than young ones, just as the veins on the hands of old people always stand out more than they do on you young chaps. The cow's udder is a most wonderful thing and of great capacity. Good cows give several times more than their weight in milk. In 1905 Silver's Mollie made 6286 pounds of milk, which is seven times as much as her own body weight of 900 pounds, and that milk contained over 300 pounds of butter fat."

"Now, Henry, when you put your hands on Czarina, you found her all covered with mellow flesh, but this cow—Silver's Mollie—you say was muscular and showed her ribs. Yes, she is lean all over, and you do not



"She is lean all over."

feel any fat on her skeleton. That is because her ancestors have been bred for generations to make milk, and her food helps to make milk instead of meat. Thus, each cow is bred for a special purpose, and the one who understands the type is thus in a position to purchase or to produce the one that should best suit his purpose."

"There is another thing I want to call your attention to before we finish talking about these cattle. That thing is what stockmen call quality. High class animals always have the most quality. It is shown in a fine, silky coat of hair, in a mellow, elastic skin and in fine bones and neat joints. There is lots of difference in the coat of hair. One cow may have hair that is fine and soft and thick. There is a very fine and close undercoat and then longer, coarser hair. Such hair is a great protection in winter. Other animals, and they are the most common, have coarse, long hair. Their bones are also likely to be big and coarse. When an animal has plenty of quality you can easily take the skin in the hand between thumb and fingers and pull it out from the

side of the body. It will be mellow and roll up somewhat in the hand. If the cow lacks quality her skin will be thick, tight, and not easily taken in the hand. Fine quality as seen in the hair, skin, and bone means, with the beef animal, that when killed there will be much less waste of the carcass than if the conditions show lack of quality. So also the dairy cow with plenty of quality is a better producer of milk than if the quality is lacking."

"Do people pay more for these cows if they have the types you have been talking about, and this quality?" said the boy.

"They certainly do. Years ago, when our cities were small and the country was young, people did not pay much attention to these things, but, as the country and the markets grew, the dealers in stock began to get more and more particular about the types. They divided the animals into different classes, and the nearer, for example, the beef steer in the market comes to the best type the higher the price he brings. And so they say an animal is a fancy or a choice steer, or only good or medium, or perhaps he is only fair, or common. In each case, from fancy to common, the grade is getting farther and farther away from the type of Ohio Prince. The poorer he is, the less the butcher will pay. By the way, here I have in my pocket a copy of a live stock paper, in which the Chicago market prices on steers are given, and you notice that the price paid becomes lower as the quality and type drop toward common. It is the same way with dairy cows, with draft horses, with fat hogs, or any other kind of stock."

"Now there is a great deal more that might be said on this important subject of types and breeds of stock and the judging of them, but that is enough for now. Perhaps one of these days you will be a student in the Agricultural College and then you can study and judge live stock to your heart's content."

... prime Kansas
 ... at \$6.85, and nowhere near
 choice heaves were offered. The foreign
 demand is still an important factor in the
 market. Last week exporters purchased
 6,841 cattle, compared with 8,177 a year
 ago.

Tuesday: Receipts 3,000 head. Market strong.

Fancy steers, 1,300 to 1,600 lbs	\$6 60@6 85
Choice steers, 1,200 to 1,600 lbs	6 25@6 50
Good steers, 1,300 to 1,500 lbs.	5 75@6 20
Medium steers, 1,200 to 1,350 lbs	5 00@5 70
Fair steers, 1,000 to 1,350 lbs.	4 60@4 95
Common steers, 900 to 1,000 lbs	4 00@4 50
Choice to extra heifers	4 25@5 30
Medium to good heifers	3 50@4 00
Fair cows and heifers	3 10@3 45
Choice to extra bulls	3 75@4 50
Bologna bulls	3 00@3 60
Common to good cutters	2 50@3 00
Rough to good canners' stock	1 25@2 25
Fair to choice feeders	4 00@4 90
Common to choice stockers	3 00@4 35
Good to choice calves	7 00@7 50
Common to good calves	3 00@6 75
Milkers and springers, each.	25 00@55 00

"The prices become lower as the quality and type drop toward common."

LOCAL WEATHER SIGNS

By J. WARREN SMITH,
Lecturer in Meteorology and Section Director, U. S. Weather Bureau

“When the wind is in the north,
The skillful fisher goes not forth;
When the wind is in the east,
'Tis good for neither man nor beast;
When the wind is in the south,
It blows the flies in the fish's mouth;
When the wind is in the west,
There it is the very best”—*Isaac Walton.*

An observing person whose work takes them out of doors a good deal, can make very accurate weather predictions from local weather signs, for from 6 to 18 hours in advance. The most important phenomena to consider are the wind and clouds.

In the temperate zone of the northern hemisphere easterly winds are proverbially rain winds and westerly winds are associated with fair or clearing weather; southerly winds are known to bring mild weather and northerly winds cold weather.

Surface winds always blow toward areas of low barometric pressure. In this latitude areas of low pressure move from the west toward the east, and are usually accompanied by cloudy and stormy weather. Hence as the storms move toward us from the west the wind sets in from the east, and after the storm center passes by us the winds shift to the westerly (from the west) and the rain is followed by an area of fair weather.

CLOUDS

“Clouds are the storm signals of the sky.”

“Evening red and morning gray
Will set the traveler on his way;
But evening gray and morning red
Will bring down rain upon his head.”

A brilliant sunrise or sunset indicates a large amount of moisture in the atmosphere. If it is there in the evening it is very apt to be deposited as dew during the night; if it is there in the morning it has not been so deposited and will be very likely to be precipitated as rain during the day.

“When ye see a cloud rise out of the west, straightway ye say: There cometh a shower; and so it is.—*Luke, XII, 54.*”

The storms move from the west toward the east in this latitude. The Zuni Indians say for the same reason: “When the clouds rise in terraces of white, soon will the country of the corn priests be pierced with the arrows of rain.”

“Clouds upon the hill
Water for the mill;
Clouds upon the plain
It's not going to rain.”

“When Lookout Mountain (Tennessee) has its cap on, it will rain in six hours.”

This last is a common saying in connection with other mountains, and this as well as the first part of the couplet is true if the clouds are settling down. If they are rising then we need not look for rain.

In general lower clouds possess but little value as rain indicators, for the reason that they usually come with the rain or are seen only just before rain.

In this portion of the United States true cirrus and cirro-stratus clouds, the high thin wispy clouds sometimes called "mare's tails," are almost invariably observed moving from the westerly. These clouds are composed of ice spiculæ, and are formed by the condensation, in high altitudes and at low temperatures, of the moisture that has been carried up in an area of low pressure to the west of the observer.

Circles around the sun and moon or "halos," are formed by refraction of light through these ice particles, and are indicative of stormy weather, because the storm is moving eastward toward the observer.

BAROMETER CHANGES

"Everything is lovely and the goose hangs (honks) high," really has some basis in the physical effect of the air pressure on birds and other fowl.

"When swallows fleet soar high and sport in air,
He told us that the welkin would be clear."—*Gay*.

It is often noticed that swallows and martins fly low just before a storm and bees remain in or near their hives just before a rain. This may be due, to some extent at least, to the fact that the rarer air just before a storm makes it harder for birds and bees to fly aloft.

Quite likely, however, the higher temperature and increasing humidity have an enervating effect on insects, birds, and animals, as well as on humans.

The chill and moisture of the east wind is conducive to aches and pains, hence people complain of rheumatic pains and troublesome corns before a storm.

HUMIDITY

"When the locks turn damp in the scalp house surely it will rain," says the American Indian.

The amount of moisture in the atmosphere usually increases before a rain, so that any phenomena that are brought about by increasing moisture are fairly good rain indicators.

Some of these are: Sweating walls and sidewalks and metal plates and dishes, tightening of ropes, increase in the perfume of flowers, hoar frost, softening of moss, shortening of guitar strings, increase in odor from drains and ditches, tightening up of curls, etc.

Excessive twinkling of the stars indicate much moisture and conditions favorable for rain. "When the stars begin to huddle, the earth will soon become a puddle."

LONG RANGE WEATHER FORECASTS

"If on Friday it rain,
'Twill on Sunday again;
If Friday be clear,
Have for Sunday no fear."

Forecasts for days, months, or seasons based on the weather of special days have no scientific basis. Hence such sayings as the above and such as "When it storms on the first Sunday in the month, it will storm every Sunday during the month," should never be considered.

Also the condition and actions of animals depend upon the past season and present weather conditions, and can have no possible relation to the weather of the coming season.

The color of the goosebone, the thickness of corn husks, the store of nuts laid up by squirrels, the thickness of animals' fur, all relate to past weather conditions and in no manner to future ones.

Forecasts based upon astronomical events, such as the conjunction of planets, the difference in the appearance of the moon, etc., cannot stand the test of verification.

The sun controls all our weather conditions, and it may be possible to predict the general character of a *season*, or possibly of a month in advance, through a study of the varying energy from the sun and its effect upon the great air currents of the earth, but it will never be possible to predict the weather of a single day or the movements of a single storm, weeks in advance, as some so-called long range forecasters pretend to do at the present time.

SUN SPOTS AND THE WEATHER

Sunspots do not have a direct effect upon our weather. The claim that an unusual electrical storm at Pittsburg, Pa., was due to the large sun spot observed at about that time, is about as sensible as to say that a gunner could hit the big toe on the right hind foot of a flea with a two-ton cannon ball fired from a distance of fifty miles. Or to claim that one could cover the point of a cambric needle with a blanket 1000 miles square without covering the rest of the needle.

MOON AND THE WEATHER

There is no well established relation between the moon and the weather.

Go plant the bean when the moon is light,
And you will find that this is right;
Plant the potatoes when the moon is dark,
And to this line you always hark;
But if you vary from this rule,
You will find you are a fool;
If you always follow this rule to the end,
You will always have money to spend.

This expresses the belief in the minds of many persons, even in this age of general education, that certain plants should be seeded in certain phases of the moon, but the great majority of people now know that such beliefs must be relegated to the age of superstition.

There is a negro saying that "Chickens should be picked in the dark of the moon," but the thoughtful minded will hardly class this as a weather proverb, or local weather sign.

Notice

Each one who now receives the BULLETIN and wishes to have his name placed on the mailing list for NEXT YEAR, should write at once or as soon as he has determined his post-office address. In changing address, give both old and new address.

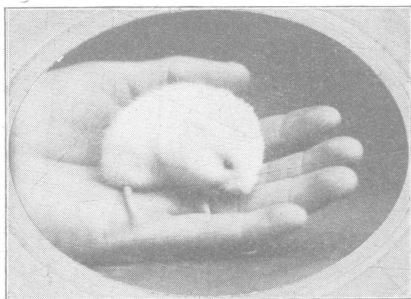
Members of Agricultural Clubs and pupils now receiving this BULLETIN will have their names continued without action on their part.

WHAT ARE THEY? This department will always be ready to assist you in naming plants and insects. Send specimens by mail, carefully packed. Do not hesitate to ask the name for the most common thing. Get acquainted with what lives near you.

A. B. GRAHAM,
Superintendent of Agricultural Extension.

Summer School

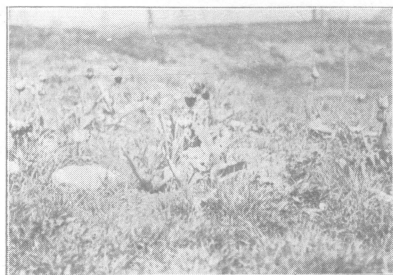
Courses in Elementary Agriculture and Manual Training will again be given in the Summer Term at the Ohio State University, beginning June 24. Address the Secretary of the University Faculty, O. S. U., Columbus, Ohio, for Summer Term Announcement.



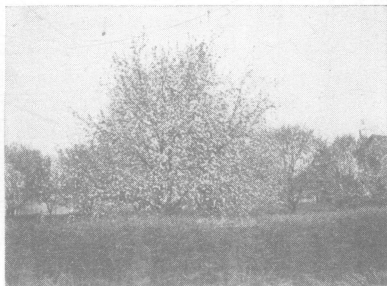
A White Field Mouse.



An invitation to purple martins and blue birds.



Tulips this spring on a country school ground. Bulbs planted last November.



"Apple bloom whiten and peach bloom fall;
Roses are gay by the garden wall."

From the Readers for Our Little Readers

“Across the lonely beach we flit,
One little sandpiper and I.”
Is the sandpiper found along our streams?
“I watch him as he skims along
Uttering his sweet and mournful cry.”
Does this bird sing as it flies?

“As fresh and thick in bending ranks
Of herbs that line thy oozy banks.”
—*The Rivulet* by Bryant.
What herbs line an *oozy* bank?

“The violet there, in soft May dew,
Comes up, as modest and as blue.”
Are violets any other color than blue?
Is May the month for violets in Ohio?

“As green amid thy current’s stress,
Floats the scarce-rooted water cress.”
Does water-cress root itself in the earth? .
Does it grow in swift or sluggish streams? .

“And the brown ground-bird, in they glen,
Still chirps as merrily as then.”
What bird does Bryant mean by the brown ground-bird? Does it
chirp or sing?

In a “Talk in the Honey Market” the bee says:
“We know the swamp-pinks, with their fragrance so fine,
The lupine, the aster, and bright columbine.
We know where the purple geranium blows,
And fragrant sweet brier, and pretty wild rose.”
Which of these do you know? For which would you look in rough
and rocky places? For which in low places?

“So after whispering among themselves, two of them flew
to the brookside, and perching on a buttercup, said close to
Eva’s ear,—”
Do buttercups grow by the brookside?
Is a buttercup and a cowslip the same flower?

“One year when the canker-worm ate all the leaves from the elms,
the orioles built new nests on the ash and button-wood trees.” What
are canker-worms? Do they injure elm leaves in this state? What
reason have you for the oriole’s building its nest so often in elm trees?
By what other name is the button-wood known?

“Little white Lily droopeth with pain,
Waiting and waiting for the wet rain.
Little white Lily holdeth her cup;
Rain is fast falling and filling it up.”
Compare the thought in the first two lines with that of the last two.
Has the lily such a habit as is spoken of in the last two lines?

THE GLAD SPRING DAY.

Moderato.

W. A. MOZART.



1. The crim - sön clouds a - cross the sky, A ro - sy lus - tre fling,
2. A thous - and flow'rs their per - fume bring, To scent the morn - ing air,
3. Oh! break of drow - sy sleep the chains, And come and taste the bliss,



The wak - en'd birds are soar - ing high, With joy - ful car - ol - ing!
A thou - sand buds are o - pen - ing, In dew - y fra - grance fair;
That floods the vales, and hills and plains, On such a morn as this.



A - down the hills the shin - ing rills Are sing - ing blithe and gay,
O'er rock and tree, and danc - ing sea, The joy - ous sun - beams play,
When land and sea are full of glee, No long - er will we stay,



Then join the chime of morn - ing time, This glad, bright new Spring day,
Then join the chime of morn - ing time, This glad, bright new Spring day,
Then join the chime of morn - ing time, This glad, bright new Spring day,



Then join the chime of morn - ing time, This glad, bright new Spring day.
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